

Incident ID	nRM2004350563
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?	<u>25.25</u> (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas not on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

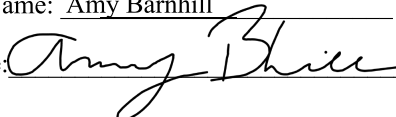
State of New Mexico
Oil Conservation Division

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

Printed Name: Amy Barnhill Title: Lead Environmental Specialist

Signature:  Date: 1-11-21

email: ABarnhill@chevron.com Telephone: 432-940-8432

OCD Only

Received by: _____ Date: _____

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Remediation Plan

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

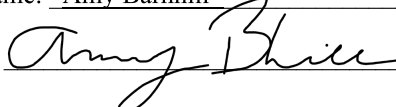
- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points
- ☒ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☒ Proposed schedule for remediation (note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

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

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

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

Printed Name: Amy Barnhill Title: Lead Environmental Specialist

Signature:  Date: 1-11-21

email: ABarnhill@chevron.com Telephone: 432-940-8524

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

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Closure

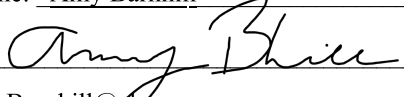
The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled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

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

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

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

Printed Name: Amy Barnhill Title: Lead Environmental Specialist

Signature:  Date: 1-11-21

email: ABarnhill@chevron.com Telephone: 432-940-8524

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

Tracking Number: nRM2004350563
Closure Report
Skeen 2 26 27 State #002H Pumping Unit
Produced Water and Crude Oil Release
Eddy County, New Mexico

Latitude: N 32.078476°
Longitude: W -104.1631546°

LAI Project No. 20-0107-03

December 29, 2020

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

Prepared by:
Larson & Associates, Inc.
507 North Marienfeld Street, Suite 202
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Mark J. Larson, P.G.
Certified Professional Geologist #10490



Robert Nelson
Sr. Geoscientist

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Figure 3	Aerial Map Showing Confirmation Sample and Excavation Locations
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Appendices

Appendix A	Chevron Spill Calculation
Appendix B	Boring Log
Appendix C	Karst Risk Potential
Appendix D	Laboratory Reports
Appendix E	Waste Manifests
Appendix F	Photographs

Tracking Number: nRM2004350563
Closure Report
Chevron USA, Inc., Skeen 2H Pumping Unit
Produced Water and Crude Oil Release
December 29, 2020

1.0 INTRODUCTION

Larson & Associates, Inc. (LAI), has prepared this delineation report and remediation plan is submitted to the New Mexico Oil Conservation Division (OCD) District 2 on behalf of Chevron USA Inc. (Chevron) for a crude oil and produced water release at Skeen 2 26 27 State #002H (Site) located in Unit C (NE/4, NW/4), Section 2, Township 26 South, Range 27 East, in Eddy County New Mexico. The geodetic position is North 32.078476° and West -104.1631546°. Figure 1 presents a topographic map. Figure 2 presents an aerial map.

1.1 Background

The release was discovered on January 27, 2020, due to equipment failure. Chevron reported that approximately 2.3 barrels (bbls) of crude oil and 2.95 bbls of produced water were released. Approximately 2 bbls of crude oil and 2.95 bbls of produced water were recovered. The affected area measures approximately 2,598 square feet. Appendix A presents initial Chevron spill documentation and initial C-141. The OCD assigned the release incident number of nRM2004350563.

1.2 Physical Setting

The physical setting is as follows:

- The surface elevation is approximately 3,212 feet above mean sea level (msl).
- The surface topography slopes gradually to the southeast.
- There are no surface water features within 1,000 feet of the Site.
- Karst Data provided by the USGS describes the Site as “High Risk” potential.
- The soils are designated “Reeves-Gypsum land complex, 0 to 3 percent slopes” consisting of 8 inches of loam, underlain by 24 inches of clay loam, and 28 inches of gypsiferous material, in descending order.
- The upper geological unit is the Rustler Formation (Upper Permian) consisting of siltstone, gypsum, sandstone, and dolomite deposits (USGS).
- Groundwater occurs at approximately 25.25 feet below ground surface (bgs) based on depth to groundwater measurements 72 hours after installing a boring (BH-1) on April 29, 2020.

Appendix B presents karst potential map. Appendix C presents the boring log. Figure 4 presents the boring hole location.

1.3 Remediation Action 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 100 mg/Kg
- Chloride 600 mg/Kg

Tracking Number: nRM2004350563
 Closure Report
 Chevron USA, Inc., Skeen 2H Pumping Unit
 Produced Water and Crude Oil Release
 December 29, 2020

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

2.0 DELINEATION

On February 20, March 17, and May 13, 2020, LAI personnel used a stainless-steel hand auger to collect soil samples from eleven (11) locations (SP-1 through SP-11) inside of the spill area and in each cardinal direction of the spill (north, south, east, and west) to delineate the release vertically and horizontally. The samples were collected to approximately 0.5 and 1.0 feet below ground surface (bgs). The soil samples were delivered under chain of custody and preservation to Xenco Laboratories in Midland, Texas. The laboratory analyzed the samples 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 analytical method reporting limits and OCD remediation levels of 10 milligrams per kilogram (mg/Kg) and 50 mg/Kg, respectively, in all samples. Chloride and TPH exceeded the surface restoration limit (19.15.29.13 NMAC) of 600 mg/Kg and 100 mg/Kg, respectively, in the following samples:

Sample ID, Depth (Feet)	TPH (mg/Kg)	Chloride (mg/Kg)
S-1, 0 to 0.5	523	3,210
S-1, 0.5 to 1	237	3,360
S-2, 0 to 0.5	411	4,230
S-2, 0.5 to 1	753	4,290
S-3, 0 to 0.5	694	1,020
S-3, 0.5 to 1	795	677
S-4, 0 to 0.5	457	820
S-4, 0.5 to 1	663	1,050
S-6, 0 to 0.5	--	916
S-6, 0.5 to 1	--	657
S-7, 0 to 0.5	517	--
S-7, 0.5 to 1	--	877
S-8, 0 to 0.5	103	--

On March 17 and 18, 2019, LAI personnel used direct push technology (DPT) to further delineate the release. Soil samples were collected at 2, 3, 5 and 10 feet bgs, depending on subsurface conditions. The samples were delivered under chain of custody and preservation to Xenco and were analyzed for BTEX, TPH, and chloride by EPA SW-846 Methods 8021B and 8015M, and M300, respectively. TPH and chloride were delineated below the remediation limits of 100 mg/Kg and 600 mg/Kg, respectively, at all sample locations. Table 1 presents the soil sample analytical data summary. Appendix B presents the laboratory reports.

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Closure Report
Chevron USA, Inc., Skeen 2H Pumping Unit
Produced Water and Crude Oil Release
December 29, 2020

3.0 REMEDIATION

On November 17, 2020, P2 Construction, Inc. (P2) under supervision from LAI excavated soil from the crude oil and produced water release encompassing sample locations SP-1 through SP-4 and SP-6 through SP-8, measuring approximately 3,488 square feet. Soil was excavated to approximately one (1) foot bgs. Approximately 160 cubic yards of contaminated soil was stockpiled on a liner adjacent to the excavation prior to being hauled to the R360 Red Bluff disposal facility located approximately 13 miles northwest of Orla, Texas. On November 24, 2020, LAI personnel collected ten (10) confirmation soil samples from the bottom and sidewalls of the excavation. The soil samples were delivered under chain of custody and preservation to Xenco Laboratories (Xenco) in Carlsbad, New Mexico. The laboratory analyzed the samples for BTEX, TPH, and chloride by EPA SW-846 Methods 8021B, 8015M, and 300E, respectively. All confirmation soil samples reported benzene and BTEX below the OCD remediation levels. Chloride and TPH were reported above OCD remediation levels in the following confirmation sample:

Sample ID	Location	Depth (Feet)	TPH (mg/Kg)	Chloride (mg/Kg)
C-5	Bottom	1	216	1,300

On December 14, 2020, P2 excavated approximately one (1) foot of soil from the bottom of the excavation encompassing sample location C-5. Approximately 18 cubic yards of impacted material was removed and hauled to the R360 Red Bluff disposal facility. A subsequent confirmation soil sample reported TPH and chloride below the OCD remediation levels.

LAI personnel collected one (1) composite sample of clean caliche from a nearby State of New Mexico borrow pit. Benzene, BTEX, and TPH were below the analytical method reporting limit and chloride was less than 600 mg/Kg in the backfill composite sample. On December 28, 2020, the excavation was backfilled to ground surface with clean caliche. Table 2 presents the confirmation soil analytical data summary. Figure 3 presents the excavations and confirmation sample locations. Appendix D presents the laboratory reports. Appendix E presents the waste manifests. Appendix F presents photographic documentation.

4.0 CLOSURE REQUEST

Chevron USA requests no further action for this release.

Tables

Table 1
Soil Sample Analytical Data Summary
Skeen 2H
Eddy County, New Mexico
North 32 04' 42.83", West 104 09' 47.46"

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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:										
S-1	0 - 0.5	2/20/2020	In-Situ	<0.00202	<0.00202	<50.0	468	55.2	523	3,210
	0.5 - 1	2/20/2020	In-Situ	<0.00200	<0.00200	<50.0	237	<50.0	237	3,360
	2	3/17/2020	In-Situ	--	--	<50.0	<50.0	<50.0	<50.0	123
	3	3/17/2020	In-Situ	--	--	<49.8	<49.8	<49.8	<49.8	7.00
	5	3/17/2020	In-Situ	--	--	<50.0	<50.0	<50.0	<50.0	5.88
	10	3/17/2020	In-Situ	--	--	<49.9	<49.9	<49.9	<49.9	29.5
S-2	0 - 0.5	2/20/2020	In-Situ	<0.00200	0.07550	<50.0	411	<50.0	411	4,230
	0.5 - 1	2/20/2020	In-Situ	<0.00200	0.02440	<49.8	681	71.5	753	4,290
	2	3/18/2020	In-Situ	--	--	<50.0	<50.0	<50.0	<50.0	591
	3	3/18/2020	In-Situ	--	--	<49.9	<49.9	<49.9	<49.9	373
	5	3/18/2020	In-Situ	--	--	<49.8	<49.8	<49.8	<49.8	344
	8	3/18/2020	In-Situ	--	--	<50.0	<50.0	<50.0	<50.0	261
S-3	0 - 0.5	2/20/2020	In-Situ	<0.00200	<0.00200	<49.9	614	79.9	694	1,020
	0.5 - 1	2/20/2020	In-Situ	<0.00200	<0.00200	<50.0	711	84	795	677
	2	3/18/2020	In-Situ	--	--	<50.0	<50.0	<50.0	<50.0	323
	5	3/18/2020	In-Situ	--	--	<49.9	<49.9	<49.9	<49.9	95.4
	8	3/18/2020	In-Situ	--	--	<49.8	<49.8	<49.8	<49.8	19.6
	10	3/18/2020	In-Situ	--	--	<49.8	<49.8	<49.8	<49.8	14.6
S-4	0 - 0.5	2/20/2020	In-Situ	<0.00202	<0.00202	<49.8	404	52.5	457	820
	0.5 - 1	2/20/2020	In-Situ	<0.00199	<0.00199	<50.0	597	66.3	663	1,050
	2	3/17/2020	In-Situ	--	--	<49.9	<49.9	<49.9	<49.9	114
	3	3/17/2020	In-Situ	--	--	<50.0	<50.0	<50.0	<50.0	43.8

Table 1
Soil Sample Analytical Data Summary
Skeen 2H
Eddy County, New Mexico
North 32 04' 42.83", West 104 09' 47.46"

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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:										
	5	3/17/2020	In-Situ	--	--	<49.9	<49.9	<49.9	<49.9	61.3
	7.5	3/17/2020	In-Situ	--	--	<50.0	<50.0	<50.0	<50.0	40.1
S-5	0 - 0.5	2/20/2020	In-Situ	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	126
	0.5 - 1	2/20/2020	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	151
S-6	0 - 0.5	2/20/2020	In-Situ	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	916
	0.5 - 1	2/20/2020	In-Situ	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	657
	2	3/17/2020	In-Situ	--	--	--	--	--	--	387
	4	3/17/2020	In-Situ	--	--	--	--	--	--	98.3
	5	3/17/2020	In-Situ	--	--	--	--	--	--	307
	8	3/17/2020	In-Situ	--	--	--	--	--	--	475
S-7	0 - 0.5	2/20/2020	In-Situ	<0.00199	<0.00199	<50.0	455	62.2	517	504
	0.5 - 1	2/20/2020	In-Situ	<0.00200	<0.00200	<50.0	60.7	<50.0	60.7	877
	2	3/17/2020	In-Situ	--	--	--	--	--	--	478
	3	3/17/2020	In-Situ	--	--	--	--	--	--	61.6
	5	3/17/2020	In-Situ	--	--	--	--	--	--	<4.95
	7.5	3/17/2020	In-Situ	--	--	--	--	--	--	<4.95
S-8	0 - 0.5	2/20/2020	In-Situ	<0.00200	<0.00200	<49.9	103	<49.9	103	152
	0.5 - 1	2/20/2020	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	111
S-9	0 - 0.5	3/17/2020	In-Situ	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<5.03
	0.5 - 1	3/17/2020	In-Situ	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<5.05

Table 1
Soil Sample Analytical Data Summary
Skeen 2H
Eddy County, New Mexico
North 32 04' 42.83", West 104 09' 47.46"

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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:										
S-10	0 - 0.5	3/17/2020	In-Situ	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	26.5
	0.5 - 1	3/17/2020	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	18.0
S-11	0 - 0.5	5/13/2020	In-Situ	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	102
	0.5 - 1	5/13/2020	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	104

Notes: Analysis performed by Xenco Laboratories in Midland, TX

Depth in feet below ground surface (bgs)

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

<: denotes concentration less than analytical method reporting limit

Bold and Highlighted exceeds OCD remediation action limits

Bold and Highlighted exceeds OCD delineation limits

Table 2
Confirmation Soil Sample Analytical Data Summary
Chevron USA, Skeen 2H
Eddy County, New Mexico
North 32°04'42.83", West 104°09'47.46"

Sample ID	Location	Depth (feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
RAL:					10		50		100		600
SW-N	Sidewall	0 - 1	11/24/2020	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	116
SW-E	Sidewall	0 - 1	11/24/2020	In-Situ	<0.00200	<0.00200	<49.8	61.9	<49.8	61.9	289
SW-W	Sidewall	0 - 1	11/24/2020	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	253
SW-S	Sidewall	0 - 1	11/24/2020	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	22.1
C-1	Bottom	1	11/24/2020	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	180
C-2	Bottom	1	11/24/2020	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	184
C-3	Bottom	1	11/24/2020	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	359
C-4	Bottom	1	11/24/2020	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	128
C-5	Bottom	1	11/24/2020	In-Situ	<0.00200	<0.00200	<49.9	216	<49.9	216	1,300
		2	12/14/2020	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	304
C-6	Bottom	1	11/24/2020	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	216
Backfill Caliche 1	--	--	11/23/2020	In-Situ	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<49.9

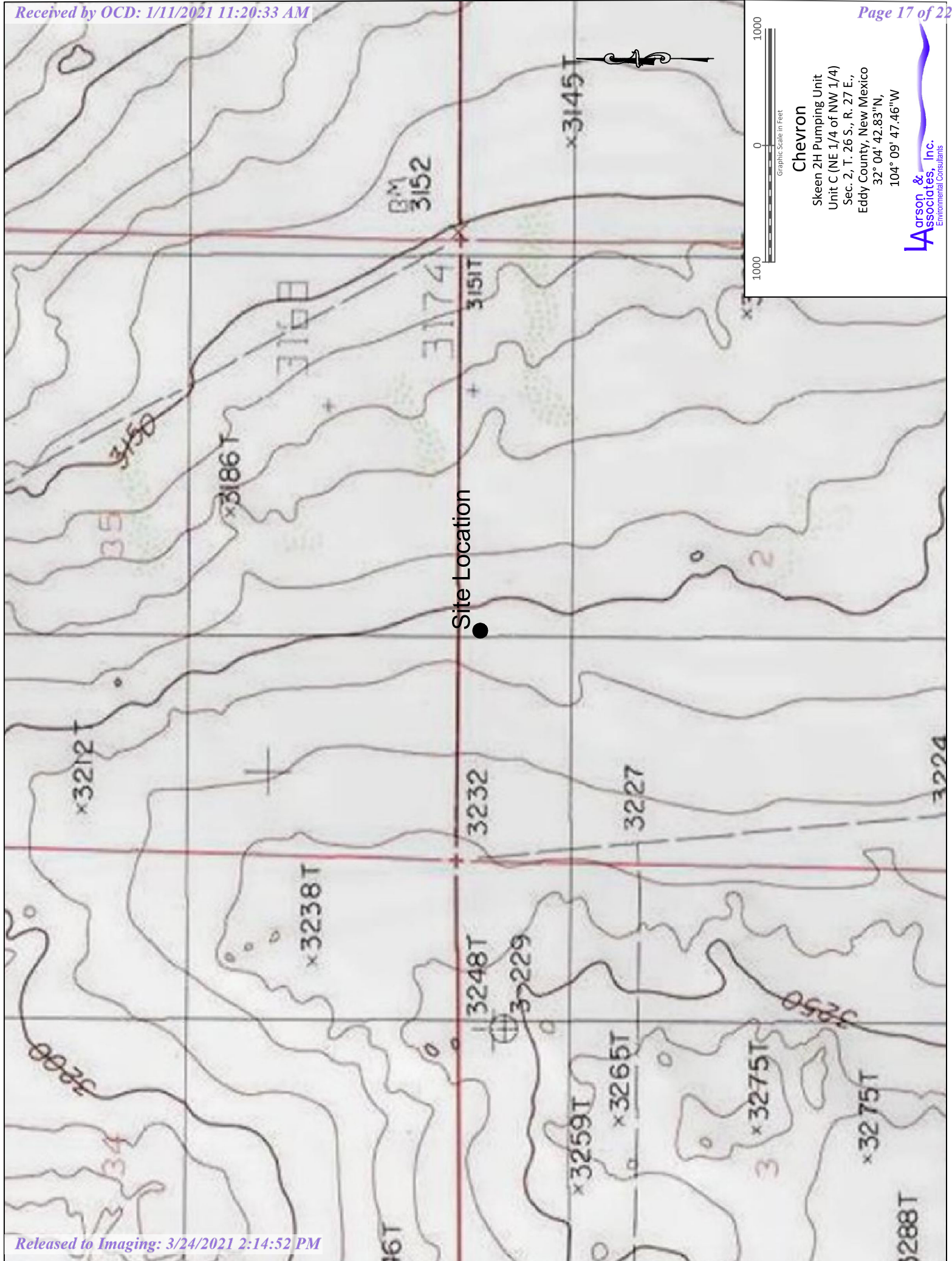
Notes: analysis performed by Xenco Laboratories (Xenco), Midland, Texas and Carlsbad, New Mexico by EPA SW-846 Methods 8021B (BTEX) and 8015M (TPH), and Method 300 (chloride)

Depth in feet below ground surface (bgs)

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

Bold and Highlighted Denotes Concentrations Above OCD Closure Criteria

Figures



Chevron

Skeen 2H Pumping Unit
Unit C (NE 1/4 of NW 1/4)
Sec. 2, T. 26 S., R. 27 E.,
Eddy County, New Mexico
32° 04' 42.83"N,
104° 09' 47.46"W

Larson &
Associates, Inc.
Environmental Consultants

Figure 1 - Topographic Map



Figure 2 - Aerial Map

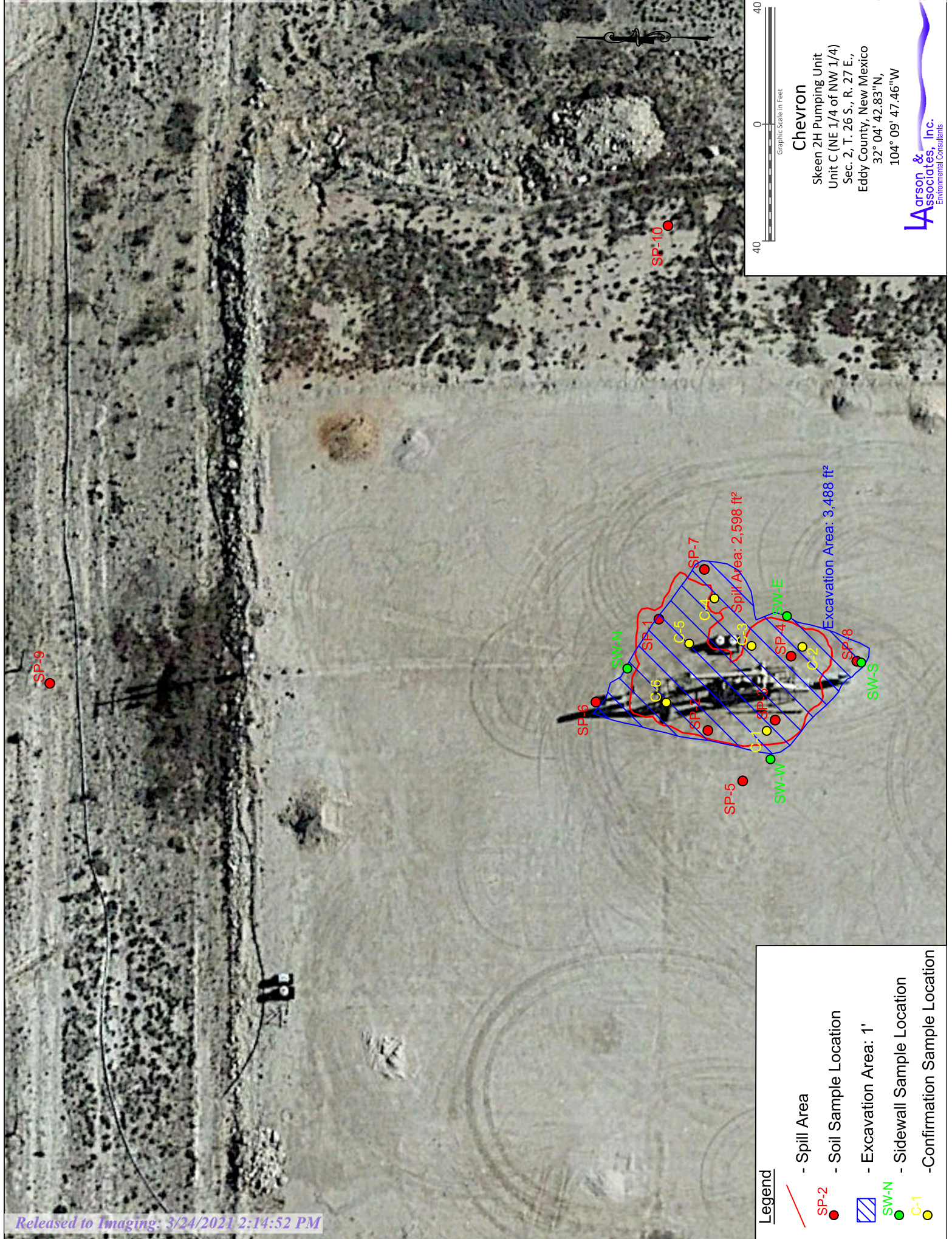


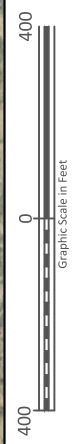
Figure 3 - Aerial Map Showing Excavation Location

Site Location

BH-1

Legend

BH-1 ● - Boring Hole Location



Chevron

Skeen 2H Pumping Unit
Unit C (NE 1/4 of NW 1/4)
Sec. 2, T. 26 S., R. 27 E.,
Eddy County, New Mexico
32° 04' 42.83"N,
104° 09' 47.46"W

Arson & Associates, Inc.
Environmental Consultants

Figure 4 - Aerial Map Showing Boring Hole Location

Appendix A
Chevron Spill Calculation

Incident ID	
District RP	
Facility ID	
Application ID	

Incident Date		1/28/2020			
Incident Time		Start Time		End Time	
		7:55 AM		8:00 AM	
Location		Skeen 2H Pumping Unit			
Area	Standing Liquid	In Soil	size	Oil Volume	Water Volume
1	0.1667	0.26	15 X 3.14	2.3	2.95
2					
3					
4					
5					
Total Fluid				2.3	2.95
Fluid Recovered		Oil Volume		Water Volume	
		2		2.95	

Appendix B

Boring Log

BORING RECORD

GEOLOGIC UNIT	DEPTH	Start: 11:30 Finish: 12:30 DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	PID READING										SAMPLE			REMARKS		
					PPM X <u>1</u>										NUMBER	PID READING	RECOVERY	DEPTH	BACKGROUND PID READING	
					2	4	6	8	10	12	14	16	18							
Depth to Water: 25.25	0	Silty Sand, 7.5YR 8/2, Pinkish White, Rounded, Fine Grained, Poorly Sorted, Subangular, 0.5-2cm Clast Inclusions	ML																	
	5	Caliche, 7.5YR 8/1, White, Rounded, Poorly Sorted, Medium Grained, Subangular, 0.5-1cm Diameter Clast Inclusions	Caliche																	
	10																			
	15	Silty Sand, 7.5YR 6/6, Reddish Yellow, Rounded, Fine Grained, Poorly Sorted, Subangular, 0.5-1cm Diameter Clast Inclusions	ML																	
	20	7.5YR 6/8, Reddish Yellow, Subangular, 0.5-2.5cm Diameter Clast Inclusions	ML																	
	25	Quartz Sand, 2.5YR 8/2, Pinkish White, Fine Grained, Rounded, Poorly Sorted, Subangular, 0.5-2cm Diameter Clast Inclusions	SM																	
	30																			
	35																			
	40	Quartz Sand, Very Fine Grained, Well Rounded, Poorly Sorted, 7.5YR 8/1, White, Subangular Clast Inclusions, 0.5-1.5cm Diameter	SM																	
	45																			
50																				

ONE CONTINUOUS AUGER SAMPLER	WATER TABLE (TIME OF BORING)	JOB NUMBER : <u>Chevron/ 20-0107-03</u>
STANDARD PENETRATION TEST	LABORATORY TEST LOCATION	HOLE DIAMETER : <u>2"</u>
UNDISTURBED SAMPLE	PENETROMETER (TONS/ SQ. FT)	LOCATION : <u>Skeen 2H - Carlsbad, NM</u>
WATER TABLE (24 HRS)	NR NO RECOVERY	LAI GEOLOGIST : <u>R. Nelson</u>

	DRILL DATE : <u>04-29-2020</u>	BORING NUMBER : <u>BH-1</u>	DRILLING CONTRACTOR : <u>SDI</u>
			DRILLING METHOD : <u>Air Rotary</u>

BORING RECORD

GEOLOGIC UNIT	DEPTH	Start: 11:30 Finish: 12:30 DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	PID READING									SAMPLE		REMARKS			
					PPM X <u>1</u>									NUMBER	PID READING	RECOVERY	DEPTH	BACKGROUND PID READING SOIL : _____ PPM SOIL : _____ PPM	
					2	4	6	8	10	12	14	16	18						
	55																		
	60		SM															60	
	65	Silty Sand, 18YR 6/5, Pale Brown, Rounded, Fine Grained, Moderately Sorted, Subangular, 0.5-1cm Diameter Inclusions																65	
	70		ML															70	
	75																	75	
	80	2.5YR, Pink, Very Fine Grained, Well Rounded, Well Sorted, Subangular, 0.5-1cm Diameter Clast Inclusions																80	
	85		ML															85	
	90																	90	
	95	TD: 95'																95	
	100																	100	
	105																	105	

☐ ONE CONTINUOUS AUGER SAMPLER

☐ STANDARD PENETRATION TEST

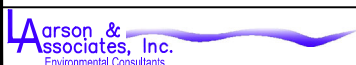
☐ UNDISTURBED SAMPLE

☐ WATER TABLE (24 HRS)

☐ WATER TABLE (TIME OF BORING)

☐ LABORATORY TEST LOCATION

☐ PENETROMETER (TONS/ SQ. FT)

☐ NR NO RECOVERY
JOB NUMBER : Chevron/ 20-0107-03HOLE DIAMETER : 2"LOCATION : Skeen 2H - Carlsbad, NMLAI GEOLOGIST : R. NelsonDRILLING CONTRACTOR : SDIDRILLING METHOD : Air Rotary

DRILL DATE :

04-29-2020

BORING NUMBER :

BH-1

Appendix C

Karst Risk Potential



Appendix D
Laboratory Reports



Certificate of Analysis Summary 653356

Larson and Associates, Inc., Midland, TX

Project Name: Sken 2H Pumping Unit

Project Id: 20-0107-03
Contact: Mark Larson
Project Location: NM

Date Received in Lab: Fri Feb-21-20 03:47 pm
Report Date: 02-MAR-20
Project Manager: Holly Taylor

Analysis Requested	Lab Id:	Field Id:	Depth:	Matrix:	Sampled:	653356-001	653356-002	653356-003	653356-004	653356-005	653356-006
	Extracted:	Field Id:	Depth:	Matrix:	Sampled:	S-1 (0.0-5)	S-1 (0.5-1)	S-2 (0.0-5)	S-2 (0.5-1)	S-3 (0.0-5)	S-3 (0.5-1)
	Analyzed:	Field Id:	Depth:	Matrix:	Sampled:	0-0.5 ft	0.5-1 ft	0-0.5 ft	0.5-1 ft	0-0.5 ft	0.5-1 ft
	Units/RL:	Field Id:	Depth:	Matrix:	Sampled:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Units/RL:	Field Id:	Depth:	Matrix:	Sampled:	Feb-20-20 11:40	Feb-20-20 11:41	Feb-20-20 11:53	Feb-20-20 11:54	Feb-20-20 11:43	Feb-20-20 11:47
BTEX by EPA 8021B	Extracted:	Feb-29-20 08:30	Feb-29-20 08:30	Feb-29-20 08:30	Feb-29-20 08:30	Feb-29-20 08:30	Feb-29-20 08:30	Feb-29-20 08:30	Feb-29-20 08:30	Feb-29-20 08:30	Feb-29-20 08:30
	Analyzed:	Feb-29-20 14:03	Feb-29-20 14:23	Feb-29-20 14:43	Feb-29-20 14:43	Feb-29-20 14:43	Feb-29-20 14:43	Feb-29-20 14:43	Feb-29-20 15:03	Feb-29-20 15:23	Feb-29-20 15:43
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	Units/RL:	<0.00202	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	Units/RL:	0.00202	0.00200	0.00200	0.00200	0.00200	0.00200	0.00200	0.00200	0.00200	0.00200
	Units/RL:	0.00403	0.00399	0.00399	0.00399	0.00399	0.00399	0.00399	0.00401	0.00399	0.00400
Chloride by EPA 300	Extracted:	Feb-24-20 12:40	Feb-24-20 12:40	Feb-24-20 12:40	Feb-24-20 12:40	Feb-24-20 12:40	Feb-24-20 12:40	Feb-24-20 12:40	Feb-24-20 12:40	Feb-24-20 12:40	Feb-24-20 12:40
	Analyzed:	Feb-24-20 13:45	Feb-24-20 13:51	Feb-24-20 13:58	Feb-24-20 13:58	Feb-24-20 13:58	Feb-24-20 13:58	Feb-24-20 13:58	Feb-24-20 14:04	Feb-24-20 14:23	Feb-24-20 14:29
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	Units/RL:	3210	3360	4230	4230	4230	4230	4230	4290	1020	677
	Units/RL:	49.7	49.9	50.2	50.2	50.2	50.2	50.2	49.8	49.7	24.9
	Units/RL:	Feb-24-20 13:00	Feb-24-20 13:00	Feb-24-20 13:00	Feb-24-20 13:00	Feb-24-20 13:00	Feb-24-20 13:00	Feb-24-20 13:00	Feb-24-20 13:00	Feb-24-20 13:00	Feb-24-20 13:00
TPH By SW8015 Mod	Extracted:	Feb-24-20 14:36	Feb-24-20 15:38	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 16:20	Feb-24-20 16:41	Feb-24-20 17:02
	Analyzed:	Feb-24-20 14:36	Feb-24-20 15:38	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 16:20	Feb-24-20 16:41	Feb-24-20 17:02
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	Units/RL:	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<49.8	<49.9	<50.0
	Units/RL:	50.0	50.0	50.0	50.0	50.0	50.0	50.0	49.8	49.9	50.0
	Units/RL:	468	237	411	411	411	411	411	681	614	711
Gasoline Range Hydrocarbons	Extracted:	Feb-24-20 14:36	Feb-24-20 15:38	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 16:20	Feb-24-20 16:41	Feb-24-20 17:02
	Analyzed:	Feb-24-20 14:36	Feb-24-20 15:38	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 16:20	Feb-24-20 16:41	Feb-24-20 17:02
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Diesel Range Organics	Extracted:	Feb-24-20 14:36	Feb-24-20 15:38	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 16:20	Feb-24-20 16:41	Feb-24-20 17:02
	Analyzed:	Feb-24-20 14:36	Feb-24-20 15:38	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 16:20	Feb-24-20 16:41	Feb-24-20 17:02
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Oil Range Hydrocarbons	Extracted:	Feb-24-20 14:36	Feb-24-20 15:38	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 16:20	Feb-24-20 16:41	Feb-24-20 17:02
	Analyzed:	Feb-24-20 14:36	Feb-24-20 15:38	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 16:20	Feb-24-20 16:41	Feb-24-20 17:02
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Total TPH	Extracted:	Feb-24-20 14:36	Feb-24-20 15:38	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 16:20	Feb-24-20 16:41	Feb-24-20 17:02
	Analyzed:	Feb-24-20 14:36	Feb-24-20 15:38	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 16:20	Feb-24-20 16:41	Feb-24-20 17:02
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Total BTEX	Extracted:	Feb-24-20 14:36	Feb-24-20 15:38	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 16:20	Feb-24-20 16:41	Feb-24-20 17:02
	Analyzed:	Feb-24-20 14:36	Feb-24-20 15:38	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 16:20	Feb-24-20 16:41	Feb-24-20 17:02
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Total BTEX	Extracted:	Feb-24-20 14:36	Feb-24-20 15:38	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 16:20	Feb-24-20 16:41	Feb-24-20 17:02
	Analyzed:	Feb-24-20 14:36	Feb-24-20 15:38	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 15:59	Feb-24-20 16:20	Feb-24-20 16:41	Feb-24-20 17:02
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg

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

Holly Taylor

Holly Taylor
Project Manager



Certificate of Analysis Summary 653356

Larson and Associates, Inc., Midland, TX

Project Name: Sken 2H Pumping Unit

Project Id: 20-0107-03
Contact: Mark Larson
Project Location: NM

Date Received in Lab: Fri Feb-21-20 03:47 pm
Report Date: 02-MAR-20
Project Manager: Holly Taylor

Analysis Requested

Analysis Requested	Lab Id:	653356-007	653356-008	653356-009	653356-010	653356-011	653356-012
	Field Id:	S-4 (0-0.5)	S-4 (0.5-1)	S-5 (0-0.5)	S-5 (0.5-1)	S-6 (0-0.5)	S-6 (0.5-1)
	Depth:	0-0.5 ft	0.5-1 ft	0-0.5 ft	0.5-1 ft	0-0.5 ft	0.5-1 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Feb-20-20 11:36	Feb-20-20 11:38	Feb-20-20 11:50	Feb-20-20 11:53	Feb-20-20 12:02	Feb-20-20 12:07
	Extracted:	Feb-29-20 08:30	Feb-29-20 08:30	Feb-29-20 08:30	Feb-29-20 08:30	Feb-29-20 08:30	Feb-29-20 08:30
BTEX by EPA 8021B	Analyzed:	Feb-29-20 16:03	Feb-29-20 16:24	Feb-29-20 16:44	Feb-29-20 17:04	Feb-29-20 18:23	Feb-29-20 18:43
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene	<0.00202 0.00202	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
	Toluene	<0.00202 0.00202	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
	Ethylbenzene	<0.00202 0.00202	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
	m,p-Xylenes	<0.00403 0.00403	<0.00398 0.00398	<0.00397 0.00397	<0.00399 0.00399	<0.00397 0.00397	<0.00397 0.00397
Chloride by EPA 300	o-Xylene	<0.00202 0.00202	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
	Total Xylenes	<0.00202 0.00202	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
	Total BTEX	<0.00202 0.00202	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
	Extracted:	Feb-24-20 12:40	Feb-24-20 12:40	Feb-24-20 12:40	Feb-24-20 12:40	Feb-24-20 12:40	Feb-24-20 12:40
	Analyzed:	Feb-24-20 14:35	Feb-24-20 14:41	Feb-24-20 14:48	Feb-24-20 15:13	Feb-24-20 15:19	Feb-24-20 15:38
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
TPH By SW8015 Mod	Chloride	820 50.0	1050 50.0	126 50.3	151 49.5	916 25.0	657 49.9
	Extracted:	Feb-24-20 13:00	Feb-24-20 13:00	Feb-24-20 13:00	Feb-24-20 13:00	Feb-24-20 13:00	Feb-24-20 13:00
	Analyzed:	Feb-24-20 17:23	Feb-24-20 17:44	Feb-24-20 18:05	Feb-24-20 18:26	Feb-24-20 19:08	Feb-24-20 19:29
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Gasoline Range Hydrocarbons	<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9	<49.8 49.8
	Diesel Range Organics	404 49.8	597 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9	<49.8 49.8
Oil Range Hydrocarbons	Oil Range Hydrocarbons	52.5 49.8	66.3 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9	<49.8 49.8
	Total TPH	457 49.8	663 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9	<49.8 49.8

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

Holly Taylor

Holly Taylor
Project Manager



Certificate of Analysis Summary 653356

Larson and Associates, Inc., Midland, TX

Project Name: Sken 2H Pumping Unit

Project Id: 20-0107-03
Contact: Mark Larson
Project Location: NM

Date Received in Lab: Fri Feb-21-20 03:47 pm
Report Date: 02-MAR-20
Project Manager: Holly Taylor

<i>Analysis Requested</i>		<i>Lab Id:</i>	<i>Field Id:</i>	<i>Depth:</i>	<i>Matrix:</i>	<i>Sampled:</i>	<i>653356-013</i>	<i>653356-014</i>	<i>653356-015</i>	<i>653356-016</i>	
BTEX by EPA 8021B		<i>Extracted:</i>	Mar-01-20 10:00				Mar-01-20 10:00	Mar-01-20 10:00	Mar-01-20 10:00	Mar-01-20 10:00	
		<i>Analyzed:</i>	Mar-01-20 15:49				Mar-01-20 16:09	Mar-01-20 16:30	Mar-01-20 16:50	Mar-01-20 16:50	
		<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	
Toluene			<0.00199	0.00199			<0.00200	0.00200	<0.00199	0.00199	
Ethylbenzene			<0.00199	0.00199			<0.00200	0.00200	<0.00199	0.00199	
m,p-Xylenes			<0.00398	0.00398			<0.00399	0.00399	<0.00398	0.00398	
o-Xylene			<0.00199	0.00199			<0.00200	0.00200	<0.00199	0.00199	
Total Xylenes			<0.00199	0.00199			<0.00200	0.00200	<0.00199	0.00199	
Total BTEX			<0.00199	0.00199			<0.00200	0.00200	<0.00199	0.00199	
Chloride by EPA 300		<i>Extracted:</i>	Feb-24-20 12:40				Feb-24-20 12:40	Feb-24-20 12:40	Feb-24-20 12:40	Feb-24-20 12:40	
		<i>Analyzed:</i>	Feb-24-20 15:44				Feb-24-20 15:50	Feb-24-20 15:56	Feb-24-20 16:03	Feb-24-20 16:03	
		<i>Units/RL:</i>	mg/kg RL				mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride			504	50.3			877	25.3	152	111	50.5
TPH By SW8015 Mod		<i>Extracted:</i>	Feb-24-20 13:00				Feb-24-20 13:00	Feb-24-20 13:00	Feb-24-20 13:00	Feb-24-20 13:00	
		<i>Analyzed:</i>	Feb-24-20 19:50				Feb-24-20 20:11	Feb-24-20 20:32	Feb-24-20 20:53	Feb-24-20 20:53	
		<i>Units/RL:</i>	mg/kg RL				mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons			<50.0	50.0			<50.0	49.9	<50.0	<50.0	50.0
Diesel Range Organics			455	50.0			60.7	49.9	<50.0	<50.0	50.0
Oil Range Hydrocarbons			62.2	50.0			<50.0	49.9	<50.0	<50.0	50.0
Total TPH			517	50.0			60.7	49.9	<50.0	<50.0	50.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Holly Taylor

Holly Taylor
Project Manager

Analytical Report 653356

for
Larson and Associates, Inc.

Project Manager: Mark Larson

Skeen 2H Pumping Unit

20-0107-03

02-MAR-20

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



02-MAR-20

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **653356**

Skeen 2H Pumping Unit

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 XENCO Report Number(s) 653356. 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 XENCO Laboratories. 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. 653356 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 XENCO Laboratories 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

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 653356

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
S-1 (0-0.5)	S	02-20-20 11:40	0 - 0.5 ft	653356-001
S-1 (0.5-1)	S	02-20-20 11:41	0.5 - 1 ft	653356-002
S-2 (0-0.5)	S	02-20-20 11:53	0 - 0.5 ft	653356-003
S-2 (0.5-1)	S	02-20-20 11:54	0.5 - 1 ft	653356-004
S-3 (0-0.5)	S	02-20-20 11:43	0 - 0.5 ft	653356-005
S-3 (0.5-1)	S	02-20-20 11:47	0.5 - 1 ft	653356-006
S-4 (0-0.5)	S	02-20-20 11:36	0 - 0.5 ft	653356-007
S-4 (0.5-1)	S	02-20-20 11:38	0.5 - 1 ft	653356-008
S-5 (0-0.5)	S	02-20-20 11:50	0 - 0.5 ft	653356-009
S-5 (0.5-1)	S	02-20-20 11:53	0.5 - 1 ft	653356-010
S-6 (0-0.5)	S	02-20-20 12:02	0 - 0.5 ft	653356-011
S-6 (0.5-1)	S	02-20-20 12:07	0.5 - 1 ft	653356-012
S-7 (0-0.5)	S	02-20-20 12:11	0 - 0.5 ft	653356-013
S-7 (0.5-1)	S	02-20-20 12:13	0.5 - 1 ft	653356-014
S-8 (0-0.5)	S	02-20-20 12:06	0 - 0.5 ft	653356-015
S-8 (0.5-1)	S	02-20-20 12:07	0.5 - 1 ft	653356-016



CASE NARRATIVE

Client Name: *Larson and Associates, Inc.*

Project Name: *Skeen 2H Pumping Unit*

Project ID: 20-0107-03

Work Order Number(s): 653356

Report Date: 02-MAR-20

Date Received: 02/21/2020

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3118121 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3118135 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analytical Results 653356



Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-1 (0-0.5)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-001

Date Collected: 02.20.20 11.40

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.24.20 12.40

Basis: Wet Weight

Seq Number: 3117491

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3210	49.7	mg/kg	02.24.20 13.45		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.24.20 13.00

Basis: Wet Weight

Seq Number: 3117576

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	02.24.20 14.36	U	1
Diesel Range Organics	C10C28DRO	468	50.0	mg/kg	02.24.20 14.36		1
Oil Range Hydrocarbons	PHCG2835	55.2	50.0	mg/kg	02.24.20 14.36		1
Total TPH	PHC635	523	50.0	mg/kg	02.24.20 14.36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	02.24.20 14.36	
o-Terphenyl	84-15-1	106	%	70-135	02.24.20 14.36	



Certificate of Analytical Results 653356



Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-1 (0-0.5)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-001

Date Collected: 02.20.20 11.40

Sample Depth: 0 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.29.20 08.30

Basis: Wet Weight

Seq Number: 3118121

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.29.20 14.03	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.29.20 14.03	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.29.20 14.03	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.29.20 14.03	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.29.20 14.03	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.29.20 14.03	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.29.20 14.03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	96	%	70-130	02.29.20 14.03		
4-Bromofluorobenzene	460-00-4	101	%	70-130	02.29.20 14.03		



Certificate of Analytical Results 653356



Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-1 (0.5-1)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-002

Date Collected: 02.20.20 11.41

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.24.20 12.40

Basis: Wet Weight

Seq Number: 3117491

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3360	49.9	mg/kg	02.24.20 13.51		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.24.20 13.00

Basis: Wet Weight

Seq Number: 3117576

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	02.24.20 15.38	U	1
Diesel Range Organics	C10C28DRO	237	50.0	mg/kg	02.24.20 15.38		1
Oil Range Hydrocarbons	PHCG2835	<50.0	50.0	mg/kg	02.24.20 15.38	U	1
Total TPH	PHC635	237	50.0	mg/kg	02.24.20 15.38		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	02.24.20 15.38	
o-Terphenyl	84-15-1	98	%	70-135	02.24.20 15.38	



Certificate of Analytical Results 653356



Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-1 (0.5-1)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-002

Date Collected: 02.20.20 11.41

Sample Depth: 0.5 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.29.20 08.30

Basis: Wet Weight

Seq Number: 3118121

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.29.20 14.23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.29.20 14.23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.29.20 14.23	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.29.20 14.23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.29.20 14.23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.29.20 14.23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.29.20 14.23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	02.29.20 14.23		
1,4-Difluorobenzene	540-36-3	99	%	70-130	02.29.20 14.23		



Certificate of Analytical Results 653356



Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-2 (0-0.5)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-003

Date Collected: 02.20.20 11.53

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.24.20 12.40

Basis: Wet Weight

Seq Number: 3117491

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4230	50.2	mg/kg	02.24.20 13.58		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.24.20 13.00

Basis: Wet Weight

Seq Number: 3117576

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	02.24.20 15.59	U	1
Diesel Range Organics	C10C28DRO	411	50.0	mg/kg	02.24.20 15.59		1
Oil Range Hydrocarbons	PHCG2835	<50.0	50.0	mg/kg	02.24.20 15.59	U	1
Total TPH	PHC635	411	50.0	mg/kg	02.24.20 15.59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	02.24.20 15.59	
o-Terphenyl	84-15-1	100	%	70-135	02.24.20 15.59	



Certificate of Analytical Results 653356



Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-2 (0-0.5)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-003

Date Collected: 02.20.20 11.53

Sample Depth: 0 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.29.20 08.30

Basis: Wet Weight

Seq Number: 3118121

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.29.20 14.43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.29.20 14.43	U	1
Ethylbenzene	100-41-4	0.00370	0.00200	mg/kg	02.29.20 14.43		1
m,p-Xylenes	179601-23-1	0.0536	0.00401	mg/kg	02.29.20 14.43		1
o-Xylene	95-47-6	0.0182	0.00200	mg/kg	02.29.20 14.43		1
Total Xylenes	1330-20-7	0.0718	0.00200	mg/kg	02.29.20 14.43		1
Total BTEX		0.0755	0.00200	mg/kg	02.29.20 14.43		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120		%	70-130	02.29.20 14.43	
1,4-Difluorobenzene	540-36-3	88		%	70-130	02.29.20 14.43	



Certificate of Analytical Results 653356



Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-2 (0.5-1)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-004

Date Collected: 02.20.20 11.54

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.24.20 12.40

Basis: Wet Weight

Seq Number: 3117491

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4290	49.8	mg/kg	02.24.20 14.04		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.24.20 13.00

Basis: Wet Weight

Seq Number: 3117576

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	02.24.20 16.20	U	1
Diesel Range Organics	C10C28DRO	681	49.8	mg/kg	02.24.20 16.20		1
Oil Range Hydrocarbons	PHCG2835	71.5	49.8	mg/kg	02.24.20 16.20		1
Total TPH	PHC635	753	49.8	mg/kg	02.24.20 16.20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.24.20 16.20	
o-Terphenyl	84-15-1	106	%	70-135	02.24.20 16.20	



Certificate of Analytical Results 653356



Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-2 (0.5-1)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-004

Date Collected: 02.20.20 11.54

Sample Depth: 0.5 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.29.20 08.30

Basis: Wet Weight

Seq Number: 3118121

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.29.20 15.03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.29.20 15.03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.29.20 15.03	U	1
m,p-Xylenes	179601-23-1	0.0203	0.00401	mg/kg	02.29.20 15.03		1
o-Xylene	95-47-6	0.00412	0.00200	mg/kg	02.29.20 15.03		1
Total Xylenes	1330-20-7	0.0244	0.00200	mg/kg	02.29.20 15.03		1
Total BTEX		0.0244	0.00200	mg/kg	02.29.20 15.03		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	112	%	70-130	02.29.20 15.03		
1,4-Difluorobenzene	540-36-3	93	%	70-130	02.29.20 15.03		



Certificate of Analytical Results 653356



Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-3 (0-0.5)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-005

Date Collected: 02.20.20 11.43

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.24.20 12.40

Basis: Wet Weight

Seq Number: 3117491

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1020	49.7	mg/kg	02.24.20 14.23		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.24.20 13.00

Basis: Wet Weight

Seq Number: 3117576

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	02.24.20 16.41	U	1
Diesel Range Organics	C10C28DRO	614	49.9	mg/kg	02.24.20 16.41		1
Oil Range Hydrocarbons	PHCG2835	79.9	49.9	mg/kg	02.24.20 16.41		1
Total TPH	PHC635	694	49.9	mg/kg	02.24.20 16.41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	02.24.20 16.41	
o-Terphenyl	84-15-1	104	%	70-135	02.24.20 16.41	



Certificate of Analytical Results 653356



Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-3 (0-0.5)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-005

Date Collected: 02.20.20 11.43

Sample Depth: 0 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.29.20 08.30

Basis: Wet Weight

Seq Number: 3118121

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.29.20 15.23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.29.20 15.23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.29.20 15.23	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.29.20 15.23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.29.20 15.23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.29.20 15.23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.29.20 15.23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	02.29.20 15.23		
4-Bromofluorobenzene	460-00-4	103	%	70-130	02.29.20 15.23		



Certificate of Analytical Results 653356



Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-3 (0.5-1)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-006

Date Collected: 02.20.20 11.47

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.24.20 12.40

Basis: Wet Weight

Seq Number: 3117491

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	677	24.9	mg/kg	02.24.20 14.29		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.24.20 13.00

Basis: Wet Weight

Seq Number: 3117576

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	02.24.20 17.02	U	1
Diesel Range Organics	C10C28DRO	711	50.0	mg/kg	02.24.20 17.02		1
Oil Range Hydrocarbons	PHCG2835	84.0	50.0	mg/kg	02.24.20 17.02		1
Total TPH	PHC635	795	50.0	mg/kg	02.24.20 17.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	02.24.20 17.02	
o-Terphenyl	84-15-1	109	%	70-135	02.24.20 17.02	



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Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-3 (0.5-1)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-006

Date Collected: 02.20.20 11.47

Sample Depth: 0.5 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.29.20 08.30

Basis: Wet Weight

Seq Number: 3118121

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.29.20 15.43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.29.20 15.43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.29.20 15.43	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.29.20 15.43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.29.20 15.43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.29.20 15.43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.29.20 15.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	02.29.20 15.43		
4-Bromofluorobenzene	460-00-4	102	%	70-130	02.29.20 15.43		



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Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-4 (0-0.5)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-007

Date Collected: 02.20.20 11.36

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.24.20 12.40

Basis: Wet Weight

Seq Number: 3117491

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	820	50.0	mg/kg	02.24.20 14.35		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.24.20 13.00

Basis: Wet Weight

Seq Number: 3117576

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	02.24.20 17.23	U	1
Diesel Range Organics	C10C28DRO	404	49.8	mg/kg	02.24.20 17.23		1
Oil Range Hydrocarbons	PHCG2835	52.5	49.8	mg/kg	02.24.20 17.23		1
Total TPH	PHC635	457	49.8	mg/kg	02.24.20 17.23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	02.24.20 17.23	
o-Terphenyl	84-15-1	100	%	70-135	02.24.20 17.23	



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Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-4 (0-0.5)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-007

Date Collected: 02.20.20 11.36

Sample Depth: 0 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.29.20 08.30

Basis: Wet Weight

Seq Number: 3118121

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.29.20 16.03	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.29.20 16.03	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.29.20 16.03	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.29.20 16.03	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.29.20 16.03	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.29.20 16.03	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.29.20 16.03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	02.29.20 16.03		
1,4-Difluorobenzene	540-36-3	94	%	70-130	02.29.20 16.03		



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Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-4 (0.5-1)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-008

Date Collected: 02.20.20 11.38

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.24.20 12.40

Basis: Wet Weight

Seq Number: 3117491

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1050	50.0	mg/kg	02.24.20 14.41		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.24.20 13.00

Basis: Wet Weight

Seq Number: 3117576

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	02.24.20 17.44	U	1
Diesel Range Organics	C10C28DRO	597	50.0	mg/kg	02.24.20 17.44		1
Oil Range Hydrocarbons	PHCG2835	66.3	50.0	mg/kg	02.24.20 17.44		1
Total TPH	PHC635	663	50.0	mg/kg	02.24.20 17.44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	02.24.20 17.44	
o-Terphenyl	84-15-1	106	%	70-135	02.24.20 17.44	



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Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-4 (0.5-1)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-008

Date Collected: 02.20.20 11.38

Sample Depth: 0.5 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.29.20 08.30

Basis: Wet Weight

Seq Number: 3118121

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.29.20 16.24	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.29.20 16.24	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.29.20 16.24	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.29.20 16.24	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.29.20 16.24	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.29.20 16.24	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.29.20 16.24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	111	%	70-130	02.29.20 16.24		
1,4-Difluorobenzene	540-36-3	95	%	70-130	02.29.20 16.24		



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Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-5 (0-0.5)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-009

Date Collected: 02.20.20 11.50

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.24.20 12.40

Basis: Wet Weight

Seq Number: 3117491

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	126	50.3	mg/kg	02.24.20 14.48		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.24.20 13.00

Basis: Wet Weight

Seq Number: 3117576

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	02.24.20 18.05	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	02.24.20 18.05	U	1
Oil Range Hydrocarbons	PHCG2835	<50.0	50.0	mg/kg	02.24.20 18.05	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.24.20 18.05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	91	%	70-135	02.24.20 18.05		
o-Terphenyl	84-15-1	94	%	70-135	02.24.20 18.05		



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Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-5 (0-0.5)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-009

Date Collected: 02.20.20 11.50

Sample Depth: 0 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.29.20 08.30

Basis: Wet Weight

Seq Number: 3118121

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	02.29.20 16.44	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.29.20 16.44	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.29.20 16.44	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	02.29.20 16.44	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.29.20 16.44	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.29.20 16.44	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.29.20 16.44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	70-130	02.29.20 16.44		
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.29.20 16.44		



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Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-5 (0.5-1)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-010

Date Collected: 02.20.20 11.53

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.24.20 12.40

Basis: Wet Weight

Seq Number: 3117491

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	151	49.5	mg/kg	02.24.20 15.13		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.24.20 13.00

Basis: Wet Weight

Seq Number: 3117576

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	02.24.20 18.26	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	02.24.20 18.26	U	1
Oil Range Hydrocarbons	PHCG2835	<49.9	49.9	mg/kg	02.24.20 18.26	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.24.20 18.26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	109	%	70-135	02.24.20 18.26		
o-Terphenyl	84-15-1	120	%	70-135	02.24.20 18.26		



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Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-5 (0.5-1)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-010

Date Collected: 02.20.20 11.53

Sample Depth: 0.5 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.29.20 08.30

Basis: Wet Weight

Seq Number: 3118121

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.29.20 17.04	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.29.20 17.04	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.29.20 17.04	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.29.20 17.04	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.29.20 17.04	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.29.20 17.04	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.29.20 17.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	02.29.20 17.04		
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.29.20 17.04		



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Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-6 (0-0.5)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-011

Date Collected: 02.20.20 12.02

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.24.20 12.40

Basis: Wet Weight

Seq Number: 3117491

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	916	25.0	mg/kg	02.24.20 15.19		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.24.20 13.00

Basis: Wet Weight

Seq Number: 3117576

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	02.24.20 19.08	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	02.24.20 19.08	U	1
Oil Range Hydrocarbons	PHCG2835	<49.9	49.9	mg/kg	02.24.20 19.08	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.24.20 19.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	86	%	70-135	02.24.20 19.08		
o-Terphenyl	84-15-1	91	%	70-135	02.24.20 19.08		



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Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-6 (0-0.5)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-011

Date Collected: 02.20.20 12.02

Sample Depth: 0 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.29.20 08.30

Basis: Wet Weight

Seq Number: 3118121

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	02.29.20 18.23	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.29.20 18.23	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.29.20 18.23	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	02.29.20 18.23	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.29.20 18.23	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.29.20 18.23	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.29.20 18.23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	97	%	70-130	02.29.20 18.23		
4-Bromofluorobenzene	460-00-4	82	%	70-130	02.29.20 18.23		



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Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-6 (0.5-1)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-012

Date Collected: 02.20.20 12.07

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.24.20 12.40

Basis: Wet Weight

Seq Number: 3117491

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	657	49.9	mg/kg	02.24.20 15.38		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.24.20 13.00

Basis: Wet Weight

Seq Number: 3117576

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	02.24.20 19.29	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	02.24.20 19.29	U	1
Oil Range Hydrocarbons	PHCG2835	<49.8	49.8	mg/kg	02.24.20 19.29	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.24.20 19.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	91	%	70-135	02.24.20 19.29		
o-Terphenyl	84-15-1	94	%	70-135	02.24.20 19.29		



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Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-6 (0.5-1)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-012

Date Collected: 02.20.20 12.07

Sample Depth: 0.5 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.29.20 08.30

Basis: Wet Weight

Seq Number: 3118121

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	02.29.20 18.43	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.29.20 18.43	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.29.20 18.43	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	02.29.20 18.43	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.29.20 18.43	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.29.20 18.43	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.29.20 18.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.29.20 18.43		
1,4-Difluorobenzene	540-36-3	100	%	70-130	02.29.20 18.43		



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Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-7 (0-0.5)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-013

Date Collected: 02.20.20 12.11

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.24.20 12.40

Basis: Wet Weight

Seq Number: 3117491

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	504	50.3	mg/kg	02.24.20 15.44		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.24.20 13.00

Basis: Wet Weight

Seq Number: 3117576

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	02.24.20 19.50	U	1
Diesel Range Organics	C10C28DRO	455	50.0	mg/kg	02.24.20 19.50		1
Oil Range Hydrocarbons	PHCG2835	62.2	50.0	mg/kg	02.24.20 19.50		1
Total TPH	PHC635	517	50.0	mg/kg	02.24.20 19.50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	02.24.20 19.50	
o-Terphenyl	84-15-1	106	%	70-135	02.24.20 19.50	



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Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-7 (0-0.5)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-013

Date Collected: 02.20.20 12.11

Sample Depth: 0 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 03.01.20 10.00

Basis: Wet Weight

Seq Number: 3118135

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.01.20 15.49	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.01.20 15.49	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.01.20 15.49	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.01.20 15.49	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.01.20 15.49	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.01.20 15.49	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.01.20 15.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	03.01.20 15.49		
4-Bromofluorobenzene	460-00-4	93	%	70-130	03.01.20 15.49		



Certificate of Analytical Results 653356



Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-7 (0.5-1)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-014

Date Collected: 02.20.20 12.13

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.24.20 12.40

Basis: Wet Weight

Seq Number: 3117491

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	877	25.3	mg/kg	02.24.20 15.50		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.24.20 13.00

Basis: Wet Weight

Seq Number: 3117576

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	02.24.20 20.11	U	1
Diesel Range Organics	C10C28DRO	60.7	50.0	mg/kg	02.24.20 20.11		1
Oil Range Hydrocarbons	PHCG2835	<50.0	50.0	mg/kg	02.24.20 20.11	U	1
Total TPH	PHC635	60.7	50.0	mg/kg	02.24.20 20.11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	02.24.20 20.11	
o-Terphenyl	84-15-1	97	%	70-135	02.24.20 20.11	



Certificate of Analytical Results 653356



Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-7 (0.5-1)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-014

Date Collected: 02.20.20 12.13

Sample Depth: 0.5 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 03.01.20 10.00

Basis: Wet Weight

Seq Number: 3118135

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.01.20 16.09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.01.20 16.09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.01.20 16.09	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.01.20 16.09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.01.20 16.09	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.01.20 16.09	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.01.20 16.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	88	%	70-130	03.01.20 16.09		
1,4-Difluorobenzene	540-36-3	102	%	70-130	03.01.20 16.09		



Certificate of Analytical Results 653356



Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-8 (0-0.5)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-015

Date Collected: 02.20.20 12.06

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.24.20 12.40

Basis: Wet Weight

Seq Number: 3117491

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	152	25.3	mg/kg	02.24.20 15.56		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.24.20 13.00

Basis: Wet Weight

Seq Number: 3117576

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	02.24.20 20.32	U	1
Diesel Range Organics	C10C28DRO	103	49.9	mg/kg	02.24.20 20.32		1
Oil Range Hydrocarbons	PHCG2835	<49.9	49.9	mg/kg	02.24.20 20.32	U	1
Total TPH	PHC635	103	49.9	mg/kg	02.24.20 20.32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	02.24.20 20.32	
o-Terphenyl	84-15-1	95	%	70-135	02.24.20 20.32	



Certificate of Analytical Results 653356



Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-8 (0-0.5)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-015

Date Collected: 02.20.20 12.06

Sample Depth: 0 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 03.01.20 10.00

Basis: Wet Weight

Seq Number: 3118135

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.01.20 16.30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.01.20 16.30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.01.20 16.30	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.01.20 16.30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.01.20 16.30	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.01.20 16.30	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.01.20 16.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	03.01.20 16.30		
4-Bromofluorobenzene	460-00-4	86	%	70-130	03.01.20 16.30		



Certificate of Analytical Results 653356



Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-8 (0.5-1)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-016

Date Collected: 02.20.20 12.07

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.24.20 12.40

Basis: Wet Weight

Seq Number: 3117491

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	111	50.5	mg/kg	02.24.20 16.03		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.24.20 13.00

Basis: Wet Weight

Seq Number: 3117576

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	02.24.20 20.53	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	02.24.20 20.53	U	1
Oil Range Hydrocarbons	PHCG2835	<50.0	50.0	mg/kg	02.24.20 20.53	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.24.20 20.53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	90	%	70-135	02.24.20 20.53		
o-Terphenyl	84-15-1	92	%	70-135	02.24.20 20.53		



Certificate of Analytical Results 653356



Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-8 (0.5-1)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-016

Date Collected: 02.20.20 12.07

Sample Depth: 0.5 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 03.01.20 10.00

Basis: Wet Weight

Seq Number: 3118135

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.01.20 16.50	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.01.20 16.50	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.01.20 16.50	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.01.20 16.50	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.01.20 16.50	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.01.20 16.50	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.01.20 16.50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	83	%	70-130	03.01.20 16.50		
1,4-Difluorobenzene	540-36-3	102	%	70-130	03.01.20 16.50		



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.

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.
Skeen 2H Pumping Unit

Analytical Method: Chloride by EPA 300

Seq Number: 3117491

MB Sample Id: 7697309-1-BLK

Matrix: Solid

LCS Sample Id: 7697309-1-BKS

Prep Method: E300P

Date Prep: 02.24.20

LCSD Sample Id: 7697309-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	251	100	250	100	90-110	0	20	mg/kg	02.24.20 13:14	

Analytical Method: Chloride by EPA 300

Seq Number: 3117491

Parent Sample Id: 653386-006

Matrix: Soil

MS Sample Id: 653386-006 S

Prep Method: E300P

Date Prep: 02.24.20

MSD Sample Id: 653386-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	42.9	202	237	96	240	98	90-110	1	20	mg/kg	02.24.20 13:33	

Analytical Method: Chloride by EPA 300

Seq Number: 3117491

Parent Sample Id: 653390-001

Matrix: Soil

MS Sample Id: 653390-001 S

Prep Method: E300P

Date Prep: 02.24.20

MSD Sample Id: 653390-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	267	200	466	100	467	100	90-110	0	20	mg/kg	02.24.20 15:00	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3117576

MB Sample Id: 7697335-1-BLK

Matrix: Solid

LCS Sample Id: 7697335-1-BKS

Prep Method: SW8015P

Date Prep: 02.24.20

LCSD Sample Id: 7697335-1-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	<15.0	1000	879	88	876	88	70-135	0	20	mg/kg	02.24.20 13:54	
Diesel Range Organics	<15.0	1000	967	97	930	93	70-135	4	20	mg/kg	02.24.20 13:54	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		106		102		70-135	%	02.24.20 13:54
o-Terphenyl	106		109		105		70-135	%	02.24.20 13:54

Analytical Method: TPH By SW8015 Mod

Seq Number: 3117576

Matrix: Solid

MB Sample Id: 7697335-1-BLK

Prep Method: SW8015P

Date Prep: 02.24.20

Parameter	MB Result	Units	Analysis Date	Flag
Oil Range Hydrocarbons	<50.0	mg/kg	02.24.20 13:33	

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.

Skeen 2H Pumping Unit

Analytical Method: TPH By SW8015 Mod

Seq Number: 3117576

Parent Sample Id: 653356-001

Matrix: Soil

MS Sample Id: 653356-001 S

Prep Method: SW8015P

Date Prep: 02.24.20

MSD Sample Id: 653356-001 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	<15.0	998	880	88	878	88	70-135	0	20	mg/kg	02.24.20 14:56	
Diesel Range Organics	468	998	1470	100	1450	98	70-135	1	20	mg/kg	02.24.20 14:56	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		94		70-135	%	02.24.20 14:56
o-Terphenyl	110		109		70-135	%	02.24.20 14:56

Analytical Method: BTEX by EPA 8021B

Seq Number: 3118121

MB Sample Id: 7697783-1-BLK

Matrix: Solid

LCS Sample Id: 7697783-1-BKS

Prep Method: SW5030B

Date Prep: 02.29.20

LCSD Sample Id: 7697783-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.116	116	0.117	117	70-130	1	35	mg/kg	02.29.20 11:43	
Toluene	<0.000456	0.100	0.107	107	0.114	114	70-130	6	35	mg/kg	02.29.20 11:43	
Ethylbenzene	<0.000565	0.100	0.101	101	0.108	108	70-130	7	35	mg/kg	02.29.20 11:43	
m,p-Xylenes	<0.00101	0.200	0.198	99	0.216	108	70-130	9	35	mg/kg	02.29.20 11:43	
o-Xylene	<0.000344	0.100	0.0983	98	0.107	107	70-130	8	35	mg/kg	02.29.20 11:43	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		100		99		70-130	%	02.29.20 11:43
4-Bromofluorobenzene	86		92		98		70-130	%	02.29.20 11:43

Analytical Method: BTEX by EPA 8021B

Seq Number: 3118135

MB Sample Id: 7697798-1-BLK

Matrix: Solid

LCS Sample Id: 7697798-1-BKS

Prep Method: SW5030B

Date Prep: 03.01.20

LCSD Sample Id: 7697798-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.124	124	0.107	107	70-130	15	35	mg/kg	03.01.20 12:50	
Toluene	<0.000456	0.100	0.117	117	0.107	107	70-130	9	35	mg/kg	03.01.20 12:50	
Ethylbenzene	<0.000565	0.100	0.112	112	0.103	103	70-130	8	35	mg/kg	03.01.20 12:50	
m,p-Xylenes	<0.00101	0.200	0.222	111	0.209	105	70-130	6	35	mg/kg	03.01.20 12:50	
o-Xylene	<0.000344	0.100	0.111	111	0.104	104	70-130	7	35	mg/kg	03.01.20 12:50	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		102		100		70-130	%	03.01.20 12:50
4-Bromofluorobenzene	83		97		100		70-130	%	03.01.20 12:50

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

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

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.

Skeen 2H Pumping Unit

Analytical Method: BTEX by EPA 8021B

Seq Number: 3118121

Parent Sample Id: 653356-002

Matrix: Soil

MS Sample Id: 653356-002 S

Prep Method: SW5030B

Date Prep: 02.29.20

MSD Sample Id: 653356-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000382	0.0992	0.100	101	0.109	109	70-130	9	35	mg/kg	02.29.20 12:24	
Toluene	0.000719	0.0992	0.0937	94	0.100	100	70-130	7	35	mg/kg	02.29.20 12:24	
Ethylbenzene	<0.000560	0.0992	0.0806	81	0.0901	90	70-130	11	35	mg/kg	02.29.20 12:24	
m,p-Xylenes	<0.00101	0.198	0.157	79	0.177	89	70-130	12	35	mg/kg	02.29.20 12:24	
o-Xylene	0.000439	0.0992	0.0782	78	0.0876	88	70-130	11	35	mg/kg	02.29.20 12:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		98		70-130	%	02.29.20 12:24
4-Bromofluorobenzene	77		96		70-130	%	02.29.20 12:24

Analytical Method: BTEX by EPA 8021B

Seq Number: 3118135

Parent Sample Id: 653393-002

Matrix: Soil

MS Sample Id: 653393-002 S

Prep Method: SW5030B

Date Prep: 03.01.20

MSD Sample Id: 653393-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000387	0.101	0.137	136	0.132	132	70-130	4	35	mg/kg	03.01.20 13:30	X
Toluene	<0.000458	0.101	0.130	129	0.121	121	70-130	7	35	mg/kg	03.01.20 13:30	
Ethylbenzene	<0.000568	0.101	0.120	119	0.111	111	70-130	8	35	mg/kg	03.01.20 13:30	
m,p-Xylenes	<0.00102	0.201	0.229	114	0.212	106	70-130	8	35	mg/kg	03.01.20 13:30	
o-Xylene	<0.000346	0.101	0.116	115	0.108	108	70-130	7	35	mg/kg	03.01.20 13:30	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		103		70-130	%	03.01.20 13:30
4-Bromofluorobenzene	96		101		70-130	%	03.01.20 13:30

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: 2/2/2020 PAGE 1 OF 2
PO#: _____ LAB WORK ORDER#: 453354
PROJECT LOCATION OR NAME: SKEN 2nd Pumping Unit
LAI PROJECT #: 20-DID7-03 COLLECTOR: EC/BS

CHAIN-OF-CUSTODY

0677N

Final 1.000

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

Data Reported to:

DATE: 2/21/2008 PAGE 2 OF 3
PO#: LAB WORK ORDER#: 653356
PROJECT LOCATION OR NAME: STEEN 2TH PUMPING UNIT
LAI PROJECT #: 20-D107-03 COLLECTOR: EC1DS

CHAIN-OF-CUSTODY

078

Final 1.000



Client: Larson and Associates, Inc.

Date/ Time Received: 02/21/2020 03:47:00 PM

Work Order #: 653356

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	-1.4
#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:

Alexis Jaime

Date: 02/21/2020

Checklist reviewed by:

Holly Taylor

Date: 03/02/2020

Certificate of Analysis Summary 656204
Larson and Associates, Inc., Midland, TX

Project Name: Skeen 2H Pumping Unit

Project Id: 20-0107-03
Contact: Mark Larson
Project Location:

Date Received in Lab: Thu 03.19.2020 09:49
Report Date: 03.26.2020 13:35
Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	656204-001	<i>Field Id:</i>	656204-002	<i>Depth:</i>	656204-003	<i>Matrix:</i>	656204-004	<i>Sampled:</i>	656204-005	<i>Units/RL:</i>	656204-006
	<i>Field Id:</i>	S-1 (2')	<i>Field Id:</i>	S-1 (3')	<i>Field Id:</i>	S-1 (5')	<i>Field Id:</i>	S-1 (10')	<i>Field Id:</i>	S-7 (2')	<i>Field Id:</i>	S-7 (3')
	<i>Depth:</i>	SOIL	<i>Depth:</i>	SOIL	<i>Depth:</i>	SOIL	<i>Depth:</i>	SOIL	<i>Depth:</i>	SOIL	<i>Depth:</i>	SOIL
	<i>Matrix:</i>	SOIL	<i>Matrix:</i>	SOIL	<i>Matrix:</i>	SOIL	<i>Matrix:</i>	SOIL	<i>Matrix:</i>	SOIL	<i>Matrix:</i>	SOIL
	<i>Sampled:</i>	03.17.2020 12:55	<i>Sampled:</i>	03.17.2020 12:56	<i>Sampled:</i>	03.17.2020 13:05	<i>Sampled:</i>	03.17.2020 13:06	<i>Sampled:</i>	03.17.2020 13:18	<i>Sampled:</i>	03.17.2020 13:19
Chloride by EPA 300	<i>Extracted:</i>	03.20.2020 11:05	<i>Extracted:</i>	03.23.2020 11:00	<i>Extracted:</i>	03.23.2020 11:00	<i>Extracted:</i>	03.23.2020 11:00	<i>Extracted:</i>	03.20.2020 11:05	<i>Extracted:</i>	03.20.2020 11:15
	<i>Analyzed:</i>	03.20.2020 13:52	<i>Analyzed:</i>	03.23.2020 14:32	<i>Analyzed:</i>	03.23.2020 14:38	<i>Analyzed:</i>	03.23.2020 14:44	<i>Analyzed:</i>	03.20.2020 14:17	<i>Analyzed:</i>	03.20.2020 15:21
	<i>Units/RL:</i>	mg/kg RL 123 49.7	<i>Units/RL:</i>	mg/kg RL 7.00 4.98	<i>Units/RL:</i>	mg/kg RL 5.88 4.99	<i>Units/RL:</i>	mg/kg RL 29.5 4.97	<i>Units/RL:</i>	mg/kg RL 478 50.5	<i>Units/RL:</i>	mg/kg RL 61.6 49.7
TPH by SW8015 Mod	<i>Extracted:</i>	03.20.2020 11:00	<i>Extracted:</i>	03.20.2020 11:00	<i>Extracted:</i>	03.20.2020 11:00	<i>Extracted:</i>	03.20.2020 11:00	<i>Extracted:</i>		<i>Extracted:</i>	
	<i>Analyzed:</i>	03.20.2020 13:04	<i>Analyzed:</i>	03.20.2020 14:07	<i>Analyzed:</i>	03.20.2020 14:28	<i>Analyzed:</i>	03.20.2020 14:49	<i>Analyzed:</i>		<i>Analyzed:</i>	
	<i>Units/RL:</i>	mg/kg RL <50.0 50.0	<i>Units/RL:</i>	mg/kg RL <49.8 49.8	<i>Units/RL:</i>	mg/kg RL <50.0 50.0	<i>Units/RL:</i>	mg/kg RL <49.9 49.9	<i>Units/RL:</i>		<i>Units/RL:</i>	
Gasoline Range Hydrocarbons (GRO)	<i>Extracted:</i>		<i>Extracted:</i>		<i>Extracted:</i>		<i>Extracted:</i>		<i>Extracted:</i>		<i>Extracted:</i>	
	<i>Analyzed:</i>		<i>Analyzed:</i>		<i>Analyzed:</i>		<i>Analyzed:</i>		<i>Analyzed:</i>		<i>Analyzed:</i>	
	<i>Units/RL:</i>		<i>Units/RL:</i>		<i>Units/RL:</i>		<i>Units/RL:</i>		<i>Units/RL:</i>		<i>Units/RL:</i>	
Diesel Range Organics (DRO)	<i>Extracted:</i>		<i>Extracted:</i>		<i>Extracted:</i>		<i>Extracted:</i>		<i>Extracted:</i>		<i>Extracted:</i>	
	<i>Analyzed:</i>		<i>Analyzed:</i>		<i>Analyzed:</i>		<i>Analyzed:</i>		<i>Analyzed:</i>		<i>Analyzed:</i>	
	<i>Units/RL:</i>		<i>Units/RL:</i>		<i>Units/RL:</i>		<i>Units/RL:</i>		<i>Units/RL:</i>		<i>Units/RL:</i>	
Motor Oil Range Hydrocarbons (MRO)	<i>Extracted:</i>		<i>Extracted:</i>		<i>Extracted:</i>		<i>Extracted:</i>		<i>Extracted:</i>		<i>Extracted:</i>	
	<i>Analyzed:</i>		<i>Analyzed:</i>		<i>Analyzed:</i>		<i>Analyzed:</i>		<i>Analyzed:</i>		<i>Analyzed:</i>	
	<i>Units/RL:</i>		<i>Units/RL:</i>		<i>Units/RL:</i>		<i>Units/RL:</i>		<i>Units/RL:</i>		<i>Units/RL:</i>	
Total TPH	<i>Extracted:</i>		<i>Extracted:</i>		<i>Extracted:</i>		<i>Extracted:</i>		<i>Extracted:</i>		<i>Extracted:</i>	
	<i>Analyzed:</i>		<i>Analyzed:</i>		<i>Analyzed:</i>		<i>Analyzed:</i>		<i>Analyzed:</i>		<i>Analyzed:</i>	
	<i>Units/RL:</i>		<i>Units/RL:</i>		<i>Units/RL:</i>		<i>Units/RL:</i>		<i>Units/RL:</i>		<i>Units/RL:</i>	

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

Holly Taylor

Holly Taylor
Project Manager

Certificate of Analysis Summary 656204
Larson and Associates, Inc., Midland, TX
Project Name: Skeen 2H Pumping Unit

Project Id: 20-0107-03
Contact: Mark Larson
Project Location:

Date Received in Lab: Thu 03.19.2020 09:49
Report Date: 03.26.2020 13:35
Project Manager: Holly Taylor

Analysis Requested	Lab Id:	656204-007	656204-008	656204-009	656204-010	656204-011	656204-012
	Field Id:	S-7 (5')	S-7 (7.5')	S-9 (0.5')	S-9 (1')	S-10 (0.5')	S-10 (1')
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	03.17.2020 13:24	03.17.2020 13:25	03.17.2020 13:23	03.17.2020 12:28	03.17.2020 13:12	03.17.2020 13:16
BTEX by EPA 8021B	Extracted:			03.23.2020 16:00	03.23.2020 16:00	03.23.2020 16:00	03.25.2020 16:00
	Analyzed:			03.23.2020 22:49	03.23.2020 23:09	03.23.2020 23:30	03.25.2020 20:35
	Units/RL:			mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene			<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200
	Toluene			<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200
	Ethylbenzene			<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200
	m,p-Xylenes			<0.00397 0.00397	<0.00398 0.00398	<0.00397 0.00397	<0.00401 0.00401
Total BTEX	o-Xylene			<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200
	Total Xylenes			<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200
	Total BTEX			<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200
Chloride by EPA 300	Extracted:	03.20.2020 11:15	03.20.2020 11:15	03.20.2020 11:15	03.20.2020 11:15	03.20.2020 11:15	03.20.2020 11:15
	Analyzed:	03.20.2020 18:38	03.20.2020 18:44	03.20.2020 18:50	03.20.2020 18:57	03.20.2020 19:03	03.20.2020 19:09
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<4.95 4.95	<4.95 4.95	<5.03 5.03	<5.05 5.05	26.5 5.05	18.0 5.05
TPH by SW8015 Mod	Extracted:			03.20.2020 11:00	03.20.2020 11:00	03.20.2020 11:00	03.20.2020 11:00
	Analyzed:			03.20.2020 16:34	03.20.2020 16:55	03.20.2020 17:37	03.20.2020 17:58
	Units/RL:			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

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Holly Taylor

Holly Taylor
Project Manager

Certificate of Analysis Summary 656204
Larson and Associates, Inc., Midland, TX
Project Name: Skeen 2H Pumping Unit

Project Id: 20-0107-03
Contact: Mark Larson
Project Location:

Date Received in Lab: Thu 03.19.2020 09:49
Report Date: 03.26.2020 13:35
Project Manager: Holly Taylor

Analysis Requested	Lab Id:	656204-013	656204-014	656204-015	656204-016	656204-017	656204-018
	Field Id:	S-4 (2')	S-4 (3')	S-4 (5')	S-4 (7.5')	S-6 (2')	S-6 (4')
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	03.17.2020 13:44	03.17.2020 13:45	03.17.2020 14:01	03.17.2020 14:02	03.17.2020 14:14	03.17.2020 14:15
Chloride by EPA 300	Extracted:	03.20.2020 11:15	03.20.2020 11:15	03.20.2020 11:15	03.20.2020 11:15	03.20.2020 11:15	03.20.2020 11:15
	Analyzed:	03.20.2020 16:18	03.20.2020 19:16	03.20.2020 16:50	03.20.2020 19:22	03.20.2020 17:15	03.20.2020 17:21
	Units/RL:	mg/kg RL 114 25.1	mg/kg RL 43.8 4.97	mg/kg RL 61.3 50.5	mg/kg RL 40.1 4.96	mg/kg RL 387 50.0	mg/kg RL 98.3 50.3
TPH by SW8015 Mod	Extracted:	03.20.2020 11:00	03.20.2020 11:00	03.20.2020 11:00	03.20.2020 11:00		
	Analyzed:	03.20.2020 18:19	03.20.2020 18:39	03.20.2020 19:00	03.20.2020 19:21		
	Units/RL:	mg/kg RL <49.9 49.9	mg/kg RL <50.0 50.0	mg/kg RL <49.9 49.9	mg/kg RL <50.0 50.0		
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0		
Diesel Range Organics (DRO)		<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0		
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0		
Total TPH		<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0		

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Holly Taylor

Holly Taylor
Project Manager



Project Id: 20-0107-03
Contact: Mark Larson
Project Location:

Certificate of Analysis Summary 656204

Larson and Associates, Inc., Midland, TX

Project Name: Skeen 2H Pumping Unit

Date Received in Lab: Thu 03.19.2020 09:49
Report Date: 03.26.2020 13:35
Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	656204-019	656204-020	656204-021	656204-022	656204-023	656204-024
	<i>Field Id:</i>	S-6 (5')	S-6 (8')	S-2 (2')	S-2 (3')	S-2 (5')	S-2 (8')
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	03.17.2020 14:17	03.17.2020 14:18	03.18.2020 10:02	03.18.2020 10:03	03.18.2020 10:06	03.18.2020 10:07
Chloride by EPA 300	<i>Extracted:</i>	03.20.2020 11:15	03.20.2020 11:15	03.20.2020 11:15	03.20.2020 11:15	03.20.2020 11:15	03.20.2020 11:05
	<i>Analyzed:</i>	03.20.2020 17:28	03.20.2020 17:34	03.20.2020 17:40	03.20.2020 17:47	03.20.2020 17:53	03.20.2020 14:24
	<i>Units/RL:</i>	mg/kg RL 307 49.5	mg/kg RL 475 49.5	mg/kg RL 591 49.5	mg/kg RL 373 50.4	mg/kg RL 344 49.9	mg/kg RL 261 49.9
TPH by SW8015 Mod	<i>Extracted:</i>			03.20.2020 11:00	03.20.2020 11:00	03.20.2020 11:00	03.20.2020 11:00
	<i>Analyzed:</i>			03.20.2020 13:04	03.20.2020 14:07	03.20.2020 14:28	03.20.2020 14:49
	<i>Units/RL:</i>			mg/kg RL <50.0 50.0	mg/kg RL <49.9 49.9	mg/kg RL <49.8 49.8	mg/kg RL <50.0 50.0
Gasoline Range Hydrocarbons (GRO)				<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0
Diesel Range Organics (DRO)				<50.0 50.0	<49.9 49.9	<49.8 49.8	<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
Total TPH				<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0

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

Holly Taylor
Project Manager



Project Id: 20-0107-03
Contact: Mark Larson
Project Location:

Certificate of Analysis Summary 656204

Larson and Associates, Inc., Midland, TX

Project Name: Skeen 2H Pumping Unit

Date Received in Lab: Thu 03.19.2020 09:49
Report Date: 03.26.2020 13:35
Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	656204-025	<i>Field Id:</i>	656204-026	<i>Depth:</i>	656204-027	<i>Matrix:</i>	656204-028
	<i>Sampled:</i>	S-3 (2')	<i>Sampled:</i>	S-3 (5')	<i>Sampled:</i>	S-3 (8')	<i>Sampled:</i>	S-3 (10')
	<i>Extracted:</i>	03.20.2020 17:00	<i>Extracted:</i>	03.20.2020 17:00	<i>Extracted:</i>	03.20.2020 17:00	<i>Extracted:</i>	03.20.2020 17:00
	<i>Analyzed:</i>	03.21.2020 01:26	<i>Analyzed:</i>	03.21.2020 01:47	<i>Analyzed:</i>	03.21.2020 01:54	<i>Analyzed:</i>	03.21.2020 02:01
	<i>Units/RL:</i>	mg/kg RL	<i>Units/RL:</i>	mg/kg RL	<i>Units/RL:</i>	mg/kg RL	<i>Units/RL:</i>	mg/kg RL
Chloride		323 4.98		95.4 4.98		19.6 5.02		14.6 5.03
TPH by SW8015 Mod	<i>Extracted:</i>	03.20.2020 11:00	<i>Extracted:</i>	03.20.2020 11:00	<i>Extracted:</i>	03.20.2020 11:00	<i>Extracted:</i>	03.20.2020 11:00
	<i>Analyzed:</i>	03.20.2020 15:10	<i>Analyzed:</i>	03.20.2020 15:31	<i>Analyzed:</i>	03.20.2020 15:52	<i>Analyzed:</i>	03.20.2020 16:13
	<i>Units/RL:</i>	mg/kg RL	<i>Units/RL:</i>	mg/kg RL	<i>Units/RL:</i>	mg/kg RL	<i>Units/RL:</i>	mg/kg RL
	Gasoline Range Hydrocarbons (GRO)	<50.0 50.0	Gasoline Range Hydrocarbons (GRO)	<49.9 49.9	Gasoline Range Hydrocarbons (GRO)	<49.8 49.8	Gasoline Range Hydrocarbons (GRO)	<49.8 49.8
Total TPH	Diesel Range Organics (DRO)	<50.0 50.0	Diesel Range Organics (DRO)	<49.9 49.9	Diesel Range Organics (DRO)	<49.8 49.8	Diesel Range Organics (DRO)	<49.8 49.8
	Motor Oil Range Hydrocarbons (MRO)	<50.0 50.0	Motor Oil Range Hydrocarbons (MRO)	<49.9 49.9	Motor Oil Range Hydrocarbons (MRO)	<49.8 49.8	Motor Oil Range Hydrocarbons (MRO)	<49.8 49.8
		<50.0 50.0		<49.9 49.9		<49.8 49.8		<49.8 49.8
		<50.0 50.0		<49.9 49.9		<49.8 49.8		<49.8 49.8

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Holly Taylor

Holly Taylor
Project Manager



Analytical Report 656204

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Skeen 2H Pumping Unit

20-0107-03

03.26.2020

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



03.26.2020

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

Reference: XENCO Report No(s): **656204**
Skeen 2H Pumping Unit
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 XENCO Report Number(s) 656204. 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 XENCO Laboratories. 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. 656204 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 XENCO Laboratories 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'. The signature is written in a cursive, flowing style.

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 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
S-1 (2')	S	03.17.2020 12:55		656204-001
S-1 (3')	S	03.17.2020 12:56		656204-002
S-1 (5')	S	03.17.2020 13:05		656204-003
S-1 (10')	S	03.17.2020 13:06		656204-004
S-7 (2')	S	03.17.2020 13:18		656204-005
S-7 (3')	S	03.17.2020 13:19		656204-006
S-7 (5')	S	03.17.2020 13:24		656204-007
S-7 (7.5')	S	03.17.2020 13:25		656204-008
S-9 (0.5')	S	03.17.2020 13:23		656204-009
S-9 (1')	S	03.17.2020 12:28		656204-010
S-10 (0.5')	S	03.17.2020 13:12		656204-011
S-10 (1')	S	03.17.2020 13:16		656204-012
S-4 (2')	S	03.17.2020 13:44		656204-013
S-4 (3')	S	03.17.2020 13:45		656204-014
S-4 (5')	S	03.17.2020 14:01		656204-015
S-4 (7.5')	S	03.17.2020 14:02		656204-016
S-6 (2')	S	03.17.2020 14:14		656204-017
S-6 (4')	S	03.17.2020 14:15		656204-018
S-6 (5')	S	03.17.2020 14:17		656204-019
S-6 (8')	S	03.17.2020 14:18		656204-020
S-2 (2')	S	03.18.2020 10:02		656204-021
S-2 (3')	S	03.18.2020 10:03		656204-022
S-2 (5')	S	03.18.2020 10:06		656204-023
S-2 (8')	S	03.18.2020 10:07		656204-024
S-3 (2')	S	03.18.2020 10:15		656204-025
S-3 (5')	S	03.18.2020 10:16		656204-026
S-3 (8')	S	03.18.2020 10:20		656204-027
S-3 (10')	S	03.18.2020 10:21		656204-028



CASE NARRATIVE

Client Name: *Larson and Associates, Inc.*

Project Name: *Skeen 2H Pumping Unit*

Project ID: 20-0107-03
Work Order Number(s): 656204

Report Date: 03.26.2020
Date Received: 03.19.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3120695 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3120949 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-1 (2')
Lab Sample Id: 656204-001

Matrix: Soil
Date Collected: 03.17.2020 12:55

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:05

Basis: Wet Weight

Seq Number: 3120518

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	123	49.7	mg/kg	03.20.2020 13:52		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120516

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.20.2020 13:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.20.2020 13:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.20.2020 13:04	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.20.2020 13:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	03.20.2020 13:04	
o-Terphenyl	84-15-1	105	%	70-135	03.20.2020 13:04	



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-1 (3')
Lab Sample Id: 656204-002

Matrix: Soil
Date Collected: 03.17.2020 12:56

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

% Moisture:

Analyst: SPC

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120611

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.00	4.98	mg/kg	03.23.2020 14:32		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120516

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.20.2020 14:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.20.2020 14:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.20.2020 14:07	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.20.2020 14:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	03.20.2020 14:07	
o-Terphenyl	84-15-1	93	%	70-135	03.20.2020 14:07	



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-1 (5')
Lab Sample Id: 656204-003

Matrix: Soil
Date Collected: 03.17.2020 13:05

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3120611

Prep Method: E300P

% Moisture:

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5.88	4.99	mg/kg	03.23.2020 14:38		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3120516

Prep Method: SW8015P

% Moisture:

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.20.2020 14:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.20.2020 14:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.20.2020 14:28	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.20.2020 14:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	03.20.2020 14:28	
o-Terphenyl	84-15-1	99	%	70-135	03.20.2020 14:28	



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-1 (10')
Lab Sample Id: 656204-004

Matrix: Soil
Date Collected: 03.17.2020 13:06

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

% Moisture:

Analyst: SPC

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120611

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	29.5	4.97	mg/kg	03.23.2020 14:44		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120516

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.20.2020 14:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.20.2020 14:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.20.2020 14:49	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.20.2020 14:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.20.2020 14:49	
o-Terphenyl	84-15-1	103	%	70-135	03.20.2020 14:49	

**Certificate of Analytical Results 656204****Larson and Associates, Inc., Midland, TX****Skeen 2H Pumping Unit**

Sample Id: S-7 (2')
Lab Sample Id: 656204-005

Matrix: Soil
Date Collected: 03.17.2020 13:18

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:05

Basis: Wet Weight

Seq Number: 3120518

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	478	50.5	mg/kg	03.20.2020 14:17		10

**Certificate of Analytical Results 656204****Larson and Associates, Inc., Midland, TX****Skeen 2H Pumping Unit**

Sample Id: S-7 (3')
Lab Sample Id: 656204-006

Matrix: Soil
Date Collected: 03.17.2020 13:19

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	61.6	49.7	mg/kg	03.20.2020 15:21		10

**Certificate of Analytical Results 656204****Larson and Associates, Inc., Midland, TX****Skeen 2H Pumping Unit**

Sample Id: **S-7 (5')**
Lab Sample Id: 656204-007

Matrix: Soil
Date Collected: 03.17.2020 13:24

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	03.20.2020 18:38	U	1

**Certificate of Analytical Results 656204****Larson and Associates, Inc., Midland, TX****Skeen 2H Pumping Unit**

Sample Id: S-7 (7.5')
Lab Sample Id: 656204-008

Matrix: Soil
Date Collected: 03.17.2020 13:25

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	03.20.2020 18:44	U	1



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-9 (0.5')

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-009

Date Collected: 03.17.2020 13:23

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	03.20.2020 18:50	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120516

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.20.2020 16:34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.20.2020 16:34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.20.2020 16:34	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.20.2020 16:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	03.20.2020 16:34	
o-Terphenyl	84-15-1	96	%	70-135	03.20.2020 16:34	



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-9 (0.5')**

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-009

Date Collected: 03.17.2020 13:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 03.23.2020 16:00

Basis: Wet Weight

Seq Number: 3120695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.23.2020 22:49	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.23.2020 22:49	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.23.2020 22:49	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	03.23.2020 22:49	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.23.2020 22:49	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.23.2020 22:49	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.23.2020 22:49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	03.23.2020 22:49		
4-Bromofluorobenzene	460-00-4	112	%	70-130	03.23.2020 22:49		



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-9 (1')
Lab Sample Id: 656204-010

Matrix: Soil
Date Collected: 03.17.2020 12:28

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.05	5.05	mg/kg	03.20.2020 18:57	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120516

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.20.2020 16:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.20.2020 16:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.20.2020 16:55	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.20.2020 16:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	03.20.2020 16:55	
o-Terphenyl	84-15-1	98	%	70-135	03.20.2020 16:55	



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-9 (1')
Lab Sample Id: 656204-010

Matrix: Soil
Date Collected: 03.17.2020 12:28

Date Received: 03.19.2020 09:49

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 03.23.2020 16:00

Basis: Wet Weight

Seq Number: 3120695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.23.2020 23:09	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.23.2020 23:09	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.23.2020 23:09	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.23.2020 23:09	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.23.2020 23:09	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.23.2020 23:09	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.23.2020 23:09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	115	%	70-130	03.23.2020 23:09		
1,4-Difluorobenzene	540-36-3	112	%	70-130	03.23.2020 23:09		



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-10 (0.5')**

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-011

Date Collected: 03.17.2020 13:12

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	26.5	5.05	mg/kg	03.20.2020 19:03		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120516

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.20.2020 17:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.20.2020 17:37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.20.2020 17:37	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.20.2020 17:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	03.20.2020 17:37	
o-Terphenyl	84-15-1	97	%	70-135	03.20.2020 17:37	



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-10 (0.5')**

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-011

Date Collected: 03.17.2020 13:12

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 03.23.2020 16:00

Basis: Wet Weight

Seq Number: 3120695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.23.2020 23:30	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.23.2020 23:30	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.23.2020 23:30	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	03.23.2020 23:30	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.23.2020 23:30	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.23.2020 23:30	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.23.2020 23:30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	110	%	70-130	03.23.2020 23:30		
4-Bromofluorobenzene	460-00-4	111	%	70-130	03.23.2020 23:30		



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-10 (1')**
Lab Sample Id: 656204-012

Matrix: Soil
Date Collected: 03.17.2020 13:16

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	18.0	5.05	mg/kg	03.20.2020 19:09		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120516

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.20.2020 17:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.20.2020 17:58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.20.2020 17:58	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.20.2020 17:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	03.20.2020 17:58	
o-Terphenyl	84-15-1	92	%	70-135	03.20.2020 17:58	



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-10 (1')**
 Lab Sample Id: 656204-012

Matrix: Soil
 Date Collected: 03.17.2020 13:16

Date Received: 03.19.2020 09:49

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 03.25.2020 16:00

Basis: Wet Weight

Seq Number: 3120949

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.25.2020 20:35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.25.2020 20:35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.25.2020 20:35	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.25.2020 20:35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.25.2020 20:35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.25.2020 20:35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.25.2020 20:35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	107	%	70-130	03.25.2020 20:35		
1,4-Difluorobenzene	540-36-3	112	%	70-130	03.25.2020 20:35		



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-4 (2')
Lab Sample Id: 656204-013

Matrix: Soil
Date Collected: 03.17.2020 13:44

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	114	25.1	mg/kg	03.20.2020 16:18		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120516

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.20.2020 18:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.20.2020 18:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.20.2020 18:19	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.20.2020 18:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	03.20.2020 18:19	
o-Terphenyl	84-15-1	106	%	70-135	03.20.2020 18:19	



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-4 (3')
Lab Sample Id: 656204-014

Matrix: Soil
Date Collected: 03.17.2020 13:45

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	43.8	4.97	mg/kg	03.20.2020 19:16		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120516

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.20.2020 18:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.20.2020 18:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.20.2020 18:39	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.20.2020 18:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	03.20.2020 18:39	
o-Terphenyl	84-15-1	93	%	70-135	03.20.2020 18:39	



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-4 (5')
Lab Sample Id: 656204-015

Matrix: Soil
Date Collected: 03.17.2020 14:01

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	61.3	50.5	mg/kg	03.20.2020 16:50		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120516

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.20.2020 19:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.20.2020 19:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.20.2020 19:00	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.20.2020 19:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.20.2020 19:00	
o-Terphenyl	84-15-1	107	%	70-135	03.20.2020 19:00	



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-4 (7.5')

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-016

Date Collected: 03.17.2020 14:02

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	40.1	4.96	mg/kg	03.20.2020 19:22		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120516

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.20.2020 19:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.20.2020 19:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.20.2020 19:21	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.20.2020 19:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.20.2020 19:21	
o-Terphenyl	84-15-1	103	%	70-135	03.20.2020 19:21	

**Certificate of Analytical Results 656204****Larson and Associates, Inc., Midland, TX****Skeen 2H Pumping Unit**

Sample Id: **S-6 (2')**
Lab Sample Id: 656204-017

Matrix: Soil
Date Collected: 03.17.2020 14:14

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	387	50.0	mg/kg	03.20.2020 17:15		10

**Certificate of Analytical Results 656204****Larson and Associates, Inc., Midland, TX****Skeen 2H Pumping Unit**

Sample Id: **S-6 (4')**
Lab Sample Id: 656204-018

Matrix: Soil
Date Collected: 03.17.2020 14:15

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	98.3	50.3	mg/kg	03.20.2020 17:21		10

**Certificate of Analytical Results 656204****Larson and Associates, Inc., Midland, TX****Skeen 2H Pumping Unit**

Sample Id: **S-6 (5')**
Lab Sample Id: 656204-019

Matrix: Soil
Date Collected: 03.17.2020 14:17

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	307	49.5	mg/kg	03.20.2020 17:28		10

**Certificate of Analytical Results 656204****Larson and Associates, Inc., Midland, TX****Skeen 2H Pumping Unit**

Sample Id: **S-6 (8')**
Lab Sample Id: 656204-020

Matrix: Soil
Date Collected: 03.17.2020 14:18

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	475	49.5	mg/kg	03.20.2020 17:34		10



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-2 (2')
Lab Sample Id: 656204-021

Matrix: Soil
Date Collected: 03.18.2020 10:02

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	591	49.5	mg/kg	03.20.2020 17:40		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.20.2020 13:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.20.2020 13:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.20.2020 13:04	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.20.2020 13:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	78	%	70-135	03.20.2020 13:04	
o-Terphenyl	84-15-1	83	%	70-135	03.20.2020 13:04	



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-2 (3')
Lab Sample Id: 656204-022

Matrix: Soil
Date Collected: 03.18.2020 10:03

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	373	50.4	mg/kg	03.20.2020 17:47		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.20.2020 14:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.20.2020 14:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.20.2020 14:07	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.20.2020 14:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.20.2020 14:07	
o-Terphenyl	84-15-1	107	%	70-135	03.20.2020 14:07	



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-2 (5')
Lab Sample Id: 656204-023

Matrix: Soil
Date Collected: 03.18.2020 10:06

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	344	49.9	mg/kg	03.20.2020 17:53		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.20.2020 14:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.20.2020 14:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.20.2020 14:28	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.20.2020 14:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	03.20.2020 14:28	
o-Terphenyl	84-15-1	96	%	70-135	03.20.2020 14:28	



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-2 (8')
Lab Sample Id: 656204-024

Matrix: Soil
Date Collected: 03.18.2020 10:07

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:05

Basis: Wet Weight

Seq Number: 3120518

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	261	49.9	mg/kg	03.20.2020 14:24		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.20.2020 14:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.20.2020 14:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.20.2020 14:49	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.20.2020 14:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	03.20.2020 14:49	
o-Terphenyl	84-15-1	92	%	70-135	03.20.2020 14:49	



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-3 (2')
Lab Sample Id: 656204-025

Matrix: Soil
Date Collected: 03.18.2020 10:15

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3120530

Prep Method: E300P

% Moisture:

Date Prep: 03.20.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	323	4.98	mg/kg	03.21.2020 01:26		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3120514

Prep Method: SW8015P

% Moisture:

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.20.2020 15:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.20.2020 15:10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.20.2020 15:10	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.20.2020 15:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	03.20.2020 15:10	
o-Terphenyl	84-15-1	97	%	70-135	03.20.2020 15:10	



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-3 (5')
Lab Sample Id: 656204-026

Matrix: Soil
Date Collected: 03.18.2020 10:16

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

% Moisture:

Analyst: SPC

Date Prep: 03.20.2020 17:00

Basis: Wet Weight

Seq Number: 3120530

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	95.4	4.98	mg/kg	03.21.2020 01:47		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.20.2020 15:31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.20.2020 15:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.20.2020 15:31	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.20.2020 15:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	03.20.2020 15:31	
o-Terphenyl	84-15-1	94	%	70-135	03.20.2020 15:31	



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-3 (8')
Lab Sample Id: 656204-027

Matrix: Soil
Date Collected: 03.18.2020 10:20

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

% Moisture:

Analyst: SPC

Date Prep: 03.20.2020 17:00

Basis: Wet Weight

Seq Number: 3120530

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	19.6	5.02	mg/kg	03.21.2020 01:54		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.20.2020 15:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.20.2020 15:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.20.2020 15:52	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.20.2020 15:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.20.2020 15:52	
o-Terphenyl	84-15-1	100	%	70-135	03.20.2020 15:52	



Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-3 (10')
Lab Sample Id: 656204-028

Matrix: Soil
Date Collected: 03.18.2020 10:21

Date Received: 03.19.2020 09:49

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

% Moisture:

Analyst: SPC

Date Prep: 03.20.2020 17:00

Basis: Wet Weight

Seq Number: 3120530

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.6	5.03	mg/kg	03.21.2020 02:01		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.20.2020 16:13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.20.2020 16:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.20.2020 16:13	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.20.2020 16:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.20.2020 16:13	
o-Terphenyl	84-15-1	105	%	70-135	03.20.2020 16:13	



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.
Skeen 2H Pumping Unit

Analytical Method: Chloride by EPA 300

Seq Number: 3120518

MB Sample Id: 7699379-1-BLK

Matrix: Solid

LCS Sample Id: 7699379-1-BKS

Prep Method: E300P

Date Prep: 03.20.2020

LCSD Sample Id: 7699379-1-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	250	100	249	100	90-110	0	20	mg/kg	03.20.2020 11:20	

Analytical Method: Chloride by EPA 300

Seq Number: 3120520

MB Sample Id: 7699381-1-BLK

Matrix: Solid

LCS Sample Id: 7699381-1-BKS

Prep Method: E300P

Date Prep: 03.20.2020

LCSD Sample Id: 7699381-1-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	250	100	250	100	90-110	0	20	mg/kg	03.20.2020 14:49	

Analytical Method: Chloride by EPA 300

Seq Number: 3120530

MB Sample Id: 7699443-1-BLK

Matrix: Solid

LCS Sample Id: 7699443-1-BKS

Prep Method: E300P

Date Prep: 03.20.2020

LCSD Sample Id: 7699443-1-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	258	103	257	103	90-110	0	20	mg/kg	03.20.2020 23:05	

Analytical Method: Chloride by EPA 300

Seq Number: 3120611

MB Sample Id: 7699487-1-BLK

Matrix: Solid

LCS Sample Id: 7699487-1-BKS

Prep Method: E300P

Date Prep: 03.23.2020

LCSD Sample Id: 7699487-1-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	253	101	255	102	90-110	1	20	mg/kg	03.23.2020 13:19	

Analytical Method: Chloride by EPA 300

Seq Number: 3120518

Parent Sample Id: 656195-004

Matrix: Soil

MS Sample Id: 656195-004 S

Prep Method: E300P

Date Prep: 03.20.2020

MSD Sample Id: 656195-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	766	1260	2060	103	2060	103	90-110	0	20	mg/kg	03.20.2020 18:00	

Analytical Method: Chloride by EPA 300

Seq Number: 3120518

Parent Sample Id: 656199-004

Matrix: Soil

MS Sample Id: 656199-004 S

Prep Method: E300P

Date Prep: 03.20.2020

MSD Sample Id: 656199-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1770	1250	3090	106	3100	106	90-110	0	20	mg/kg	03.20.2020 18:12	

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.

Skeen 2H Pumping Unit

Analytical Method: Chloride by EPA 300

Seq Number: 3120520

Parent Sample Id: 656199-008

Matrix: Soil

MS Sample Id: 656199-008 S

Prep Method: E300P

Date Prep: 03.20.2020

MSD Sample Id: 656199-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	58.9	249	303	98	305	99	90-110	1	20	mg/kg	03.20.2020 16:37	

Analytical Method: Chloride by EPA 300

Seq Number: 3120520

Parent Sample Id: 656251-002

Matrix: Soil

MS Sample Id: 656251-002 S

Prep Method: E300P

Date Prep: 03.20.2020

MSD Sample Id: 656251-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.96	251	254	100	252	99	90-110	1	20	mg/kg	03.20.2020 15:08	

Analytical Method: Chloride by EPA 300

Seq Number: 3120530

Parent Sample Id: 656361-019

Matrix: Soil

MS Sample Id: 656361-019 S

Prep Method: E300P

Date Prep: 03.20.2020

MSD Sample Id: 656361-019 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	194	250	449	102	435	96	90-110	3	20	mg/kg	03.20.2020 23:26	

Analytical Method: Chloride by EPA 300

Seq Number: 3120530

Parent Sample Id: 656361-028

Matrix: Soil

MS Sample Id: 656361-028 S

Prep Method: E300P

Date Prep: 03.20.2020

MSD Sample Id: 656361-028 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	95.9	248	353	104	325	92	90-110	8	20	mg/kg	03.21.2020 01:05	

Analytical Method: Chloride by EPA 300

Seq Number: 3120611

Parent Sample Id: 656464-002

Matrix: Soil

MS Sample Id: 656464-002 S

Prep Method: E300P

Date Prep: 03.23.2020

MSD Sample Id: 656464-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	22.8	249	280	103	280	103	90-110	0	20	mg/kg	03.23.2020 15:02	

Analytical Method: Chloride by EPA 300

Seq Number: 3120611

Parent Sample Id: 656464-007

Matrix: Soil

MS Sample Id: 656464-007 S

Prep Method: E300P

Date Prep: 03.23.2020

MSD Sample Id: 656464-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	57.4	250	312	102	304	99	90-110	3	20	mg/kg	03.23.2020 13:37	

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.

Skeen 2H Pumping Unit

Analytical Method: TPH by SW8015 Mod

Seq Number: 3120514

MB Sample Id: 7699386-1-BLK

Matrix: Solid

LCS Sample Id: 7699386-1-BKS

Prep Method: SW8015P

Date Prep: 03.20.2020

LCSD Sample Id: 7699386-1-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	840	84	822	82	70-135	2	20	mg/kg	03.20.2020 12:21	
Diesel Range Organics (DRO)	<50.0	1000	864	86	862	86	70-135	0	20	mg/kg	03.20.2020 12:21	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	77		78		77		70-135	%	03.20.2020 12:21
o-Terphenyl	84		84		83		70-135	%	03.20.2020 12:21

Analytical Method: TPH by SW8015 Mod

Seq Number: 3120516

MB Sample Id: 7699382-1-BLK

Matrix: Solid

LCS Sample Id: 7699382-1-BKS

Prep Method: SW8015P

Date Prep: 03.20.2020

LCSD Sample Id: 7699382-1-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	852	85	857	86	70-135	1	20	mg/kg	03.20.2020 12:21	
Diesel Range Organics (DRO)	<50.0	1000	936	94	919	92	70-135	2	20	mg/kg	03.20.2020 12:21	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		89		89		70-135	%	03.20.2020 12:21
o-Terphenyl	101		98		97		70-135	%	03.20.2020 12:21

Analytical Method: TPH by SW8015 Mod

Seq Number: 3120514

Matrix: Solid

MB Sample Id: 7699386-1-BLK

Prep Method: SW8015P

Date Prep: 03.20.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.20.2020 12:00	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3120516

Matrix: Solid

MB Sample Id: 7699382-1-BLK

Prep Method: SW8015P

Date Prep: 03.20.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.20.2020 12:00	

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.

Skeen 2H Pumping Unit

Analytical Method: TPH by SW8015 Mod

Seq Number: 3120514

Parent Sample Id: 656204-021

Matrix: Soil

MS Sample Id: 656204-021 S

Prep Method: SW8015P

Date Prep: 03.20.2020

MSD Sample Id: 656204-021 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	997	839	84	878	88	70-135	5	20	mg/kg	03.20.2020 13:25	
Diesel Range Organics (DRO)	<49.9	997	890	89	953	95	70-135	7	20	mg/kg	03.20.2020 13:25	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	85		88		70-135	%	03.20.2020 13:25
o-Terphenyl	90		96		70-135	%	03.20.2020 13:25

Analytical Method: TPH by SW8015 Mod

Seq Number: 3120516

Parent Sample Id: 656204-001

Matrix: Soil

MS Sample Id: 656204-001 S

Prep Method: SW8015P

Date Prep: 03.20.2020

MSD Sample Id: 656204-001 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	886	89	895	90	70-135	1	20	mg/kg	03.20.2020 13:25	
Diesel Range Organics (DRO)	<49.9	998	965	97	974	98	70-135	1	20	mg/kg	03.20.2020 13:25	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		98		70-135	%	03.20.2020 13:25
o-Terphenyl	103		104		70-135	%	03.20.2020 13:25

Analytical Method: BTEX by EPA 8021B

Seq Number: 3120695

MB Sample Id: 7699582-1-BLK

Matrix: Solid

LCS Sample Id: 7699582-1-BKS

Prep Method: SW5030B

Date Prep: 03.23.2020

LCSD Sample Id: 7699582-1-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	0.0976	98	0.0896	90	70-130	9	35	mg/kg	03.23.2020 18:25	
Toluene	<0.00200	0.100	0.0978	98	0.0896	90	70-130	9	35	mg/kg	03.23.2020 18:25	
Ethylbenzene	<0.00200	0.100	0.0997	100	0.0912	91	70-130	9	35	mg/kg	03.23.2020 18:25	
m,p-Xylenes	<0.00400	0.200	0.198	99	0.181	91	70-130	9	35	mg/kg	03.23.2020 18:25	
o-Xylene	<0.00200	0.100	0.100	100	0.0921	92	70-130	8	35	mg/kg	03.23.2020 18:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		111		108		70-130	%	03.23.2020 18:25
4-Bromofluorobenzene	102		107		105		70-130	%	03.23.2020 18:25

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.
Skeen 2H Pumping Unit

Analytical Method: BTEX by EPA 8021B

Seq Number: 3120949

MB Sample Id: 7699754-1-BLK

Matrix: Solid

LCS Sample Id: 7699754-1-BKS

Prep Method: SW5030B

Date Prep: 03.25.2020

LCSD Sample Id: 7699754-1-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	0.101	101	0.0942	94	70-130	7	35	mg/kg	03.25.2020 18:13	
Toluene	<0.00200	0.100	0.0989	99	0.0924	92	70-130	7	35	mg/kg	03.25.2020 18:13	
Ethylbenzene	<0.00200	0.100	0.0985	99	0.0920	92	70-130	7	35	mg/kg	03.25.2020 18:13	
m,p-Xylenes	<0.00400	0.200	0.195	98	0.182	91	70-130	7	35	mg/kg	03.25.2020 18:13	
o-Xylene	<0.00200	0.100	0.0977	98	0.0916	92	70-130	6	35	mg/kg	03.25.2020 18:13	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		111		108		70-130	%	03.25.2020 18:13
4-Bromofluorobenzene	93		98		95		70-130	%	03.25.2020 18:13

Analytical Method: BTEX by EPA 8021B

Seq Number: 3120695

Parent Sample Id: 656199-003

Matrix: Soil

MS Sample Id: 656199-003 S

Prep Method: SW5030B

Date Prep: 03.23.2020

MSD Sample Id: 656199-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.0868	87	0.0880	87	70-130	1	35	mg/kg	03.23.2020 19:06	
Toluene	<0.00200	0.100	0.0859	86	0.0874	87	70-130	2	35	mg/kg	03.23.2020 19:06	
Ethylbenzene	<0.00200	0.100	0.0854	85	0.0884	88	70-130	3	35	mg/kg	03.23.2020 19:06	
m,p-Xylenes	<0.00401	0.200	0.169	85	0.175	87	70-130	3	35	mg/kg	03.23.2020 19:06	
o-Xylene	<0.00200	0.100	0.0861	86	0.0892	88	70-130	4	35	mg/kg	03.23.2020 19:06	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		109		70-130	%	03.23.2020 19:06
4-Bromofluorobenzene	106		107		70-130	%	03.23.2020 19:06

Analytical Method: BTEX by EPA 8021B

Seq Number: 3120949

Parent Sample Id: 656204-012

Matrix: Soil

MS Sample Id: 656204-012 S

Prep Method: SW5030B

Date Prep: 03.25.2020

MSD Sample Id: 656204-012 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	0.0911	91	0.0873	88	70-130	4	35	mg/kg	03.25.2020 18:54	
Toluene	<0.00200	0.100	0.0889	89	0.0849	85	70-130	5	35	mg/kg	03.25.2020 18:54	
Ethylbenzene	<0.00200	0.100	0.0868	87	0.0827	83	70-130	5	35	mg/kg	03.25.2020 18:54	
m,p-Xylenes	<0.00401	0.200	0.172	86	0.164	82	70-130	5	35	mg/kg	03.25.2020 18:54	
o-Xylene	<0.00200	0.100	0.0854	85	0.0818	82	70-130	4	35	mg/kg	03.25.2020 18:54	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		108		70-130	%	03.25.2020 18:54
4-Bromofluorobenzene	97		96		70-130	%	03.25.2020 18:54

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

Lauson & Associates, Inc.
Environmental Consultants

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

Data Reported to:

TRRP report?
☐ Yes ☒ No

S=SOIL
W=WATER
A=AIR

P=PAINT
SL=SLUDGE
OT=OTHER

TIME ZONE:
Time zone/State:

MST

Field
Sample I.D.

Lab #

Date

Time

Matrix

of Containers

HCl

HNO₃H₂SO₄ ☐ NaOH ☐

ICE

UNPRESERVED

PRESERVATION

ANALYSES

BTEX ☐ MTBE ☐
TRPH 418.1 ☐ TPH 1005 ☒ TPH 1006 ☐
GASOLINE MOD 8015 ☒
DIESEL - MOD 8015 ☒
OIL - MOD 8015 ☒
VOC 8260 ☐
SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐
8081 PESTICIDES ☐ 8151 HERBICIDES ☐
TBLP - METALS (RCRA) ☐ TCLP VOC ☐
TCLP - PEST ☐ HERB ☐ Semi-VOC ☐
TOTAL METALS (RCRA) ☐ OTHER LIST ☐
LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐
RCI ☐ TOX ☐ FLASHPOINT ☐
TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐
pH ☐ HEXAVALENT CHROMIUM ☐
EXPLOSIVES ☐ PENTACHLORATE ☐
CHLORIDES ☒ ANIONS ☐ ALKALINITY ☐

FIELD NOTES

DATE: 3/19/2020

PO#:

PROJECT LOCATION OR NAME: SKENAH PUMPING UNIT

LAI PROJECT #: 20-0107-03

COLLECTOR: D5/EC

LAB WORK ORDER#:

PAGE 2 OF 2

CHAIN-OF-CUSTODY

No 1125

S-4 (7.5')	3/17/20	1402	S	1	X	XXX	X
S-6 (2')		1414					
S-6 (3')		1415					
S-6 (5')		1417					
S-6 (6')		1418					
S-2 (2')	3/18/20	1002				XXX	
S-2 (3')		1003					
S-2 (5')		1006					
S-2 (8')		1007					
S-3 (2')		1015					
S-3 (5')		1016					
S-3 (8')		1020					
S-3 (10')		1021					
TOTAL	13						

RELINQUISHED BY: (Signature)
RELINQUISHED BY: (Signature)

DATE/TIME
3/19/20 9:49

RECEIVED BY: (Signature)
RECEIVED BY: (Signature)

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

LABORATORY USE ONLY:
RECEIVING TEMP: C1063

THERM#: D9

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

LABORATORY:

Xenon

CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED

CARRIER BILL #

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 03.19.2020 09.49.00 AM

Work Order #: 656204

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R9

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	.3
#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: 03.19.2020

Checklist reviewed by:



Holly Taylor

Date: 03.24.2020

Certificate of Analysis Summary 661563
Larson and Associates, Inc., Midland, TX
Project Name: Skeen 2H,Chevron

Project Id: 20-0107-03
Contact: Mark Larson
Project Location:

Date Received in Lab: Thu 05.14.2020 10:44
Report Date: 05.19.2020 14:02
Project Manager: Holly Taylor

Analysis Requested	Lab Id:	661563-001	661563-002		
	Field Id:	SP-11 (0-0.5')	SP-11 (0.5-1')		
	Depth:				
	Matrix:	SOIL	SOIL		
	Sampled:	05.13.2020 11:40	05.13.2020 11:43		
BTEx by EPA 8021B	Extracted:	05.18.2020 17:00	05.18.2020 17:00		
	Analyzed:	05.18.2020 21:14	05.18.2020 21:34		
	Units/RL:	mg/kg RL	mg/kg RL		
	Benzene	<0.00202 0.00202	<0.00200 0.00200		
	Toluene	<0.00202 0.00202	<0.00200 0.00200		
	Ethylbenzene	<0.00202 0.00202	<0.00200 0.00200		
	m,p-Xylenes	<0.00403 0.00403	<0.00399 0.00399		
Total Xylenes	o-Xylene	<0.00202 0.00202	<0.00200 0.00200		
	Total Xylenes	<0.00202 0.00202	<0.00200 0.00200		
	Total BTEx	<0.00202 0.00202	<0.00200 0.00200		
Chloride by EPA 300	Extracted:	05.14.2020 15:05	05.14.2020 15:05		
	Analyzed:	05.15.2020 02:19	05.15.2020 02:25		
	Units/RL:	mg/kg RL	mg/kg RL		
Chloride		102 50.0	104 50.2		
TPH by SW8015 Mod	Extracted:	05.14.2020 17:00	05.14.2020 17:00		
	Analyzed:	05.15.2020 09:31	05.15.2020 10:28		
	Units/RL:	mg/kg RL	mg/kg RL		
	Gasoline Range Hydrocarbons (GRO)	<50.0 50.0	<50.0 50.0		
Diesel Range Organics (DRO)		<50.0 50.0	<50.0 50.0		
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0		
Total TPH		<50.0 50.0	<50.0 50.0		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Holly Taylor

Holly Taylor
Project Manager



Analytical Report 661563

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Skeen 2H,Chevron

20-0107-03

05.19.2020

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-32), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-23), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
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 (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



05.19.2020

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

Reference: XENCO Report No(s): **661563**
Skeen 2H, Chevron
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 XENCO Report Number(s) 661563. 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 XENCO Laboratories. 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. 661563 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 XENCO Laboratories 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'. The signature is written in a cursive, flowing style.

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 661563

Larson and Associates, Inc., Midland, TX

Skeen 2H,Chevron

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-11 (0-0.5')	S	05.13.2020 11:40		661563-001
SP-11 (0.5-1')	S	05.13.2020 11:43		661563-002



CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: Skeen 2H, Chevron

Project ID: 20-0107-03
Work Order Number(s): 661563

Report Date: 05.19.2020
Date Received: 05.14.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 661563

Larson and Associates, Inc., Midland, TX

Skeen 2H,Chevron

Sample Id: **SP-11 (0-0.5')**

Matrix: Soil

Date Received: 05.14.2020 10:44

Lab Sample Id: 661563-001

Date Collected: 05.13.2020 11:40

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.14.2020 15:05

Basis: Wet Weight

Seq Number: 3126007

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	102	50.0	mg/kg	05.15.2020 02:19		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 05.14.2020 17:00

Basis: Wet Weight

Seq Number: 3126160

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	05.15.2020 09:31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	05.15.2020 09:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	05.15.2020 09:31	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	05.15.2020 09:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-130	05.15.2020 09:31	
o-Terphenyl	84-15-1	105	%	70-130	05.15.2020 09:31	



Certificate of Analytical Results 661563

Larson and Associates, Inc., Midland, TX

Skeen 2H,Chevron

Sample Id: **SP-11 (0-0.5')**

Matrix: Soil

Date Received: 05.14.2020 10:44

Lab Sample Id: 661563-001

Date Collected: 05.13.2020 11:40

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 05.18.2020 17:00

Basis: Wet Weight

Seq Number: 3126326

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.18.2020 21:14	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.18.2020 21:14	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.18.2020 21:14	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	05.18.2020 21:14	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.18.2020 21:14	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.18.2020 21:14	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.18.2020 21:14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	111	%	70-130	05.18.2020 21:14		
1,4-Difluorobenzene	540-36-3	115	%	70-130	05.18.2020 21:14		



Certificate of Analytical Results 661563

Larson and Associates, Inc., Midland, TX

Skeen 2H,Chevron

Sample Id: **SP-11 (0.5-1')**

Matrix: Soil

Date Received: 05.14.2020 10:44

Lab Sample Id: 661563-002

Date Collected: 05.13.2020 11:43

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.14.2020 15:05

Basis: Wet Weight

Seq Number: 3126007

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	104	50.2	mg/kg	05.15.2020 02:25		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 05.14.2020 17:00

Basis: Wet Weight

Seq Number: 3126160

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	05.15.2020 10:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	05.15.2020 10:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	05.15.2020 10:28	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	05.15.2020 10:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-130	05.15.2020 10:28	
o-Terphenyl	84-15-1	102	%	70-130	05.15.2020 10:28	



Certificate of Analytical Results 661563

Larson and Associates, Inc., Midland, TX

Skeen 2H,Chevron

Sample Id: **SP-11 (0.5-1')**

Matrix: Soil

Date Received: 05.14.2020 10:44

Lab Sample Id: 661563-002

Date Collected: 05.13.2020 11:43

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 05.18.2020 17:00

Basis: Wet Weight

Seq Number: 3126326

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.18.2020 21:34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.18.2020 21:34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.18.2020 21:34	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.18.2020 21:34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.18.2020 21:34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.18.2020 21:34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.18.2020 21:34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	05.18.2020 21:34		
1,4-Difluorobenzene	540-36-3	114	%	70-130	05.18.2020 21:34		



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.

Skeen 2H,Chevron

Analytical Method: Chloride by EPA 300

Seq Number: 3126007

MB Sample Id: 7703342-1-BLK

Matrix: Solid

LCS Sample Id: 7703342-1-BKS

Prep Method: E300P

Date Prep: 05.14.2020

LCSD Sample Id: 7703342-1-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	243	97	236	94	90-110	3	20	mg/kg	05.14.2020 23:35	

Analytical Method: Chloride by EPA 300

Seq Number: 3126007

Parent Sample Id: 661555-004

Matrix: Soil

MS Sample Id: 661555-004 S

Prep Method: E300P

Date Prep: 05.14.2020

MSD Sample Id: 661555-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	58.4	252	298	95	292	93	90-110	2	20	mg/kg	05.14.2020 23:52	

Analytical Method: Chloride by EPA 300

Seq Number: 3126007

Parent Sample Id: 661555-011

Matrix: Soil

MS Sample Id: 661555-011 S

Prep Method: E300P

Date Prep: 05.14.2020

MSD Sample Id: 661555-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	174	249	425	101	426	101	90-110	0	20	mg/kg	05.15.2020 01:16	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3126160

MB Sample Id: 7703367-1-BLK

Matrix: Solid

LCS Sample Id: 7703367-1-BKS

Prep Method: SW8015P

Date Prep: 05.14.2020

LCSD Sample Id: 7703367-1-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	928	93	70-130	1	20	mg/kg	05.15.2020 08:53	
Diesel Range Organics (DRO)	<50.0	1000	897	90	897	90	70-130	0	20	mg/kg	05.15.2020 08:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		117		117		70-130	%	05.15.2020 08:53
o-Terphenyl	107		111		112		70-130	%	05.15.2020 08:53

Analytical Method: TPH by SW8015 Mod

Seq Number: 3126160

Matrix: Solid

MB Sample Id: 7703367-1-BLK

Prep Method: SW8015P

Date Prep: 05.14.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	05.15.2020 08:34	

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.

Skeen 2H,Chevron

Analytical Method: TPH by SW8015 Mod

Seq Number: 3126160

Parent Sample Id: 661563-001

Matrix: Soil

MS Sample Id: 661563-001 S

Prep Method: SW8015P

Date Prep: 05.14.2020

MSD Sample Id: 661563-001 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)	<49.8	996	923	93	933	94	70-130	1	20	mg/kg	05.15.2020 09:50	
Diesel Range Organics (DRO)	<49.8	996	903	91	913	92	70-130	1	20	mg/kg	05.15.2020 09:50	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		119		70-130	%	05.15.2020 09:50
o-Terphenyl	108		108		70-130	%	05.15.2020 09:50

Analytical Method: BTEX by EPA 8021B

Seq Number: 3126326

MB Sample Id: 7703598-1-BLK

Matrix: Solid

LCS Sample Id: 7703598-1-BKS

Prep Method: SW5035A

Date Prep: 05.18.2020

LCSD Sample Id: 7703598-1-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	0.0982	98	70-130	4	35	mg/kg	05.18.2020 17:15	
Toluene	<0.00200	0.100	0.110	110	0.104	104	70-130	6	35	mg/kg	05.18.2020 17:15	
Ethylbenzene	<0.00200	0.100	0.105	105	0.0985	99	70-130	6	35	mg/kg	05.18.2020 17:15	
m,p-Xylenes	<0.00400	0.200	0.210	105	0.197	99	70-130	6	35	mg/kg	05.18.2020 17:15	
o-Xylene	<0.00200	0.100	0.101	101	0.0943	94	70-130	7	35	mg/kg	05.18.2020 17:15	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		104		104		70-130	%	05.18.2020 17:15
4-Bromofluorobenzene	90		101		100		70-130	%	05.18.2020 17:15

Analytical Method: BTEX by EPA 8021B

Seq Number: 3126326

Parent Sample Id: 661896-001

Matrix: Soil

MS Sample Id: 661896-001 S

Prep Method: SW5035A

Date Prep: 05.18.2020

MSD Sample Id: 661896-001 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	0.0910	91	0.100	100	70-130	9	35	mg/kg	05.18.2020 18:08	
Toluene	<0.00199	0.0996	0.0856	86	0.0978	98	70-130	13	35	mg/kg	05.18.2020 18:08	
Ethylbenzene	<0.00199	0.0996	0.0700	70	0.0860	86	70-130	21	35	mg/kg	05.18.2020 18:08	
m,p-Xylenes	<0.00398	0.199	0.141	71	0.173	87	70-130	20	35	mg/kg	05.18.2020 18:08	
o-Xylene	<0.00199	0.0996	0.0668	67	0.0828	83	70-130	21	35	mg/kg	05.18.2020 18:08	X

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		108		70-130	%	05.18.2020 18:08
4-Bromofluorobenzene	99		94		70-130	%	05.18.2020 18:08

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

Aarson & Associates, Inc.
Environmental Consultants

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

Data Reported to:

DATE: 5/14/20 PAGE 1 OF 1
PO#: 601543
PROJECT LOCATION OR NAME: Skeneath, Chevron
LAB PROJECT #: 20-0107-03 COLLECTOR: R0

TRRP report?
☐ Yes ☒ No

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

TIME ZONE:
Time zone/State:
MS T

Field
Sample I.D.

Lab #

Date

Time

Matrix

of Containers

HCl

HNO₃H₂SO₄ ☐ NaOH ☐

ICE

UNPRESERVED

ANALYSES

BTEX ☒ MTBE ☐
TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐
GASOLINE MOD 8015 ☒
DIESEL - MOD 8015 ☒
OIL - MOD 8015 ☒
VOC 8260 ☒
SVOC 8270 ☒ PAH 8270 ☒ HOLDPAH ☐
8081 PESTICIDES ☐ 8151 HERBICIDES ☐
TBLP - METALS (RCRA) ☐ TCLP VOC ☐
TCLP - PEST ☐ HERB ☐ Semi-VOC ☐
TOTAL METALS (RCRA) ☐ OTHER LIST ☐
LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐
RO ☐ TOX ☐ FLASHPOINT ☐
TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐
PH ☐ HEXAVALENT CHROMIUM ☐
EXPLOSIVES ☐ PECHLORATE ☐
CHLORIDE ANIONS ☐ ALKALINITY ☐
MS 500

FIELD NOTES

SP-11 (0-0.5')
SP-11 (0.5-1')

5/13/20 11:40
5/13/20 11:43

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TOTAL

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RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

TURN AROUND TIME

LABORATORY USE ONLY:

RECEIVING TEMP:

THERM#:

CUSTODY SEALS -

BROKEN

INTACT

NOT USED

CARRIER BILL #

HAND DELIVERED

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

LABORATORY: XEROX

No 1152

CHAIN-OF-CUSTODY

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 05.14.2020 10.44.00 AM

Work Order #: 661563

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R9

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.3
#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: 05.14.2020

Checklist reviewed by:



Holly Taylor

Date: 05.18.2020

Certificate of Analysis Summary 678851
Larson and Associates, Inc., Midland, TX

Project Name: Hayhurst Soil Pile- Skeen Back Fill

Date Received in Lab: Mon 11.23.2020 16:36
Report Date: 11.30.2020 14:06
Project Manager: Holly Taylor

Project Id: 20-0107-03
Contact: Mark Larson
Project Location:

Analysis Requested	Lab Id: Field Id: Depth: Matrix: Sampled:	678851-001 C-1 SOIL 11.23.2020 09:30				
	Extracted:	11.24.2020 15:36				
	Analyzed:	11.24.2020 22:35				
	Units/RL:	mg/kg RL				
	Benzene	<0.00200 0.00200				
	Toluene	<0.00200 0.00200				
	Ethylbenzene	<0.00200 0.00200				
	m,p-Xylenes	<0.00399 0.00399				
	o-Xylene	<0.00200 0.00200				
	Total Xylenes	<0.002000 0.002000				
Chloride by EPA 300	Units/RL:	<0.002000 0.002000				
	Extracted:	11.24.2020 14:00				
	Analyzed:	11.24.2020 18:54				
TPH by SW8015 Mod	Units/RL:	mg/kg RL				
	Chloride	<49.9 49.9				
	Extracted:	11.24.2020 12:30				
Gasoline Range Hydrocarbons (GRO)	Analyzed:	11.24.2020 14:46				
	Units/RL:	mg/kg RL				
	Gasoline Range Hydrocarbons (GRO)	<50.1 50.1				
Diesel Range Organics (DRO)	Analyzed:	<50.1 50.1				
	Units/RL:	<50.1 50.1				
	Motor Oil Range Hydrocarbons (MRO)	<50.1 50.1				
Total TPH	Analyzed:	<50.10 50.10				
	Units/RL:	<50.10 50.10				
	Total TPH	<50.10 50.10				

Holly Taylor

BRL - Below Reporting Limit

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



Analytical Report 678851

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Hayhurst Soil Pile- Skeen Back Fill

20-0107-03

11.30.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

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 (T104704219-20-23)
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)



11.30.2020

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

Reference: Eurofins Xenco, LLC Report No(s): **678851**
Hayhurst Soil Pile- Skeen Back Fill
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) 678851. 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. 678851 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 678851

Larson and Associates, Inc., Midland, TX

Hayhurst Soil Pile- Skeen Back Fill

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
C-1	S	11.23.2020 09:30		678851-001



CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: Hayhurst Soil Pile- Skeen Back Fill

Project ID: 20-0107-03
Work Order Number(s): 678851

Report Date: 11.30.2020
Date Received: 11.23.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 678851

Larson and Associates, Inc., Midland, TX

Hayhurst Soil Pile- Skeen Back Fill

Sample Id: C-1
Lab Sample Id: 678851-001

Matrix: Soil
Date Collected: 11.23.2020 09:30

Date Received: 11.23.2020 16:36

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

Analyst: MAB

Date Prep: 11.24.2020 14:00

% Moisture:
Basis: Wet Weight

Seq Number: 3143277

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<49.9	49.9	mg/kg	11.24.2020 18:54	U	5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: MAB

Analyst: CAC

Date Prep: 11.24.2020 12:30

% Moisture:
Basis: Wet Weight

Seq Number: 3143273

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.24.2020 14:46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	11.24.2020 14:46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.24.2020 14:46	U	1
Total TPH	PHC635	<50.10	50.10	mg/kg	11.24.2020 14:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	11.24.2020 14:46	
o-Terphenyl	84-15-1	121	%	70-135	11.24.2020 14:46	



Certificate of Analytical Results 678851

Larson and Associates, Inc., Midland, TX

Hayhurst Soil Pile- Skeen Back Fill

Sample Id: C-1
Lab Sample Id: 678851-001

Matrix: Soil
Date Collected: 11.23.2020 09:30

Date Received: 11.23.2020 16:36

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 11.24.2020 15:36

% Moisture:
Basis: Wet Weight

Seq Number: 3143258

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.24.2020 22:35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.24.2020 22:35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.24.2020 22:35	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	11.24.2020 22:35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.24.2020 22:35	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	11.24.2020 22:35	U	1
Total BTEX		<0.002000	0.002000	mg/kg	11.24.2020 22:35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	122	%	70-130	11.24.2020 22:35	
1,4-Difluorobenzene	540-36-3	105	%	70-130	11.24.2020 22:35	

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.
Hayhurst Soil Pile- Skeen Back Fill

Analytical Method: Chloride by EPA 300

Seq Number: 3143277

MB Sample Id: 7715945-1-BLK

Matrix: Solid

LCS Sample Id: 7715945-1-BKS

Prep Method: E300P

Date Prep: 11.24.2020

LCSD Sample Id: 7715945-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	240	96	238	95	90-110	1	20	mg/kg	11.24.2020 15:42	

Analytical Method: Chloride by EPA 300

Seq Number: 3143277

Parent Sample Id: 678846-001

Matrix: Soil

MS Sample Id: 678846-001 S

Prep Method: E300P

Date Prep: 11.24.2020

MSD Sample Id: 678846-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2690	200	2870	90	2890	101	90-110	1	20	mg/kg	11.24.2020 16:45	

Analytical Method: Chloride by EPA 300

Seq Number: 3143277

Parent Sample Id: 678848-005

Matrix: Soil

MS Sample Id: 678848-005 S

Prep Method: E300P

Date Prep: 11.24.2020

MSD Sample Id: 678848-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	23.8	201	219	97	220	97	90-110	0	20	mg/kg	11.24.2020 17:57	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3143273

MB Sample Id: 7715953-1-BLK

Matrix: Solid

LCS Sample Id: 7715953-1-BKS

Prep Method: SW8015P

Date Prep: 11.24.2020

LCSD Sample Id: 7715953-1-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	1030	103	1010	101	70-135	2	35	mg/kg	11.24.2020 14:06	
Diesel Range Organics (DRO)	<50.0	1000	1040	104	1140	114	70-135	9	35	mg/kg	11.24.2020 14:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		107		114		70-135	%	11.24.2020 14:06
o-Terphenyl	111		105		100		70-135	%	11.24.2020 14:06

Analytical Method: TPH by SW8015 Mod

Seq Number: 3143273

Matrix: Solid

MB Sample Id: 7715953-1-BLK

Prep Method: SW8015P

Date Prep: 11.24.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.24.2020 13:46	

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.
Hayhurst Soil Pile- Skeen Back Fill

Analytical Method: TPH by SW8015 Mod

Seq Number: 3143273

Parent Sample Id: 678851-001

Matrix: Soil

MS Sample Id: 678851-001 S

Prep Method: SW8015P

Date Prep: 11.24.2020

MSD Sample Id: 678851-001 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)	<49.8	995	1150	116	1010	101	70-135	13	35	mg/kg	11.24.2020 15:06	
Diesel Range Organics (DRO)	<49.8	995	1090	110	1130	113	70-135	4	35	mg/kg	11.24.2020 15:06	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	111		115		70-135	%	11.24.2020 15:06
o-Terphenyl	107		104		70-135	%	11.24.2020 15:06

Analytical Method: BTEX by EPA 8021B

Seq Number: 3143258

MB Sample Id: 7715911-1-BLK

Matrix: Solid

LCS Sample Id: 7715911-1-BKS

Prep Method: SW5035A

Date Prep: 11.24.2020

LCSD Sample Id: 7715911-1-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	0.107	107	0.104	104	70-130	3	35	mg/kg	11.24.2020 10:40	
Toluene	<0.00200	0.100	0.0982	98	0.0974	97	70-130	1	35	mg/kg	11.24.2020 10:40	
Ethylbenzene	<0.00200	0.100	0.101	101	0.101	101	71-129	0	35	mg/kg	11.24.2020 10:40	
m,p-Xylenes	<0.00400	0.200	0.208	104	0.205	103	70-135	1	35	mg/kg	11.24.2020 10:40	
o-Xylene	<0.00200	0.100	0.102	102	0.101	101	71-133	1	35	mg/kg	11.24.2020 10:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		102		100		70-130	%	11.24.2020 10:40
4-Bromofluorobenzene	121		110		108		70-130	%	11.24.2020 10:40

Analytical Method: BTEX by EPA 8021B

Seq Number: 3143258

Parent Sample Id: 678846-001

Matrix: Soil

MS Sample Id: 678846-001 S

Prep Method: SW5035A

Date Prep: 11.24.2020

MSD Sample Id: 678846-001 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	0.107	107	0.0881	88	70-130	19	35	mg/kg	11.24.2020 13:34	
Toluene	<0.00200	0.100	0.0960	96	0.0781	78	70-130	21	35	mg/kg	11.24.2020 13:34	
Ethylbenzene	<0.00200	0.100	0.0934	93	0.0728	73	71-129	25	35	mg/kg	11.24.2020 13:34	
m,p-Xylenes	<0.00401	0.200	0.192	96	0.144	72	70-135	29	35	mg/kg	11.24.2020 13:34	
o-Xylene	<0.00200	0.100	0.0928	93	0.0711	71	71-133	26	35	mg/kg	11.24.2020 13:34	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		101		70-130	%	11.24.2020 13:34
4-Bromofluorobenzene	105		112		70-130	%	11.24.2020 13:34

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: 11.23.2020 04.36.00 PM

Work Order #: 678851

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T_NM_007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.4
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#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)?	No
#18 Water VOC samples have zero headspace?	N/A

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Cloe Clifton

Date: 11.23.2020

Checklist reviewed by:



Holly Taylor

Date: 11.23.2020

Project Id: 20-0107-03
Contact: Mark Larson
Project Location:

Date Received in Lab: Tue 11.24.2020 15:31
Report Date: 12.18.2020 14:55
Project Manager: Holly Taylor

Certificate of Analysis Summary 678962

Larson and Associates, Inc., Midland, TX

Project Name: Sken 2H

Analysis Requested	Lab Id: Field Id: Depth: Matrix: Sampled:	678962-001 SW-N SOIL 11.24.2020 10:40	678962-002 SW-E SOIL 11.24.2020 10:42	678962-003 SW-S SOIL 11.24.2020 10:44	678962-004 SW-W SOIL 11.24.2020 10:46	678962-005 C-1 SOIL 11.24.2020 10:48	678962-006 C-2 SOIL 11.24.2020 10:50
	Extracted: Analyzed: Units/RL:	12.02.2020 08:00 12.02.2020 13:35 mg/kg RL <0.00200 0.00200	12.02.2020 08:00 12.02.2020 13:55 mg/kg RL <0.00200 0.00200	12.02.2020 08:00 12.02.2020 14:16 mg/kg RL <0.00200 0.00200	12.02.2020 08:00 12.02.2020 14:36 mg/kg RL <0.00200 0.00200	12.02.2020 08:00 12.02.2020 14:57 mg/kg RL <0.00200 0.00200	12.02.2020 08:00 12.02.2020 15:18 mg/kg RL <0.00200 0.00200
BTEX by EPA 8021B							
Benzene							
Toluene							
Ethylbenzene							
m,p-Xylenes							
o-Xylene							
Total Xylenes							
Total BTEX							
Chloride by EPA 300							
Extracted:		11.25.2020 09:45	11.25.2020 09:45	11.30.2020 15:35	11.25.2020 09:45	11.25.2020 09:45	11.25.2020 09:45
Analyzed:		11.25.2020 12:10	11.25.2020 12:32	12.01.2020 09:25	11.25.2020 13:02	11.25.2020 13:09	11.25.2020 13:16
Units/RL:		mg/kg RL 116 X 50.0	mg/kg RL 289 49.6	mg/kg RL 22.1 4.95	mg/kg RL 253 50.2	mg/kg RL 180 49.7	mg/kg RL 184 49.6
Chloride							
TPH by SW8015 Mod							
Extracted:		12.01.2020 17:00	12.01.2020 17:00	12.01.2020 17:00	12.01.2020 17:00	12.01.2020 17:00	12.01.2020 17:00
Analyzed:		12.02.2020 01:57	12.02.2020 02:55	12.02.2020 03:14	12.02.2020 03:33	12.02.2020 03:52	12.02.2020 04:12
Units/RL:		mg/kg RL <50.0 50.0	mg/kg RL <49.8 49.8	mg/kg RL <50.0 50.0	mg/kg RL <50.0 50.0	mg/kg RL <50.0 50.0	mg/kg RL <49.9 49.9
Gasoline Range Hydrocarbons (GRO)							
Diesel Range Organics (DRO)							
Motor Oil Range Hydrocarbons (MRO)							
Total TPH							

BRL - Below Reporting Limit

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

Holly Taylor

Certificate of Analysis Summary 678962

Larson and Associates, Inc., Midland, TX

Project Id:

20-0107-03

Contact:

Mark Larson

Project Location:

Project Name:

Skeen 2H

Date Received in Lab:

Tue 11.24.2020 15:31

Report Date:

12.18.2020 14:55

Project Manager:

Holly Taylor

Analysis Requested	Lab Id: Field Id: Depth: Matrix: Sampled:	678962-007 C-3 SOIL 11.24.2020 10:52	678962-008 C-4 SOIL 11.24.2020 10:54	678962-009 C-5 SOIL 11.24.2020 10:56	678962-010 C-6 SOIL 11.24.2020 10:58
	Extracted: Analyzed: Units/RL:	12.02.2020 08:00 12.02.2020 15:48 mg/kg RL <0.00200 0.00200	12.02.2020 08:00 12.02.2020 16:08 mg/kg RL <0.00200 0.00200	12.01.2020 08:00 12.01.2020 13:40 mg/kg RL <0.00200 0.00200	12.01.2020 08:00 12.01.2020 14:01 mg/kg RL <0.00199 0.00199
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
m,p-Xylenes		<0.00400 0.00400	<0.00400 0.00400	<0.00399 0.00399	<0.00398 0.00398
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Total Xylenes		<0.002000 0.002000	<0.002000 0.002000	<0.002000 0.002000	<0.001990 0.001990
Total BTEX		<0.002000 0.002000	<0.002000 0.002000	<0.002000 0.002000	<0.001990 0.001990
Chloride by EPA 300	Extracted: Analyzed: Units/RL:	11.25.2020 09:45 11.25.2020 13:24 mg/kg RL 359 50.0	11.25.2020 09:45 11.25.2020 13:31 mg/kg RL 128 49.5	11.25.2020 11:15 11.25.2020 16:33 mg/kg RL 1300 50.3	11.25.2020 11:15 11.25.2020 16:39 mg/kg RL 216 50.1
TPH by SW8015 Mod	Extracted: Analyzed: Units/RL:	12.01.2020 17:00 12.02.2020 04:31 mg/kg RL <50.0 50.0	12.01.2020 17:00 12.02.2020 04:50 mg/kg RL <49.9 49.9	12.01.2020 17:00 12.02.2020 05:09 mg/kg RL <49.9 49.9	12.01.2020 17:00 12.02.2020 05:28 mg/kg RL <50.0 50.0
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0
Diesel Range Organics (DRO)		<50.0 50.0	<49.9 49.9	216 49.9	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0
Total TPH		<50.00 50.00	<49.90 49.90	216.0 49.90	<50.00 50.00

BRL - Below Reporting Limit

Holly Taylor

Analytical Report 678962

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Skeen 2H

20-0107-03

12.18.2020

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 (T104704219-20-23)
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)



12.18.2020

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: Eurofins Xenco, LLC Report No(s): **678962**

Skeen 2H

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) 678962. 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. 678962 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 678962****Larson and Associates, Inc., Midland, TX**

Skeen 2H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW-N	S	11.24.2020 10:40		678962-001
SW-E	S	11.24.2020 10:42		678962-002
SW-S	S	11.24.2020 10:44		678962-003
SW-W	S	11.24.2020 10:46		678962-004
C-1	S	11.24.2020 10:48		678962-005
C-2	S	11.24.2020 10:50		678962-006
C-3	S	11.24.2020 10:52		678962-007
C-4	S	11.24.2020 10:54		678962-008
C-5	S	11.24.2020 10:56		678962-009
C-6	S	11.24.2020 10:58		678962-010

**CASE NARRATIVE****Client Name: Larson and Associates, Inc.****Project Name: Skeen 2H**Project ID: 20-0107-03
Work Order Number(s): 678962Report Date: 12.18.2020
Date Received: 11.24.2020**Sample receipt non conformances and comments:**

12/18/2020 1.001 Revised to change sample IDs for 005-010 per Robert Nelson (email). HT

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3143457 Chloride by EPA 300

Lab Sample ID 678962-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 678962-001, -002, -004, -005, -006, -007, -008.

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

Batch: LBA-3143719 TPH by SW8015 Mod

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

Samples affected are: 678962-004, 678962-002.

Batch: LBA-3143802 BTEX by EPA 8021B

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

Samples affected are: 678962-001.

Lab Sample ID 678962-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, m,p-Xylenes, o-Xylene 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: 678962-001, -002, -003, -004, -005, -006, -007, -008.

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 678962

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **SW-N** Matrix: Soil Date Received: 11.24.2020 15:31
 Lab Sample Id: 678962-001 Date Collected: 11.24.2020 10:40
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE
 Analyst: CHE Date Prep: 11.25.2020 09:45 % Moisture:
 Seq Number: 3143457 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	116	50.0	mg/kg	11.25.2020 12:10	X	10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 12.01.2020 17:00 % Moisture:
 Seq Number: 3143719 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.02.2020 01:57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.02.2020 01:57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.02.2020 01:57	U	1
Total TPH	PHC635	<50.00	50.00	mg/kg	12.02.2020 01:57	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	127	%	70-130	12.02.2020 01:57		
o-Terphenyl	84-15-1	126	%	70-130	12.02.2020 01:57		



Certificate of Analytical Results 678962

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **SW-N**
Lab Sample Id: 678962-001

Matrix: Soil
Date Collected: 11.24.2020 10:40

Date Received: 11.24.2020 15:31

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MNR

Analyst: MNR

Date Prep: 12.02.2020 08:00

% Moisture:
Basis: Wet Weight

Seq Number: 3143802

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.02.2020 13:35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.02.2020 13:35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.02.2020 13:35	UX	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.02.2020 13:35	UX	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.02.2020 13:35	UX	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.02.2020 13:35	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.02.2020 13:35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	0	%	70-130	12.02.2020 13:35	**	
1,4-Difluorobenzene	540-36-3	86	%	70-130	12.02.2020 13:35		



Certificate of Analytical Results 678962

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **SW-E** Matrix: Soil Date Received: 11.24.2020 15:31
 Lab Sample Id: 678962-002 Date Collected: 11.24.2020 10:42
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE
 Analyst: CHE Date Prep: 11.25.2020 09:45 % Moisture:
 Seq Number: 3143457 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	289	49.6	mg/kg	11.25.2020 12:32		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 12.01.2020 17:00 % Moisture:
 Seq Number: 3143719 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.02.2020 02:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	61.9	49.8	mg/kg	12.02.2020 02:55		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.02.2020 02:55	U	1
Total TPH	PHC635	61.90	49.80	mg/kg	12.02.2020 02:55		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	126	%	70-130	12.02.2020 02:55		
o-Terphenyl	84-15-1	144	%	70-130	12.02.2020 02:55	**	



Certificate of Analytical Results 678962

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **SW-E**
Lab Sample Id: 678962-002

Matrix: Soil
Date Collected: 11.24.2020 10:42

Date Received: 11.24.2020 15:31

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MNR

Analyst: MNR

Date Prep: 12.02.2020 08:00

% Moisture:
Basis: Wet Weight

Seq Number: 3143802

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.02.2020 13:55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.02.2020 13:55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.02.2020 13:55	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.02.2020 13:55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.02.2020 13:55	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.02.2020 13:55	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.02.2020 13:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	88	%	70-130	12.02.2020 13:55	
4-Bromofluorobenzene	460-00-4	99	%	70-130	12.02.2020 13:55	



Certificate of Analytical Results 678962

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **SW-S** Matrix: Soil Date Received: 11.24.2020 15:31
 Lab Sample Id: 678962-003 Date Collected: 11.24.2020 10:44
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: SPC
 Analyst: CHE Date Prep: 11.30.2020 15:35 % Moisture:
 Seq Number: 3143554 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	22.1	4.95	mg/kg	12.01.2020 09:25		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 12.01.2020 17:00 % Moisture:
 Seq Number: 3143719 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.02.2020 03:14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.02.2020 03:14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.02.2020 03:14	U	1
Total TPH	PHC635	<50.00	50.00	mg/kg	12.02.2020 03:14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	115	%	70-130	12.02.2020 03:14		
o-Terphenyl	84-15-1	120	%	70-130	12.02.2020 03:14		



Certificate of Analytical Results 678962

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **SW-S**
Lab Sample Id: 678962-003

Matrix: Soil
Date Collected: 11.24.2020 10:44

Date Received: 11.24.2020 15:31

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MNR

Analyst: MNR

Date Prep: 12.02.2020 08:00

% Moisture:
Basis: Wet Weight

Seq Number: 3143802

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.02.2020 14:16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.02.2020 14:16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.02.2020 14:16	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.02.2020 14:16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.02.2020 14:16	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.02.2020 14:16	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.02.2020 14:16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	87	%	70-130	12.02.2020 14:16		
4-Bromofluorobenzene	460-00-4	99	%	70-130	12.02.2020 14:16		



Certificate of Analytical Results 678962

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **SW-W**
Lab Sample Id: 678962-004

Matrix: Soil
Date Collected: 11.24.2020 10:46

Date Received: 11.24.2020 15:31

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 11.25.2020 09:45

% Moisture:
Basis: Wet Weight

Seq Number: 3143457

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	253	50.2	mg/kg	11.25.2020 13:02		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 12.01.2020 17:00

% Moisture:
Basis: Wet Weight

Seq Number: 3143719

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.02.2020 03:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.02.2020 03:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.02.2020 03:33	U	1
Total TPH	PHC635	<50.00	50.00	mg/kg	12.02.2020 03:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	128	%	70-130	12.02.2020 03:33	
o-Terphenyl	84-15-1	141	%	70-130	12.02.2020 03:33	**



Certificate of Analytical Results 678962

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **SW-W**
Lab Sample Id: 678962-004

Matrix: Soil
Date Collected: 11.24.2020 10:46

Date Received: 11.24.2020 15:31

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MNR

Analyst: MNR

Date Prep: 12.02.2020 08:00

% Moisture:
Basis: Wet Weight

Seq Number: 3143802

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.02.2020 14:36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.02.2020 14:36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.02.2020 14:36	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.02.2020 14:36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.02.2020 14:36	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.02.2020 14:36	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.02.2020 14:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	81	%	70-130	12.02.2020 14:36	
4-Bromofluorobenzene	460-00-4	97	%	70-130	12.02.2020 14:36	



Certificate of Analytical Results 678962

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: C-1 Matrix: Soil Date Received: 11.24.2020 15:31
 Lab Sample Id: 678962-005 Date Collected: 11.24.2020 10:48
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE
 Analyst: CHE Date Prep: 11.25.2020 09:45 % Moisture:
 Seq Number: 3143457 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	180	49.7	mg/kg	11.25.2020 13:09		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 12.01.2020 17:00 % Moisture:
 Seq Number: 3143719 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.02.2020 03:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.02.2020 03:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.02.2020 03:52	U	1
Total TPH	PHC635	<50.00	50.00	mg/kg	12.02.2020 03:52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	115	%	70-130	12.02.2020 03:52		
o-Terphenyl	84-15-1	120	%	70-130	12.02.2020 03:52		



Certificate of Analytical Results 678962

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: C-1
Lab Sample Id: 678962-005

Matrix: Soil
Date Collected: 11.24.2020 10:48

Date Received: 11.24.2020 15:31

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MNR

Analyst: MNR

Date Prep: 12.02.2020 08:00

% Moisture:
Basis: Wet Weight

Seq Number: 3143802

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.02.2020 14:57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.02.2020 14:57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.02.2020 14:57	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.02.2020 14:57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.02.2020 14:57	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.02.2020 14:57	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.02.2020 14:57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	12.02.2020 14:57	
1,4-Difluorobenzene	540-36-3	87	%	70-130	12.02.2020 14:57	



Certificate of Analytical Results 678962

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **C-2** Matrix: Soil Date Received: 11.24.2020 15:31
 Lab Sample Id: 678962-006 Date Collected: 11.24.2020 10:50
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE
 Analyst: CHE Date Prep: 11.25.2020 09:45 % Moisture:
 Seq Number: 3143457 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	184	49.6	mg/kg	11.25.2020 13:16		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 12.01.2020 17:00 % Moisture:
 Seq Number: 3143719 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.02.2020 04:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.02.2020 04:12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.02.2020 04:12	U	1
Total TPH	PHC635	<49.90	49.90	mg/kg	12.02.2020 04:12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	115	%	70-130	12.02.2020 04:12		
o-Terphenyl	84-15-1	120	%	70-130	12.02.2020 04:12		



Certificate of Analytical Results 678962

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **C-2**
 Lab Sample Id: 678962-006

Matrix: Soil
 Date Collected: 11.24.2020 10:50

Date Received: 11.24.2020 15:31

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MNR

Analyst: MNR

Date Prep: 12.02.2020 08:00

% Moisture:
 Basis: Wet Weight

Seq Number: 3143802

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.02.2020 15:18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.02.2020 15:18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.02.2020 15:18	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.02.2020 15:18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.02.2020 15:18	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.02.2020 15:18	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.02.2020 15:18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	12.02.2020 15:18		
1,4-Difluorobenzene	540-36-3	85	%	70-130	12.02.2020 15:18		



Certificate of Analytical Results 678962

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **C-3** Matrix: Soil Date Received: 11.24.2020 15:31
 Lab Sample Id: 678962-007 Date Collected: 11.24.2020 10:52
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE
 Analyst: CHE Date Prep: 11.25.2020 09:45 % Moisture:
 Seq Number: 3143457 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	359	50.0	mg/kg	11.25.2020 13:24		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 12.01.2020 17:00 % Moisture:
 Seq Number: 3143719 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.02.2020 04:31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.02.2020 04:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.02.2020 04:31	U	1
Total TPH	PHC635	<50.00	50.00	mg/kg	12.02.2020 04:31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	118	%	70-130	12.02.2020 04:31		
o-Terphenyl	84-15-1	123	%	70-130	12.02.2020 04:31		



Certificate of Analytical Results 678962

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **C-3**
 Lab Sample Id: 678962-007

Matrix: Soil
 Date Collected: 11.24.2020 10:52

Date Received: 11.24.2020 15:31

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MNR

Analyst: MNR

Date Prep: 12.02.2020 08:00

% Moisture:
 Basis: Wet Weight

Seq Number: 3143802

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.02.2020 15:48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.02.2020 15:48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.02.2020 15:48	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.02.2020 15:48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.02.2020 15:48	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.02.2020 15:48	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.02.2020 15:48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	83	%	70-130	12.02.2020 15:48		
4-Bromofluorobenzene	460-00-4	95	%	70-130	12.02.2020 15:48		



Certificate of Analytical Results 678962

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **C-4** Matrix: Soil Date Received: 11.24.2020 15:31
 Lab Sample Id: 678962-008 Date Collected: 11.24.2020 10:54
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE
 Analyst: CHE Date Prep: 11.25.2020 09:45 % Moisture:
 Seq Number: 3143457 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	128	49.5	mg/kg	11.25.2020 13:31		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 12.01.2020 17:00 % Moisture:
 Seq Number: 3143719 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.02.2020 04:50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.02.2020 04:50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.02.2020 04:50	U	1
Total TPH	PHC635	<49.90	49.90	mg/kg	12.02.2020 04:50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	117	%	70-130	12.02.2020 04:50		
o-Terphenyl	84-15-1	122	%	70-130	12.02.2020 04:50		



Certificate of Analytical Results 678962

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: C-4
Lab Sample Id: 678962-008

Matrix: Soil
Date Collected: 11.24.2020 10:54

Date Received: 11.24.2020 15:31

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MNR

Analyst: MNR

Date Prep: 12.02.2020 08:00

% Moisture:
Basis: Wet Weight

Seq Number: 3143802

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.02.2020 16:08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.02.2020 16:08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.02.2020 16:08	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.02.2020 16:08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.02.2020 16:08	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.02.2020 16:08	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.02.2020 16:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	12.02.2020 16:08	
1,4-Difluorobenzene	540-36-3	89	%	70-130	12.02.2020 16:08	



Certificate of Analytical Results 678962

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **C-5** Matrix: Soil Date Received: 11.24.2020 15:31
 Lab Sample Id: 678962-009 Date Collected: 11.24.2020 10:56
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: SPC
 Analyst: CHE Date Prep: 11.25.2020 11:15 % Moisture:
 Seq Number: 3143454 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1300	50.3	mg/kg	11.25.2020 16:33		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 12.01.2020 17:00 % Moisture:
 Seq Number: 3143719 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.02.2020 05:09	U	1
Diesel Range Organics (DRO)	C10C28DRO	216	49.9	mg/kg	12.02.2020 05:09		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.02.2020 05:09	U	1
Total TPH	PHC635	216.0	49.90	mg/kg	12.02.2020 05:09		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	124	%	70-130	12.02.2020 05:09		
o-Terphenyl	84-15-1	129	%	70-130	12.02.2020 05:09		



Certificate of Analytical Results 678962

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **C-5**
Lab Sample Id: 678962-009

Matrix: Soil
Date Collected: 11.24.2020 10:56

Date Received: 11.24.2020 15:31

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MNR

Analyst: MNR

Date Prep: 12.01.2020 08:00

% Moisture:
Basis: Wet Weight

Seq Number: 3143691

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.01.2020 13:40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.01.2020 13:40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.01.2020 13:40	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.01.2020 13:40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.01.2020 13:40	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.01.2020 13:40	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.01.2020 13:40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	85	%	70-130	12.01.2020 13:40		
4-Bromofluorobenzene	460-00-4	97	%	70-130	12.01.2020 13:40		



Certificate of Analytical Results 678962

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **C-6** Matrix: Soil Date Received: 11.24.2020 15:31
 Lab Sample Id: 678962-010 Date Collected: 11.24.2020 10:58
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: SPC
 Analyst: CHE Date Prep: 11.25.2020 11:15 % Moisture:
 Seq Number: 3143454 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	216	50.1	mg/kg	11.25.2020 16:39		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 12.01.2020 17:00 % Moisture:
 Seq Number: 3143719 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.02.2020 05:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.02.2020 05:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.02.2020 05:28	U	1
Total TPH	PHC635	<50.00	50.00	mg/kg	12.02.2020 05:28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	115	%	70-130	12.02.2020 05:28		
o-Terphenyl	84-15-1	118	%	70-130	12.02.2020 05:28		



Certificate of Analytical Results 678962

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: C-6
Lab Sample Id: 678962-010

Matrix: Soil
Date Collected: 11.24.2020 10:58

Date Received: 11.24.2020 15:31

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MNR

Analyst: MNR

Date Prep: 12.01.2020 08:00

% Moisture:
Basis: Wet Weight

Seq Number: 3143691

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.01.2020 14:01	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.01.2020 14:01	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.01.2020 14:01	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.01.2020 14:01	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.01.2020 14:01	U	1
Total Xylenes	1330-20-7	<0.001990	0.001990	mg/kg	12.01.2020 14:01	U	1
Total BTEX		<0.001990	0.001990	mg/kg	12.01.2020 14:01	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	89	%	70-130	12.01.2020 14:01		
4-Bromofluorobenzene	460-00-4	105	%	70-130	12.01.2020 14:01		

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.

Skeen 2H

Analytical Method: Chloride by EPA 300

Seq Number: 3143457

MB Sample Id: 7715949-1-BLK

Matrix: Solid

LCS Sample Id: 7715949-1-BKS

Prep Method: E300P

Date Prep: 11.25.2020

LCSD Sample Id: 7715949-1-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	265	106	265	106	90-110	0	20	mg/kg	11.25.2020 10:13	

Analytical Method: Chloride by EPA 300

Seq Number: 3143554

MB Sample Id: 7715962-1-BLK

Matrix: Solid

LCS Sample Id: 7715962-1-BKS

Prep Method: E300P

Date Prep: 11.25.2020

LCSD Sample Id: 7715962-1-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	259	104	261	104	90-110	1	20	mg/kg	11.25.2020 14:05	

Analytical Method: Chloride by EPA 300

Seq Number: 3143554

MB Sample Id: 7716101-1-BLK

Matrix: Solid

LCS Sample Id: 7716101-1-BKS

Prep Method: E300P

Date Prep: 11.30.2020

LCSD Sample Id: 7716101-1-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	270	108	90-110	0	20	mg/kg	12.01.2020 08:35	

Analytical Method: Chloride by EPA 300

Seq Number: 3143457

Parent Sample Id: 678865-001

Matrix: Soil

MS Sample Id: 678865-001 S

Prep Method: E300P

Date Prep: 11.25.2020

MSD Sample Id: 678865-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3100	2510	6010	116	5880	111	90-110	2	20	mg/kg	11.25.2020 10:35	X

Analytical Method: Chloride by EPA 300

Seq Number: 3143457

Parent Sample Id: 678962-001

Matrix: Soil

MS Sample Id: 678962-001 S

Prep Method: E300P

Date Prep: 11.25.2020

MSD Sample Id: 678962-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	116	2500	3050	117	2960	114	90-110	3	20	mg/kg	11.25.2020 12:18	X

Analytical Method: Chloride by EPA 300

Seq Number: 3143454

Parent Sample Id: 679025-001

Matrix: Soil

MS Sample Id: 679025-001 S

Prep Method: E300P

Date Prep: 11.25.2020

MSD Sample Id: 679025-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	989	248	1200	85	1200	85	90-110	0	20	mg/kg	11.25.2020 14:21	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.
Skeen 2H

Analytical Method: Chloride by EPA 300

Seq Number: 3143454

Parent Sample Id: 679026-005

Matrix: Soil

MS Sample Id: 679026-005 S

Prep Method: E300P

Date Prep: 11.25.2020

MSD Sample Id: 679026-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	63.2	250	311	99	311	99	90-110	0	20	mg/kg	11.25.2020 15:35	

Analytical Method: Chloride by EPA 300

Seq Number: 3143554

Parent Sample Id: 679045-001

Matrix: Soil

MS Sample Id: 679045-001 S

Prep Method: E300P

Date Prep: 11.30.2020

MSD Sample Id: 679045-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9.47	248	275	107	275	107	90-110	0	20	mg/kg	12.01.2020 08:54	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3143719

MB Sample Id: 7716215-1-BLK

Matrix: Solid

LCS Sample Id: 7716215-1-BKS

Prep Method: SW8015P

Date Prep: 12.01.2020

LCSD Sample Id: 7716215-1-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	1100	110	1100	110	70-130	0	20	mg/kg	12.02.2020 01:19	
Diesel Range Organics (DRO)	<50.0	1000	1130	113	1200	120	70-130	6	20	mg/kg	12.02.2020 01:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		130		101		70-130	%	12.02.2020 01:19
o-Terphenyl	122		129		122		70-130	%	12.02.2020 01:19

Analytical Method: TPH by SW8015 Mod

Seq Number: 3143719

Matrix: Solid

MB Sample Id: 7716215-1-BLK

Prep Method: SW8015P

Date Prep: 12.01.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.02.2020 00:59	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3143719

Matrix: Soil

Parent Sample Id: 678962-001

MS Sample Id: 678962-001 S

Prep Method: SW8015P

Date Prep: 12.01.2020

MSD Sample Id: 678962-001 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	1030	103	1080	108	70-130	5	20	mg/kg	12.02.2020 02:17	
Diesel Range Organics (DRO)	<49.9	998	1060	106	1170	117	70-130	10	20	mg/kg	12.02.2020 02:17	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		127		70-130	%	12.02.2020 02:17
o-Terphenyl	113		118		70-130	%	12.02.2020 02:17

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.
Skeen 2H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3143691

Matrix: Solid

Prep Method: SW5035A

Date Prep: 12.01.2020

MB Sample Id: 7716252-1-BLK

LCS Sample Id: 7716252-1-BKS

LCSD Sample Id: 7716252-1-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	0.0857	86	0.110	110	70-130	25	35	mg/kg	12.01.2020 10:57	
Toluene	<0.00200	0.100	0.0893	89	0.102	102	70-130	13	35	mg/kg	12.01.2020 10:57	
Ethylbenzene	<0.00200	0.100	0.0870	87	0.0988	99	70-130	13	35	mg/kg	12.01.2020 10:57	
m,p-Xylenes	<0.00400	0.200	0.169	85	0.190	95	70-130	12	35	mg/kg	12.01.2020 10:57	
o-Xylene	<0.00200	0.100	0.0866	87	0.0959	96	70-130	10	35	mg/kg	12.01.2020 10:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	82		88		94		70-130	%	12.01.2020 10:57
4-Bromofluorobenzene	92		93		91		70-130	%	12.01.2020 10:57

Analytical Method: BTEX by EPA 8021B

Seq Number: 3143802

Matrix: Solid

Prep Method: SW5035A

Date Prep: 12.02.2020

MB Sample Id: 7716344-1-BLK

LCS Sample Id: 7716344-1-BKS

LCSD Sample Id: 7716344-1-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	0.103	103	0.109	109	70-130	6	35	mg/kg	12.02.2020 11:11	
Toluene	<0.00200	0.100	0.0993	99	0.104	104	70-130	5	35	mg/kg	12.02.2020 11:11	
Ethylbenzene	<0.00200	0.100	0.102	102	0.107	107	70-130	5	35	mg/kg	12.02.2020 11:11	
m,p-Xylenes	<0.00400	0.200	0.192	96	0.203	102	70-130	6	35	mg/kg	12.02.2020 11:11	
o-Xylene	<0.00200	0.100	0.0949	95	0.101	101	70-130	6	35	mg/kg	12.02.2020 11:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	82		92		93		70-130	%	12.02.2020 11:11
4-Bromofluorobenzene	94		91		94		70-130	%	12.02.2020 11:11

Analytical Method: BTEX by EPA 8021B

Seq Number: 3143691

Matrix: Soil

Prep Method: SW5035A

Date Prep: 12.01.2020

Parent Sample Id: 678984-001

MS Sample Id: 678984-001 S

MSD Sample Id: 678984-001 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	0.0387	39	0.0759	76	70-130	65	35	mg/kg	12.01.2020 11:39	XF
Toluene	<0.00200	0.0998	0.0458	46	0.0683	68	70-130	39	35	mg/kg	12.01.2020 11:39	XF
Ethylbenzene	<0.00200	0.0998	0.0257	26	0.0383	38	70-130	39	35	mg/kg	12.01.2020 11:39	XF
m,p-Xylenes	<0.00399	0.200	0.0748	37	0.0985	49	70-130	27	35	mg/kg	12.01.2020 11:39	X
o-Xylene	<0.00200	0.0998	0.0505	51	0.0633	63	70-130	22	35	mg/kg	12.01.2020 11:39	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	76		91		70-130	%	12.01.2020 11:39
4-Bromofluorobenzene	105		98		70-130	%	12.01.2020 11:39

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.
Skeen 2H
Analytical Method: BTEX by EPA 8021B

Seq Number: 3143802

Parent Sample Id: 678962-001

Matrix: Soil

MS Sample Id: 678962-001 S

Prep Method: SW5035A

Date Prep: 12.02.2020

MSD Sample Id: 678962-001 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	0.106	106	0.0851	85	70-130	22	35	mg/kg	12.02.2020 11:53	
Toluene	<0.00200	0.100	0.0837	84	0.0776	78	70-130	8	35	mg/kg	12.02.2020 11:53	
Ethylbenzene	<0.00200	0.100	0.0675	68	0.0616	62	70-130	9	35	mg/kg	12.02.2020 11:53	X
m,p-Xylenes	<0.00400	0.200	0.128	64	0.119	60	70-130	7	35	mg/kg	12.02.2020 11:53	X
o-Xylene	<0.00200	0.100	0.0652	65	0.0597	60	70-130	9	35	mg/kg	12.02.2020 11:53	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		85		70-130	%	12.02.2020 11:53
4-Bromofluorobenzene	96		101		70-130	%	12.02.2020 11:53

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

CHAIN-OF-CUSTODY

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 11.24.2020 03.31.00 PM

Work Order #: 678962

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)?	2.9
#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: 11.24.2020

Checklist reviewed by:



Holly Taylor

Date: 11.29.2020

Certificate of Analysis Summary 681077
Larson and Associates, Inc., Midland, TX

Project Name: Skeen 2H

Date Received in Lab: Tue 12.15.2020 10:42
Report Date: 12.22.2020 08:56
Project Manager: Holly Taylor

Project Id: 20-0107-03
Contact: Mark Larson
Project Location:

Analysis Requested	Lab Id: Field Id: Depth: Matrix: Sampled:	681077-001 C-5 SOIL 12.14.2020 13:30				
	Extracted: Analyzed: Units/RL:	12.16.2020 14:00 12.16.2020 19:22 mg/kg RL <0.00200 0.00200				
BTEX by EPA 8021B	Benzene	<0.00200 0.00200				
	Toluene	<0.00200 0.00200				
	Ethylbenzene	<0.00200 0.00200				
	m,p-Xylenes	<0.00400 0.00400				
	o-Xylene	<0.00200 0.00200				
	Total Xylenes	<0.00200 0.00200				
Chloride by EPA 300	Total BTEX	<0.00200 0.00200				
	Extracted: Analyzed: Units/RL:	12.16.2020 10:20 12.16.2020 11:39 mg/kg RL 304 50.4				
TPH by SW8015 Mod	Chloride					
	Extracted: Analyzed: Units/RL:	12.17.2020 14:00 12.18.2020 00:08 mg/kg RL <50.0 50.0				
Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO) Total TPH		<50.0 50.0				
		<50.0 50.0				
		<50.0 50.0				
		<50.0 50.0				

Holly Taylor

BRL - Below Reporting Limit

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

Analytical Report 681077

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Skeen 2H

20-0107-03

12.22.2020

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 (T104704219-20-23)
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)



12.22.2020

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

Reference: Eurofins Xenco, LLC Report No(s): **681077**
Skeen 2H
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) 681077. 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. 681077 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 681077

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
C-5	S	12.14.2020 13:30		681077-001



CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: Skeen 2H

Project ID: 20-0107-03
Work Order Number(s): 681077

Report Date: 12.22.2020
Date Received: 12.15.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 681077

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **C-5** Matrix: Soil Date Received: 12.15.2020 10:42
 Lab Sample Id: 681077-001 Date Collected: 12.14.2020 13:30
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE
 Analyst: CHE Date Prep: 12.16.2020 10:20 % Moisture:
 Seq Number: 3145163 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	304	50.4	mg/kg	12.16.2020 11:39		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 12.17.2020 14:00 % Moisture:
 Seq Number: 3145320 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.18.2020 00:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.18.2020 00:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.18.2020 00:08	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.18.2020 00:08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	105	%	70-130	12.18.2020 00:08		
o-Terphenyl	84-15-1	111	%	70-130	12.18.2020 00:08		



Certificate of Analytical Results 681077

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **C-5**
 Lab Sample Id: 681077-001

Matrix: Soil
 Date Collected: 12.14.2020 13:30

Date Received: 12.15.2020 10:42

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 12.16.2020 14:00

% Moisture:
 Basis: Wet Weight

Seq Number: 3145180

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.16.2020 19:22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.16.2020 19:22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.16.2020 19:22	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.16.2020 19:22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.16.2020 19:22	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.16.2020 19:22	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.16.2020 19:22	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	85	%	70-130	12.16.2020 19:22		
4-Bromofluorobenzene	460-00-4	101	%	70-130	12.16.2020 19:22		

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.

Skeen 2H

Analytical Method: Chloride by EPA 300

Seq Number: 3145163

MB Sample Id: 7717240-1-BLK

Matrix: Solid

LCS Sample Id: 7717240-1-BKS

Prep Method: E300P

Date Prep: 12.16.2020

LCSD Sample Id: 7717240-1-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	254	102	90-110	0	20	mg/kg	12.16.2020 10:42	

Analytical Method: Chloride by EPA 300

Seq Number: 3145163

Parent Sample Id: 680993-005

Matrix: Soil

MS Sample Id: 680993-005 S

Prep Method: E300P

Date Prep: 12.16.2020

MSD Sample Id: 680993-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	13.1	248	272	104	273	105	90-110	0	20	mg/kg	12.16.2020 12:11	

Analytical Method: Chloride by EPA 300

Seq Number: 3145163

Parent Sample Id: 681035-003

Matrix: Soil

MS Sample Id: 681035-003 S

Prep Method: E300P

Date Prep: 12.16.2020

MSD Sample Id: 681035-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	325	251	572	98	575	100	90-110	1	20	mg/kg	12.16.2020 10:58	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3145320

MB Sample Id: 7717394-1-BLK

Matrix: Solid

LCS Sample Id: 7717394-1-BKS

Prep Method: SW8015P

Date Prep: 12.17.2020

LCSD Sample Id: 7717394-1-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	956	96	971	97	70-130	2	20	mg/kg	12.17.2020 17:04	
Diesel Range Organics (DRO)	<50.0	1000	1050	105	1040	104	70-130	1	20	mg/kg	12.17.2020 17:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	111		129		128		70-130	%	12.17.2020 17:04
o-Terphenyl	121		98		97		70-130	%	12.17.2020 17:04

Analytical Method: TPH by SW8015 Mod

Seq Number: 3145320

Matrix: Solid

MB Sample Id: 7717394-1-BLK

Prep Method: SW8015P

Date Prep: 12.17.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.17.2020 16:46	

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.

Skeen 2H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3145320

Parent Sample Id: 680993-001

Matrix: Soil

MS Sample Id: 680993-001 S

Prep Method: SW8015P

Date Prep: 12.17.2020

MSD Sample Id: 680993-001 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	1160	116	1190	119	70-130	3	20	mg/kg	12.17.2020 18:00	
Diesel Range Organics (DRO)	<50.0	999	1150	115	1190	119	70-130	3	20	mg/kg	12.17.2020 18:00	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		119		70-130	%	12.17.2020 18:00
o-Terphenyl	97		128		70-130	%	12.17.2020 18:00

Analytical Method: BTEX by EPA 8021B

Seq Number: 3145180

MB Sample Id: 7717309-1-BLK

Matrix: Solid

LCS Sample Id: 7717309-1-BKS

Prep Method: SW5035A

Date Prep: 12.16.2020

LCSD Sample Id: 7717309-1-BSL

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	0.0851	85	0.0832	83	70-130	2	35	mg/kg	12.16.2020 15:16	
Toluene	<0.00200	0.100	0.0942	94	0.0950	95	70-130	1	35	mg/kg	12.16.2020 15:16	
Ethylbenzene	<0.00200	0.100	0.0976	98	0.101	101	70-130	3	35	mg/kg	12.16.2020 15:16	
m,p-Xylenes	<0.00400	0.200	0.176	88	0.177	89	70-130	1	35	mg/kg	12.16.2020 15:16	
o-Xylene	<0.00200	0.100	0.0867	87	0.0875	88	70-130	1	35	mg/kg	12.16.2020 15:16	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	79		87		87		70-130	%	12.16.2020 15:16
4-Bromofluorobenzene	99		93		96		70-130	%	12.16.2020 15:16

Analytical Method: BTEX by EPA 8021B

Seq Number: 3145180

Parent Sample Id: 681035-003

Matrix: Soil

MS Sample Id: 681035-003 S

Prep Method: SW5035A

Date Prep: 12.16.2020

MSD Sample Id: 681035-003 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	0.101	0.0664	66	0.0562	57	70-130	17	35	mg/kg	12.16.2020 15:57	X
Toluene	<0.00201	0.101	0.0830	82	0.0785	79	70-130	6	35	mg/kg	12.16.2020 15:57	
Ethylbenzene	<0.00201	0.101	0.0897	89	0.0886	89	70-130	1	35	mg/kg	12.16.2020 15:57	
m,p-Xylenes	<0.00402	0.201	0.153	76	0.153	77	70-130	0	35	mg/kg	12.16.2020 15:57	
o-Xylene	<0.00201	0.101	0.0827	82	0.0763	77	70-130	8	35	mg/kg	12.16.2020 15:57	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	82		76		70-130	%	12.16.2020 15:57
4-Bromofluorobenzene	95		94		70-130	%	12.16.2020 15:57

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: 12.15.2020 10.42.00 AM

Work Order #: 681077

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)?	.9
#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

BTEX was in bulk container

* 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: 12.15.2020

Checklist reviewed by:



Holly Taylor

Date: 12.18.2020

Appendix B
Photographs



TEXAS NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT)

REQUIRED INFORMATION

Company Man Contact Information

Name _____

Phone No. _____

GENERATOR		NO. 211125
Operator No. _____	Permit/RRC No. _____	
Operators Name <u>Charon</u>	Lease/Well Name & No. <u>Sheen 22627 State 7-H</u>	
Address _____	County _____	
	API No. <u>30015 41097</u>	
City, State, Zip _____	Rig Name & No. _____	
Phone No. _____	AFE/PO No. _____	

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)		
Oil Based Muds _____	NON-INJECTABLE WATERS	OTHER EXEMPT WASTES (type and generation process of the waste) <u>Belly</u>
Oil Based Cuttings _____	Washout Water (Non-Injectable) _____	
Water Based Muds _____	Completion Fluid/Flow back (Non-Injectable) _____	
Water Based Cuttings _____	Produced Water (Non-Injectable) _____	
Produced Formation Solids _____	Gathering Line Water/Waste (Non-Injectable) _____	
Tank Bottoms _____	INTERNAL USE ONLY	
E&P Contaminated Soil <u>✓</u>	Truck Washout (exempt waste) _____	
Gas Plant Waste _____		
WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES		

NON-EXEMPT E&P Waste/Service Identification and Amount	
All non-exempt E&P waste must be analysed and be below the threshold limits for toxicity (TCLP), Ignitability, Corrosivity and Reactivity.	
Non-Exempt Other _____	*please select from Non-Exempt Waste List on back

QUANTITY	B - BARRELS	Y - YARDS	E - EACH
	<u>20</u>		

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

- ☐ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)
- ☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)
- ☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below) _____

(PRINT) AUTHORIZED AGENTS SIGNATURE _____ DATE _____ SIGNATURE _____

TRANSPORTER	
Transporter's Name <u>JMT</u>	Driver's Name <u>Bryce Herrera</u>
Address _____	Print Name _____
	Phone No. _____
Phone No. _____	Truck No. <u>162</u>

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

12-1-20 SHIPMENT DATE Bryce Herrera DRIVER'S SIGNATURE 12-1-20 DELIVERY DATE Bryce Herrera DRIVER'S SIGNATURE

TRUCK TIME STAMP	DISPOSAL FACILITY	RECEIVING AREA
IN: <u>3:33 PM</u> OUT: _____		Name/No. <u>D1</u>

Site Name/ Permit No. Red Bluff Facility/ STF-065 Phone No. 432-448-4239

Address 5053 US Highway 285, Orla, TX 79770

NORM READINGS TAKEN? (Circle One) YES 8 NO If YES, was reading > 50 micro roentgens? (circle one) YES NO

Chemical Analysis (Mg/l) _____ Conductivity (mmhos/cm) _____ pH _____

TANK BOTTOMS			
Feet	Inches	BS&W/BBLs Received	BS&W (%)
1st Gauge _____	_____	Free Water	_____
2nd Gauge _____	_____	Total Received	_____
Received _____	_____		

I hereby certify that the above load material has been (circle one): ACCEPTED 12-1-20 Rel If denied, why? MNawamele

NAME (PRINT) _____ DATE _____ TITLE _____ SIGNATURE _____

CHEVRON MCBU Carlsbad, NM										
NO #CAR- 3382 NON-HAZARDOUS WASTE MANIFEST					1. PAGE <u>1</u> OF <u>4</u>		2. TRAILER NO. <u>162</u>			
GENERATOR'S	3. COMPANY NAME CHEVRON CARLSBAD			4. ADDRESS 3150 E. GREENE ST.			5. PICK-UP DATE 12-1-2020			
	PHONE NO. 575-887-5676			CITY STATE ZIP CARLSBAD, NM 88220			6.			
	7. NAME OR DESCRIPTION OF WASTE SHIPPED: Contaminated Soil D.I + PW						8. CONTAINERS		9. TOTAL QUANTITY	
	a. API - 30615410470001						No. 1		Type BD	
	b. COST CODE UCRE 12000									
TRANSPORTER'S	c.									
	d.									
	12. COMMENTS OR SPECIAL INSTRUCTIONS: SCREEN 2 Well Site Cleanup						13. WASTE PROFILE NO.			
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT CHEVRON CARLSBAD						24-HOUR EMERGENCY NO. 575-887-5676			
	15. GENERATOR'S CERTIFICATION: Hereby declare that the contents of this consignment are fully and accurately described above.									
DISPOSAL SITE	PRINTED TYPED NAME STEPHEN POE CVX					SIGNATURE <i>Steph Poe CVX</i>			DATE 12-1-2020	
	16. TRANSPORTER (1) NAME Angela Herrera RB					17. TRANSPORTER (2) NAME				
	IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:					IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:				
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME John Doe					19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME				
	SIGNATURE <i>John Doe</i> DATE 12-1-20					SIGNATURE DATE				
DISPOSAL FACILITY	ADDRESS 3360 Environmental Solutions - Red Bluff			PHONE:						
	5053 US Highway 285									
	PERMIT NO. Orla, TX 79770 432-448-4239									
21. DISPOSAL FACILITY'S CERTIFICATION: I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.										
AUTHORIZED SIGNATURE <i>Maria Navarrete</i>					CELL NO. DL		DATE 12-01-20		TIME 3:33pm	

Disposal Site: Please complete Disposal Facility section at bottom of form and
mail copy of completed form to Chevron Carlsbad 3150 E. Greene St. Carlsbad, NM 88220

GENERATOR: COPY 1

TRANSPORTER: COPY 2

DISPOSAL SITE: COPY 3 & 4



TEXAS NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT)

REQUIRED INFORMATION

Company Man Contact Information

Name _____

Phone No. _____

GENERATOR

NO. **211131**

Operator No. _____
 Operators Name Cheron
 Address _____
 City, State, Zip _____
 Phone No. _____

Permit/RRC No. _____
 Lease/Well Name & No. Skene 22 27 stat 7-H
 County 30-015 41047
 API No. _____
 Rig Name & No. _____
 AFE/PO No. _____

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds	NON-INJECTABLE WATERS	OTHER EXEMPT WASTES (type and generation process of the waste)
Oil Based Cuttings	Washout Water (Non-Injectable)	<u>Bolts</u>
Water Based Muds	Completion Fluid/Flow back (Non-Injectable)	
Water Based Cuttings	Produced Water (Non-Injectable)	
Produced Formation Solids	Gathering Line Water/Waste (Non-Injectable)	
Tank Bottoms	INTERNAL USE ONLY	
E&P Contaminated Soil	Truck Washout (exempt waste)	
Gas Plant Waste		

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount

All non-exempt E&P waste must be analysed and be below the threshold limits for toxicity (TCLP), Ignitability, Corrosivity and Reactivity.

Non-Exempt Other _____ *please select from Non-Exempt Waste List on back

QUANTITY B - BARRELS 20 Y - YARDS E - EACH

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

- ☐ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)
- ☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)
- ☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

(PRINT) AUTHORIZED AGENTS SIGNATURE

DATE

SIGNATURE

TRANSPORTER

Transporter's Name JHJ
 Address _____
 Phone No. _____

Driver's Name Frederick
 Print Name _____
 Phone No. _____
 Truck No. 162

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

SHIPMENT DATE

DRIVER'S SIGNATURE

DELIVERY DATE

DRIVER'S SIGNATURE

TRUCK TIME STAMP	DISPOSAL FACILITY	RECEIVING AREA
IN: <u>1:51 PM</u> OUT: _____		Name/No. <u>D1</u>

Site Name/ Permit No. Red Bluff Facility/ STF-065
 Address 5053 US Highway 285, Orla, TX 79770

Phone No. 432-448-4239

NORM READINGS TAKEN? (Circle One)

YES

NO

If YES, was reading > 50 micro roentgens? (circle one)

YES

NO

Chemical Analysis (Mg/l)
 Chloride

Conductivity (mmhos/cm)
 pH

TANK BOTTOMS

	Feet	Inches
1st Gauge		
2nd Gauge		
Received		

BS&W/BBLS Received	BS&W (%)
Free Water	
Total Received	

I hereby certify that the above load material has been (circle one):

ACCEPTED

DENIED

If denied, why?

Maric Navamete
 NAME (PRINT)

12-01-20
 DATE

Roc
 TITLE

M Navamete
 SIGNATURE

CHEVRON											
MCBU											
Carlsbad, NM											
NO #CAR- 8080 NON-HAZARDOUS WASTE MANIFEST						1. PAGE 1 OF 1		2. TRAILER NO.			
G E N E R A T O R	3. COMPANY NAME CHEVRON CARLSBAD			4. ADDRESS 3150 E. GREENE ST.			5. PICK-UP DATE 12/2				
	PHONE NO. 575-887-5676			CITY CARLSBAD, NM			STATE NM			ZIP 88220	
	7. NAME OR DESCRIPTION OF WASTE SHIPPED: Contaminated Soil Oil & PW						8. CONTAINERS No. Type		9. TOTAL QUANTITY		10. UNIT WT/Vol.
	a. APE - 306154 104 70001						1 BD		20 yds		
	b. 1001 CODE - 10000 12000										
12. COMMENTS OR SPECIAL INSTRUCTIONS: SKEN 2 wellsite cleanup						13. WASTE PROFILE NO.					
14. IN CASE OF EMERGENCY OR SPILL, CONTACT											
CHEVRON CARLSBAD 24-HOUR EMERGENCY NO. 575-887-5676											
15. GENERATOR'S CERTIFICATION: Hereby declare that the contents of this consignment are fully and accurately described above.											
T R A N S P O R T E R S	16. TRANSPORTER (1)					17. TRANSPORTER (2)					
	NAME					NAME					
	IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:					IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:					
	18. TRANSPORTER (1): Acknowledgment of receipt of material					19. TRANSPORTER (2): Acknowledgment of receipt of material					
PRINTED/TYPED NAME					PRINTED/TYPED NAME						
SIGNATURE					SIGNATURE						
DATE					DATE						
D I S P O S I T I O N	Red Bluff Environmental Solutions - Red Bluff						PHONE:				
	5053 US Highway 285										
	Orla, TX 79770 432-448-4239						20. COMMENTS				
	PERMIT NO.										
21. DISPOSAL FACILITY'S CERTIFICATION: I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.											
AUTHORIZED SIGNATURE Maria Navarrete						CELL NO. D		DATE 12-20		TIME 1:51	

Disposal Site: Please complete Disposal Facility section at bottom of form and
mail copy of completed form to Chevron Carlsbad 3150 E. Greene St. Carlsbad, NM 88220

GENERATOR: COPY 1

TRANSPORTER: COPY 2

DISPOSAL SITE: COPY 3 & 4



TEXAS NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT)

REQUIRED INFORMATION

Company Man Contact Information

Name _____

Phone No. _____

GENERATOR		NO. 211132
Operator No. _____	Permit/RRC No. _____	
Operators Name <u>Arcon</u>	Lease/Well Name & No. <u>SKan 22627 State FH</u>	
Address _____	County _____	
City, State, Zip _____	API No. <u>30-015-91047</u>	
Phone No. _____	Rig Name & No. _____	
	AFE/PO No. _____	

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)		
Oil Based Muds _____	NON-INJECTABLE WATERS	OTHER EXEMPT WASTES (type and generation process of the waste)
Oil Based Cuttings _____	Washout Water (Non-Injectable) _____	<u>Belly</u>
Water Based Muds _____	Completion Fluid/Flow back (Non-Injectable) _____	
Water Based Cuttings _____	Produced Water (Non-Injectable) _____	
Produced Formation Solids _____	Gathering Line Water/Waste (Non-Injectable) _____	
Tank Bottoms _____	INTERNAL USE ONLY	
E&P Contaminated Soil <u>✓</u>	Truck Washout (exempt waste) _____	
Gas Plant Waste _____		
WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES		

NON-EXEMPT E&P Waste/Service Identification and Amount	
All non-exempt E&P waste must be analysed and be below the threshold limits for toxicity (TCLP), Ignitability, Corrosivity and Reactivity.	
Non-Exempt Other _____	*please select from Non-Exempt Waste List on back

QUANTITY	B - BARRELS	Y - YARDS	E - EACH
	<u>20</u>		

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

- ☐ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)
- ☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)
- ☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below) _____

(PRINT) AUTHORIZED AGENTS SIGNATURE _____ DATE _____ SIGNATURE _____

TRANSPORTER	
Transporter's Name <u>JHT</u>	Driver's Name <u>Arac Herrera</u>
Address _____	Print Name _____
Phone No. _____	Phone No. <u>162</u>
	Truck No. _____

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

12-1-20 SHIPMENT DATE 12-1-20 DELIVERY DATE 12-1-20 DRIVER'S SIGNATURE Arac Herrera

IN: <u>12:00AM</u>	DISPOSAL FACILITY	RECEIVING AREA <u>D1</u>
OUT: _____	Name/No. _____	

Site Name/ Permit No. Red Bluff Facility/ STF-065 Phone No. 432-448-4239

Address 5053 US Highway 285, Orla, TX 79770

NORM READINGS TAKEN? (Circle One) YES NO

Chloride _____ Conductivity (mmhos/cm) _____ pH _____

Chemical Analysis (Mg/I) _____

TANK BOTTOMS	
Feet	Inches
1st Gauge _____	BS&W/BLS Received _____
2nd Gauge _____	Free Water _____
Received _____	Total Received _____
	BS&W (%) _____

I hereby certify that the above load material has been (circle one): ACCEPTED 12-01-20 Rec If denied, why? MNawane

NAME (PRINT) _____ DATE _____ TITLE _____ SIGNATURE _____

CHEVRON MCBU Carlsbad, NM										
NO #CAR- 3378 NON-HAZARDOUS WASTE MANIFEST					1. PAGE <u>1</u> OF <u>4</u>		2. TRAILER NO.			
GENERATOR	3. COMPANY NAME CHEVRON CARLSBAD			4. ADDRESS 3150 E. GREENE ST.			5. PICK-UP DATE 12-1-2020			
	PHONE NO. 575-887-5676			CITY STATE ZIP CARLSBAD, NM 88220			6.			
	7. NAME OR DESCRIPTION OF WASTE SHIPPED: Contaminated Soil D.I. & PW						8. CONTAINERS No. Type		9. TOTAL QUANTITY	
	a. API - 30015410470001						1 BD		20 yds	
	b. Cost Code - UCRE 1200P									
	c.									
TRANSPORTER	12. COMMENTS OR SPECIAL INSTRUCTIONS: Well Site Clean up SPEER 2						13. WASTE PROFILE NO.			
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT									
	CHEVRON CARLSBAD						24-HOUR EMERGENCY NO. 575-887-5676			
	15. GENERATOR'S CERTIFICATION: Hereby declare that the contents of this consignment are fully and accurately described above.									
DISPOSAL SITE	PRINTED TYPED NAME STEPHEN POE CVX					SIGNATURE Stephen Poe CVX		DATE 12-1-2020		
	16. TRANSPORTER (1) NAME Anthony R8m					17. TRANSPORTER (2) NAME				
	IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE: 432-232-1583					IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:				
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME Vicki SIGNATURE Vicki DATE 12-1-20					19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME _____ SIGNATURE _____ DATE _____				
DISPOSAL SITE	ADDRESS: R360 Environmental Solutions - Red Bluff			PHONE:						
	5053 US Highway 285									
	PERMIT NO. Orla, TX 79770 432-448-4239			20. COMMENTS						
	21. DISPOSAL FACILITY'S CERTIFICATION: I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.									
DISPOSAL SITE	AUTHORIZED SIGNATURE Marla Navarrete					CELL NO. DI		DATE 12-01-20		
								TIME 12:00 AM		

Disposal Site: Please complete Disposal Facility section at bottom of form and
mail copy of completed form to Chevron Carlsbad 3150 E. Greene St. Carlsbad, NM 88220

GENERATOR: COPY 1

TRANSPORTER: COPY 2

DISPOSAL SITE: COPY 3 & 4



TEXAS NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT)

REQUIRED INFORMATION

Company Man Contact Information

Name _____

Phone No. _____

GENERATOR		NO. 211133
Operator No. _____	Permit/RRC No. _____	Screen 22027 State 2H 30-015-41047
Operators Name <u>Cherion</u>	Lease/Well Name & No. _____	
Address _____	County _____	
City, State, Zip _____	API No. _____	
Phone No. _____	Rig Name & No. _____	
		A/E/PO No. _____

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)		
Oil Based Muds _____ Oil Based Cuttings _____ Water Based Muds _____ Water Based Cuttings _____ Produced Formation Solids _____ Tank Bottoms _____ E&P Contaminated Soil _____ Gas Plant Waste _____	NON-INJECTABLE WATERS Washout Water (Non-Injectable) _____ Completion Fluid/Flow back (Non-Injectable) _____ Produced Water (Non-Injectable) _____ Gathering Line Water/Waste (Non-Injectable) _____ INTERNAL USE ONLY Truck Washout (exempt waste) _____	OTHER EXEMPT WASTES (type and generation process of the waste) <u>Belly dump</u>
WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES		

NON-EXEMPT E&P Waste/Service Identification and Amount	
All non-exempt E&P waste must be analysed and be below the threshold limits for toxicity (TCLP), Ignitability, Corrosivity and Reactivity.	
Non-Exempt Other _____	*please select from Non-Exempt Waste List on back

QUANTITY	B - BARRELS <u>20</u>	Y - YARDS	E - EACH
----------	-----------------------	-----------	----------

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

- ☐ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)
- ☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)
- ☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below) _____

(PRINT) AUTHORIZED AGENTS SIGNATURE _____ DATE _____ SIGNATURE _____

TRANSPORTER	
Transporter's Name <u>JHT</u>	Driver's Name <u>Fred Herrera</u>
Address _____	Print Name _____
Phone No. _____	Phone No. _____
	Truck No. <u>162</u>

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

SHIPMENT DATE <u>12-1-20</u>	DRIVER'S SIGNATURE <u>[Signature]</u>	DELIVERY DATE <u>12-1-20</u>	DRIVER'S SIGNATURE <u>[Signature]</u>
------------------------------	---------------------------------------	------------------------------	---------------------------------------

TRUCK TIME STAMP	DISPOSAL FACILITY	RECEIVING AREA
IN: <u>10:30 AM</u> OUT: _____		Name/No. <u>DI</u>

Site Name/ Permit No. <u>Red Bluff Facility/ STF-065</u>	Phone No. <u>432-448-4239</u>
Address <u>5053 US Highway 285, Orla, TX 79770</u>	

NORM READINGS TAKEN? (Circle One) <u>YES</u> NO Chloride _____ Chemical Analysis (Mg/l) _____	If YES, was reading > 50 micro roentgens? (circle one) YES NO Conductivity (mmhos/cm) _____ pH _____
---	---

TANK BOTTOMS			
Feet	Inches	BS&W/BBLS Received	BS&W (%)
1st Gauge _____	_____	Free Water _____	_____
2nd Gauge _____	_____	Total Received _____	_____

I hereby certify that the above load material has been (circle one): <u>ACCEPTED</u> <u>DENIED</u> If denied, why? _____			
Name (PRINT) <u>Maria Nunez</u>	DATE <u>12-1-20</u>	TITLE <u>Rec</u>	SIGNATURE <u>[Signature]</u>

CHEVRON										
MCBU										
Carlsbad, NM										
NO #CAR- <u>5510</u> NON-HAZARDOUS WASTE MANIFEST						1. PAGE <u>1</u> OF <u>1</u>		2. TRAILER NO. <u>153</u>		
G E N E R A T O R	3. COMPANY NAME CHEVRON CARLSBAD			4. ADDRESS 3150 E. GREENE ST.			5. PICK-UP DATE 12-1-2020			
	PHONE NO. 575-887-5676			CITY STATE ZIP CARLSBAD, NM 88220			6.			
	7. NAME OR DESCRIPTION OF WASTE SHIPPED: CONTAMINATED SOIL DIT & VW						8. CONTAINERS No. Type		9. TOTAL QUANTITY	
	a. Oil API - 30015416470001						1		312	
	b. Propanol-178 Cost Code MCBP 12000									
	c.									
	d.									
	12. COMMENTS OR SPECIAL INSTRUCTIONS: Well site clean up							13. WASTE PROFILE NO.		
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT									
	CHEVRON CARLSBAD 24-HOUR EMERGENCY NO. 575-887-5676									
15. GENERATOR'S CERTIFICATION: Hereby declare that the contents of this consignment are fully and accurately described above.										
T R A N S P O R T E R S	16. TRANSPORTER (1)					17. TRANSPORTER (2)				
	NAME Stephen Pore					NAME Steph Pore				
	IN CASE OF EMERGENCY CONTACT: 575-887-5676					IN CASE OF EMERGENCY CONTACT:				
	EMERGENCY PHONE: 575-887-5676					EMERGENCY PHONE:				
D I S P O S I T O R S	18. TRANSPORTER (1): Acknowledgment of receipt of material					19. TRANSPORTER (2): Acknowledgment of receipt of material				
	PRINTED/TYPED NAME Stephen Pore					PRINTED/TYPED NAME _____				
	SIGNATURE _____ DATE _____					SIGNATURE _____ DATE _____				
	ADDRESS: 5053 US Highway 285					PHONE: _____				
PERMIT NO. _____					20. COMMENTS Orla, TX 79770 432-448-4239					
21. DISPOSAL FACILITY'S CERTIFICATION: I Hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.										
AUTHORIZED SIGNATURE Maria Navarrete					CELL NO. DI		DATE 12-01-20		TIME 10:38AM	

Disposal Site: Please complete Disposal Facility section at bottom of form and
mail copy of completed form to Chevron Carlsbad 3150 E. Greene St. Carlsbad, NM 88220

GENERATOR: COPY 1

TRANSPORTER: COPY 2

DISPOSAL SITE: COPY 3 & 4



TEXAS NON-HAZARDOUS OILFIELD WASTE MANIFEST

Company Man Contact Information

(PLEASE PRINT)

REQUIRED INFORMATION

Name

Phone No.

GENERATOR

NO.

212866

Operator No. _____
 Operators Name Chellon
 Address _____
 City, State, Zip _____
 Phone No. _____

Permit/RRC No. Skeon 2627
 Lease/Well Name & No. State 241
 County 30015410470001
 API No. _____
 Rig Name & No. _____
 AFE/PO No. _____

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds	NON-INJECTABLE WATERS	OTHER EXEMPT WASTES (type and generation process of the waste)
Oil Based Cuttings	Washout Water (Non-Injectable)	<u>bell y</u>
Water Based Muds	Completion Fluid/Flow back (Non-Injectable)	
Water Based Cuttings	Produced Water (Non-Injectable)	
Produced Formation Solids	Gathering Line Water/Waste (Non-Injectable)	
Tank Bottoms	INTERNAL USE ONLY	
E&P Contaminated Soil	Truck Washout (exempt waste)	
Gas Plant Waste		

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount

All non-exempt E&P waste must be analysed and be below the threshold limits for toxicity (TCLP), Ignitability, Corrosivity and Reactivity.

Non-Exempt Other _____ *please select from Non-Exempt Waste List on back

QUANTITY B - BARRELS 20 Y - YARDS E - EACH

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

- ☐ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)
- ☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)
- ☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

(PRINT) AUTHORIZED AGENTS SIGNATURE

DATE

SIGNATURE

TRANSPORTER

Transporter's Name Rtm
 Address SHIT
 Phone No. _____

Driver's Name fabian Contreras
 Print Name _____
 Phone No. _____
 Truck No. _____

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

SHIPMENT DATE 12-1-20 DRIVER'S SIGNATURE [Signature] DELIVERY DATE 12-1-20 DRIVER'S SIGNATURE [Signature]

TRUCK TIME STAMP IN: 3:30 PM OUT: _____

DISPOSAL FACILITY

RECEIVING AREA

Name/No. DL

Site Name/ Permit No. Red Bluff Facility/ STF-065 Phone No. 432-448-4239
 Address 5053 US Highway 285, Orla, TX 79770

NORM READINGS TAKEN? (Circle One)

YES 08

NO

If YES, was reading > 50 micro roentgens? (circle one)

YES

NO 6

Chemical Analysis (Mg/l) _____ Conductivity (mmhos/cm) _____ pH _____

TANK BOTTOMS

Feet	Inches	BS&W/BBLs Received	BS&W (%)
1st Gauge		Free Water	
2nd Gauge		Total Received	
Received			

I hereby certify that the above load material has been (circle one) ACCEPTED DENIED If denied, why?

NAME (PRINT) Maria Nawamete DATE 12-1-20 TITLE Roe SIGNATURE [Signature]

CHEVRON											
MCBU											
Carlsbad, NM											
NO #CAR-0533		NON-HAZARDOUS WASTE MANIFEST				1. PAGE <u>1</u> OF <u>4</u>		2. TRAILER NO.			
GENERATOR	3. COMPANY NAME CHEVRON CARLSBAD		4. ADDRESS 3150 E. GREENE ST.			5. PICK-UP DATE <u>12-01-20</u>					
	PHONE NO. 575-887-5676		CITY STATE ZIP CARLSBAD, NM 88220			6.					
	7. NAME OR DESCRIPTION OF WASTE SHIPPED: <u>CONTAMINATED SOIL DIT + 120</u>					8. CONTAINERS No. Type		9. TOTAL QUANTITY		10. UNIT WT/Vol.	
	a. <u>API - 3201541047000</u>					1		1			
	b. <u>Cost Code WORK LABOR</u>										
	c.										
	d.										
	12. COMMENTS OR SPECIAL INSTRUCTIONS:						13. WASTE PROFILE NO.				
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT										
	CHEVRON CARLSBAD								24-HOUR EMERGENCY NO. 575-887-5676		
TRANSPORTER	15. GENERATOR'S CERTIFICATION: Hereby declare that the contents of this consignment are fully and accurately described above.										
	PRINTED TYPED NAME <u>STEPHEN PDE CVX</u>					SIGNATURE <u>[Signature]</u>			DATE <u>12-01-20</u>		
	16. TRANSPORTER (1) NAME <u>[Name]</u>					17. TRANSPORTER (2) NAME <u>[Name]</u>					
	IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE: <u>[Phone]</u>					IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE: <u>[Phone]</u>					
DISPOSAL	18. TRANSPORTER (1): Acknowledgment of receipt of material					19. TRANSPORTER (2): Acknowledgment of receipt of material					
	PRINTED/TYPED NAME <u>[Name]</u>					PRINTED/TYPED NAME <u>[Name]</u>					
	SIGNATURE <u>[Signature]</u> DATE <u>[Date]</u>					SIGNATURE <u>[Signature]</u> DATE <u>[Date]</u>					
	20. COMMENTS										
21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.											
AUTHORIZED SIGNATURE <u>Mariya N...</u>					CELL NO. <u>D1</u>		DATE <u>12-01-20</u>		TIME <u>3:38 PM</u>		

Disposal Site: Please complete Disposal Facility section at bottom of form and
mail copy of completed form to Chevron Carlsbad 3150 E. Greene St. Carlsbad, NM 88220

GENERATOR: COPY 1

TRANSPORTER: COPY 2

DISPOSAL SITE: COPY 3 & 4



TEXAS NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT)

REQUIRED INFORMATION

Company Man Contact Information

Name

Phone No.

GENERATOR

NO.

212869

Operator No. Chellon

Operators Name

Address

City, State, Zip

Phone No.

Permit/RRC No.

Lease/Well

Name & No.

County

API No.

Rig Name & No.

AFE/PO No.

Skeen 2 2027 State 2H

30015-41047

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds	NON-INJECTABLE WATERS	OTHER EXEMPT WASTES (type and generation process of the waste)
Oil Based Cuttings	Washout Water (Non-Injectable)	
Water Based Muds	Completion Fluid/Flow back (Non-Injectable)	
Water Based Cuttings	Produced Water (Non-Injectable)	
Produced Formation Solids	Gathering Line Water/Waste (Non-Injectable)	
Tank Bottoms	INTERNAL USE ONLY	
E&P Contaminated Soil	Truck Washout (exempt waste)	
Gas Plant Waste		

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount

All non-exempt E&P waste must be analysed and be below the threshold limits for toxicity (TCLP), Ignitability, Corrosivity and Reactivity.

Non-Exempt Other Belly *please select from Non-Exempt Waste List on backQUANTITY B - BARRELS Y - YARDS 20 E - EACH

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

- ☐ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)
- ☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)
- ☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

(PRINT) AUTHORIZED AGENTS SIGNATURE

DATE

SIGNATURE

TRANSPORTER

Transporter's Name RXMAddress JHT

Phone No.

Driver's Name Rubon Contreras

Print Name

Phone No.

Truck No. 174

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

SHIPMENT DATE 12-1-20DRIVER'S SIGNATURE FlatDELIVERY DATE 12-1-20DRIVER'S SIGNATURE Flat

TRUCK TIME STAMP

IN: 10:41AM OUT:

DISPOSAL FACILITY

RECEIVING AREA

Name/No. D

Site Name/

Permit No. Red Bluff Facility/ STF-065Address 5053 US Highway 285, Orla, TX 79770Phone No. 432-448-4239

NORM READINGS TAKEN? (Circle One)

YES 08

NO

If YES, was reading > 50 micro roentgens? (circle one)

YES

NO 0

Chemical Analysis (Mg/l)

Conductivity (mmhos/cm)

pH

TANK BOTTOMS

	Feet	Inches
1st Gauge		
2nd Gauge		
Received		

BS&W/BBLS Received	BS&W (%)
Free Water	
Total Received	

I hereby certify that the above load material has been (circle one):

ACCEPTED

DENIED

If denied, why?

NAME (PRINT) Marian NavaneteDATE 12-01-20TITLE RocSIGNATURE MNavanete

White - ORIGINAL

Blue - TRANSPORTER

Yellow - GENERATOR

Version 1

CHEVRON MCBU Carlsbad, NM										
NO #CAR-8577 NON-HAZARDOUS WASTE MANIFEST					1. PAGE 1 OF 1		2. TRAILER NO. 1774			
GENERATOR	3. COMPANY NAME CHEVRON CARLSBAD			4. ADDRESS 3150 E. GREENE ST.			5. PICK-UP DATE 12-1-2020			
	PHONE NO. 575-887-5676			CITY STATE ZIP CARLSBAD, NM 88220			6.			
	7. NAME OR DESCRIPTION OF WASTE SHIPPED: <i>Contaminated Soil D-1 + P-1</i>						8. CONTAINERS No. Type		9. TOTAL QUANTITY	
	a. API-30015410470021						1		2000	
	b. <i>Cost Code MCE 12000</i>									
	c.									
	d.									
	12. COMMENTS OR SPECIAL INSTRUCTIONS: <i>Well Site Clean up Skipped</i>							13. WASTE PROFILE NO.		
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT CHEVRON CARLSBAD									
	24-HOUR EMERGENCY NO. 575-887-5676									
TRANSPORTER	15. GENERATOR'S CERTIFICATION: Hereby declare that the contents of this consignment are fully and accurately described above.									
	PRINTED TYPED NAME <i>[Signature]</i>					SIGNATURE				DATE
	16. TRANSPORTER (1) NAME <i>Julian Contreras</i>					17. TRANSPORTER (2) NAME				
DISPOSAL	IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE: <i>575-272-1000</i>					IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:				
	18. TRANSPORTER (1): Acknowledgment of receipt of material					19. TRANSPORTER (2): Acknowledgment of receipt of material				
	PRINTED/TYPED NAME <i>[Signature]</i>					PRINTED/TYPED NAME				
	SIGNATURE <i>[Signature]</i> DATE <i>12-1-20</i>					SIGNATURE DATE				
ADDRESS:					PHONE:					
PERMIT NO.					20. COMMENTS					
21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.										
AUTHORIZED SIGNATURE <i>Maria Navarrete</i>					CELL NO. <i>DI</i>		DATE <i>10:40AM</i>		TIME <i>12-1-20</i>	

Disposal Site: Please complete Disposal Facility section at bottom of form and
mail copy of completed form to Chevron Carlsbad 3150 E. Greene St. Carlsbad, NM 88220

GENERATOR: COPY 1

TRANSPORTER: COPY 2

DISPOSAL SITE: COPY 3 & 4



TEXAS NON-HAZARDOUS OILFIELD WASTE MANIFEST

Company Man Contact Information

(PLEASE PRINT)

REQUIRED INFORMATION

Name

Phone No.

GENERATOR		NO. 212870
Operator No. <u>Chevron</u>	Permit/RRC No. <u>Skeen 2 State</u>	
Operators Name	Lease/Well Name & No.	
Address	County <u>Edley</u>	
	API No. <u>30015410470001</u>	
City, State, Zip	Rig Name & No.	
Phone No.	AFE/PO No.	

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds	NON-INJECTABLE WATERS	OTHER EXEMPT WASTES (type and generation process of the waste)
Oil Based Cuttings	Washout Water (Non-Injectable)	
Water Based Muds	Completion Fluid/Flow back (Non-Injectable)	
Water Based Cuttings	Produced Water (Non-Injectable)	
Produced Formation Solids	Gathering Line Water/Waste (Non-Injectable)	
Tank Bottoms	INTERNAL USE ONLY	
E&P Contaminated Soil	Truck Washout (exempt waste)	
Gas Plant Waste		

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount

All non-exempt E&P waste must be analysed and be below the threshold limits for toxicity (TCLP), Ignitability, Corrosivity and Reactivity.

Non-Exempt Other _____ *please select from Non-Exempt Waste List on back

QUANTITY B - BARRELS 200 E - EACH

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

- ☐ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)
- ☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)
- ☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

(PRINT) AUTHORIZED AGENTS SIGNATURE	DATE	SIGNATURE
Transporter's Name <u>RtM</u>	Driver's Name <u>Ruben Cortez</u>	
Address <u>JHT</u>	Print Name	
Phone No.	Phone No.	
	Truck No.	

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

SHIPMENT DATE 12-1-20 DRIVER'S SIGNATURE [Signature] DELIVERY DATE 12-1-20 DRIVER'S SIGNATURE [Signature]

TRUCK TIME STAMP IN: <u>1:54 PM</u> OUT: _____	DISPOSAL FACILITY	RECEIVING AREA Name/No. <u>[Signature]</u>
---	-------------------	---

Site Name/ Permit No. <u>Red Bluff Facility/ STF-065</u>	Phone No. <u>432-448-4239</u>
Address <u>5053 US Highway 285, Orla, TX 79770</u>	
NORM READINGS TAKEN? (Circle One) YES <u>[Signature]</u> NO	If YES, was reading > 50 micro roentgens? (circle one) YES NO <u>[Signature]</u>
Chemical Analysis (Mg/l) Chloride	Conductivity (mmhos/cm) pH

TANK BOTTOMS	
Feet	Inches
1st Gauge	BS&W/BBLS Received
2nd Gauge	Free Water
Received	Total Received
	BS&W (%)

I hereby certify that the above load material has been (circle one):

ACCEPTED

DENIED

If denied, why?

NAME (PRINT) March Navarrete DATE 12-1-20 TITLE Rec SIGNATURE [Signature]

CHEVRON						
MCBU						
Carlsbad, NM						
NO #CAR- 3381 NON-HAZARDOUS WASTE MANIFEST				1. PAGE <u>1</u> OF <u>4</u>	2. TRAILER NO.	
G E N E R A T O R	3. COMPANY NAME CHEVRON CARLSBAD		4. ADDRESS 3150 E. GREENE ST.		5. PICK-UP DATE 12-1-2020	
	PHONE NO. 575-887-5676		CITY CARLSBAD, NM	STATE NM	ZIP 88220	
	7. NAME OR DESCRIPTION OF WASTE SHIPPED: CONTAMINATED SOIL D.I + PW			8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.
	a. API 30015416470001			1	BD	20 yds
	b. COST CODE LICRE120006					
	c.					
	d.					
	12. COMMENTS OR SPECIAL INSTRUCTIONS: SCREEN 2 wellsite cleanup				13. WASTE PROFILE NO.	
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT				24-HOUR EMERGENCY NO. 575-887-5676	
	15. GENERATOR'S CERTIFICATION: Hereby declare that the contents of this consignment are fully and accurately described above.					
T R A N S P O R T E R S	PRINTED TYPED NAME STEPHEN POF		SIGNATURE <i>Step Pof</i>		DATE 12-1-2020	
	16. TRANSPORTER (1) NAME Pablo Contreras		17. TRANSPORTER (2) NAME			
	IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE: 632-232-1503		IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:			
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME [Signature] SIGNATURE [Signature] DATE 12-1-20		19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME _____ SIGNATURE _____ DATE _____			
D I S P O S I T I O N F A C I L I T Y	ADDRESS R360 Environmental Solutions - Red Bluff 5053 US Highway 285				PHONE:	
	PERMIT NO. Ora, TX 79770 432-448-4239		20. COMMENTS			
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.					
	AUTHORIZED SIGNATURE Maria Navarrete		CELL NO. DI	DATE 12-1-20	TIME 1:58 PM	

Disposal Site: Please complete Disposal Facility section at bottom of form and
mail copy of completed form to Chevron Carlsbad 3150 E. Greene St. Carlsbad, NM 88220

GENERATOR: COPY 1

TRANSPORTER: COPY 2

DISPOSAL SITE: COPY 3 & 4



TEXAS NON-HAZARDOUS OILFIELD WASTE MANIFEST

Company Man Contact Information

(PLEASE PRINT)

REQUIRED INFORMATION

Name

Phone No.

GENERATOR

NO.

212871

Operator No. Chellon

Operators Name _____

Address _____

City, State, Zip _____

Phone No. _____

Permit/RRC No.

Lease/Well

Name & No. Skop 2627 State 2HCounty EdoxAPI No. 3006410470001

Rig Name & No. _____

AFE/PO No. _____

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds	NON-INJECTABLE WATERS	OTHER EXEMPT WASTES (type and generation process of the waste)
Oil Based Cuttings	Washout Water (Non-Injectable)	
Water Based Muds	Completion Fluid/Flow back (Non-Injectable)	
Water Based Cuttings	Produced Water (Non-Injectable)	
Produced Formation Solids	Gathering Line Water/Waste (Non-Injectable)	
Tank Bottoms	INTERNAL USE ONLY	
E&P Contaminated Soil	Truck Washout (exempt waste)	
Gas Plant Waste		

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount

All non-exempt E&P waste must be analysed and be below the threshold limits for toxicity (TCLP), Ignitability, Corrosivity and Reactivity.

Non-Exempt Other _____

*please select from Non-Exempt Waste List on back

QUANTITY

B - BARRELS

Y - YARDS

E - EACH

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

- ☐ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)
- ☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)
- ☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

(PRINT) AUTHORIZED AGENTS SIGNATURE

DATE

SIGNATURE

TRANSPORTER

Transporter's Name R+MAddress SHIT

Phone No. _____

Driver's Name Fabian Contreras

Print Name

Phone No.

Truck No. 174

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below

SHIPMENT DATE

DRIVER'S SIGNATURE

DELIVERY DATE

DRIVER'S SIGNATURE

IN: 12-20 TRUCK TIME STAMP

OUT: _____

DISPOSAL FACILITY

RECEIVING AREA

Name/No. _____

Site Name/

Permit No. Red Bluff Facility/ STF-065Address 5053 US Highway 285, Orla, TX 79770Phone No. 432-448-4239

NORM READINGS TAKEN? (Circle One)

YES

NO

If YES, was reading > 50 micro roentgens? (circle one)

YES

NO

Chemical Analysis (Mg/l)

Conductivity (mmhos/cm)

pH

TANK BOTTOMS

Feet

Inches

1st Gauge

2nd Gauge

Received

BS&W/BBLs Received

Free Water

Total Received

BS&W (%)

I hereby certify that the above load material has been (circle one):

ACCEPTED

DENIED

If denied, why?

NAME (PRINT)

DATE

TITLE

SIGNATURE

White - ORIGINAL

Blue - TRANSPORTER

Yellow - GENERATOR

Version 1

CHEVRON										
MCBU										
Carlsbad, NM										
NO #CAR-3079 NON-HAZARDOUS WASTE MANIFEST						1. PAGE ____ OF ____		2. TRAILER NO. 1757		
G E N E R A T O R	3. COMPANY NAME CHEVRON CARLSBAD			4. ADDRESS 3150 E. GREENE ST.			5. PICK-UP DATE 12-1-2020			
	PHONE NO. 575-887-5676			CITY STATE ZIP CARLSBAD, NM 88220			6.			
	7. NAME OR DESCRIPTION OF WASTE SHIPPED: Contaminated Soil M/L + P/L						8. CONTAINERS No. Type		9. TOTAL QUANTITY	
	a. DOT 30715412470001						1		80	
	b. Cont Code WRE 19000									
	c.									
12. COMMENTS OR SPECIAL INSTRUCTIONS: Well Site Clean Up Skoon?						13. WASTE PROFILE NO.				
14. CHEVRON CARLSBAD						24-HOUR EMERGENCY NO. 575-887-5676				
15. GENERATOR'S CERTIFICATION: Hereby declare that the contents of this consignment are fully and accurately described above.										
PRINTED TYPED NAME Stephen Por					SIGNATURE Stephen Por					
T R A N S P O R T E R S	16. TRANSPORTER (1) NAME Stephen Por				17. TRANSPORTER (2) NAME Stephen Por					
	IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE: 575-887-5676				IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:					
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME Stephen Por				19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME Stephen Por					
	SIGNATURE Stephen Por DATE 12-1-2020				SIGNATURE Stephen Por DATE 12-1-2020					
D I S P O S I T A L Y	ADDRESS: Environmental Solutions						PHONE:			
	5053 US Highway 281									
	Orla, TX 79770									
	PERMIT NO.									
21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.										
AUTHORIZED SIGNATURE Maria Navarrete					CELL NO. DL		DATE 12-01-20		TIME 12:24 PM	

Disposal Site: Please complete Disposal Facility section at bottom of form and
mail copy of completed form to Chevron Carlsbad 3150 E. Greene St. Carlsbad, NM 88220

GENERATOR: COPY 1

TRANSPORTER: COPY 2

DISPOSAL SITE: COPY 3 & 4



TEXAS NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT)

REQUIRED INFORMATION

Company Man Contact Information

Name Joe Perez
Phone No. _____

Operator No. <u>Enrique Acosta</u>	GENERATOR	NO. <u>214104</u>
Operators Name <u>Chelton</u>	Permit/RRC No. _____	
Address _____	Lease/Well Name & No. <u>Skeen 2H</u>	
City, State, Zip _____	County _____	
Phone No. _____	API No. <u>3001541047</u>	
	Rig Name & No. _____	
	AFE/PO No. _____	

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds _____	NON-INJECTABLE WATERS	OTHER EXEMPT WASTES (type and generation process of the waste)
Oil Based Cuttings _____	Washout Water (Non-Injectable) _____	
Water Based Muds _____	Completion Fluid/Flow back (Non-Injectable) _____	
Water Based Cuttings _____	Produced Water (Non-Injectable) _____	
Produced Formation Solids _____	Gathering Line Water/Waste (Non-Injectable) _____	
Tank Bottoms _____	INTERNAL USE ONLY	
E&P Contaminated Soil <u>✓</u>	Truck Washout (exempt waste) _____	<u>Belly</u>
Gas Plant Waste _____		

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount

All non-exempt E&P waste must be analysed and be below the threshold limits for toxicity (TCLP), Ignitability, Corrosivity and Reactivity.

Non-Exempt Other _____ *please select from Non-Exempt Waste List on back

QUANTITY B - BARRELS Y - YARDS 20 E - EACH

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

- ☐ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)
- ☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)
- ☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

(PRINT) AUTHORIZED AGENTS SIGNATURE

DATE

SIGNATURE

TRANSPORTER	
Transporter's Name <u>FS trucking</u>	Driver's Name <u>Enrique Acosta</u>
Address <u>WHP# 4856</u>	Print Name _____
Phone No. _____	Phone No. <u>W 19</u>
	Truck No. _____

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

SHIPMENT DATE 12-14-20 DRIVER'S SIGNATURE Enrique Acosta DELIVERY DATE 12-14-20 DRIVER'S SIGNATURE Enrique Acosta

IN: <u>3:24PM</u>	DISPOSAL FACILITY	RECEIVING AREA
OUT: _____	Name/No. <u>D-1</u>	

Site Name/ Red Bluff Facility/ STF-065 Phone No. 432-448-4239

Permit No. _____

Address 5053 US Highway 285, Orla, TX 79770

NORM READINGS TAKEN? (Circle One) YES NO If YES, was reading > 50 micro roentgens? (circle one) YES 7 NO

Chemical Analysis (Mg/l) _____ Conductivity (mmhos/cm) _____ pH _____

TANK BOTTOMS

Feet	Inches	BS&W/BBLs Received	BS&W (%)
1st Gauge		Free Water	
2nd Gauge		Total Received	
Received			

I hereby certify that the above load material has been (circle one): ACCEPTED RECEIVED If denied, why? _____

NAME (PRINT) Veronica Calderon DATE 12/14/20 TITLE Rec SIGNATURE J. Calderon

CHEVRON											
MCBU											
Carlsbad, NM											
NO #CAR-3426 NON-HAZARDOUS WASTE MANIFEST						1. PAGE 1 OF 1		2. TRAILER NO.			
G E N E R A T O R	3. COMPANY NAME CHEVRON CARLSBAD PHONE NO. 575-887-5676			4. ADDRESS 3150 E. GREENE ST. CITY CARLSBAD, NM STATE 88220 ZIP 			5. PICK-UP DATE 12-14-2020			6.	
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:						8. CONTAINERS No. Type		9. TOTAL QUANTITY		10. UNIT WT/Vol.
	a. Contaminated Dirt						1		Dump Truck		20 Yds
	b. Skeen 2H Skeen 2 26 27 State 2H										
	c. API-30015410470001										
	d.										
	12. COMMENTS OR SPECIAL INSTRUCTIONS: Skeen 2H Remediation							13. WASTE PROFILE NO.			
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT CHEVRON CARLSBAD										
	24-HOUR EMERGENCY NO. 575-887-5676										
	15. GENERATOR'S CERTIFICATION: Hereby declare that the contents of this consignment are fully and accurately described above.										
T R A N S P O R T E R S	PRINTED TYPED NAME Joe R Perez					SIGNATURE <i>Joe R Perez</i>			DATE 12-14-2020		
	16. TRANSPORTER (1) NAME Enrique Acosta 432 2023057					17. TRANSPORTER (2) NAME					
	IN CASE OF EMERGENCY CONTACT: Victor Leyre					IN CASE OF EMERGENCY CONTACT:					
	EMERGENCY PHONE: 432-232-1580					EMERGENCY PHONE:					
D I S P O S I T O R Y	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME _____ SIGNATURE _____ DATE _____					19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME _____ SIGNATURE _____ DATE _____					
	ADDRESS:					PHONE:					
	PERMIT NO. 6060 Environmental Solutions - Red Bluff 5053 US Highway 285										
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes. Orla, TX 79770 432-448-4239										
AUTHORIZED SIGNATURE <i>J. Calduen</i>					CELL NO.		DATE 12/14/20		TIME 3:24 PM		

Disposal Site: Please complete Disposal Facility section at bottom of form and mail copy of completed form to Chevron Carlsbad 3150 E. Greene St. Carlsbad, NM 88220

GENERATOR: COPY 1

TRANSPORTER: COPY 2

DISPOSAL SITE: COPY 3 & 4

CHEVRON MCBU Carlsbad, NM											
NO #CAR- 3426		NON-HAZARDOUS WASTE MANIFEST				1. PAGE <u>1</u> OF <u>1</u>		2. TRAILER NO.			
GENERATOR'S CERTIFICATION:	3. COMPANY NAME CHEVRON CARLSBAD PHONE NO. 575-887-5676		4. ADDRESS 3150 E. GREENE ST. CITY STATE ZIP CARLSBAD, NM 88220			5. PICK-UP DATE 12-14-2020 6.					
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:					8. CONTAINERS No. Type		9. TOTAL QUANTITY		10. UNIT WT/Vol.	
	a. Contaminated Dirt					1		Dump Truck		20 YDS	
	b. SKREEN 2H										
	c. API-30015410470001										
12. COMMENTS OR SPECIAL INSTRUCTIONS: SKREEN 2H Remediation					13. WASTE PROFILE NO.						
14. IN CASE OF EMERGENCY OR SPILL, CONTACT CHEVRON CARLSBAD 24-HOUR EMERGENCY NO. 575-887-5676											
15. GENERATOR'S CERTIFICATION: Hereby declare that the contents of this consignment are fully and accurately described above.											
TRANSPORTER'S CERTIFICATION:	PRINTED TYPED NAME JOE R Perez				SIGNATURE <i>[Signature]</i>				DATE 12-14-2020		
	16. TRANSPORTER (1) NAME Enrique Acosta 432 202 3057 IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE: 432 232 1570				17. TRANSPORTER (2) NAME IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:						
DISPOSAL FACILITY'S CERTIFICATION:	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME SIGNATURE DATE				19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME SIGNATURE DATE						
	ADDRESS: R360 Environmental Solutions - Red Bluff 5053 US Highway 286 Orta, TX 79770 432-448-4230				PHONE:						
PERMIT NO.				20. COMMENTS							
21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.											
AUTHORIZED SIGNATURE <i>[Signature]</i>				CELL NO.		DATE 12/14/20		TIME 3:24 PM			

Disposal Site: Please complete Disposal Facility section at bottom of form and
mail copy of completed form to Chevron Carlsbad 3150 E. Greene St. Carlsbad, NM 88220

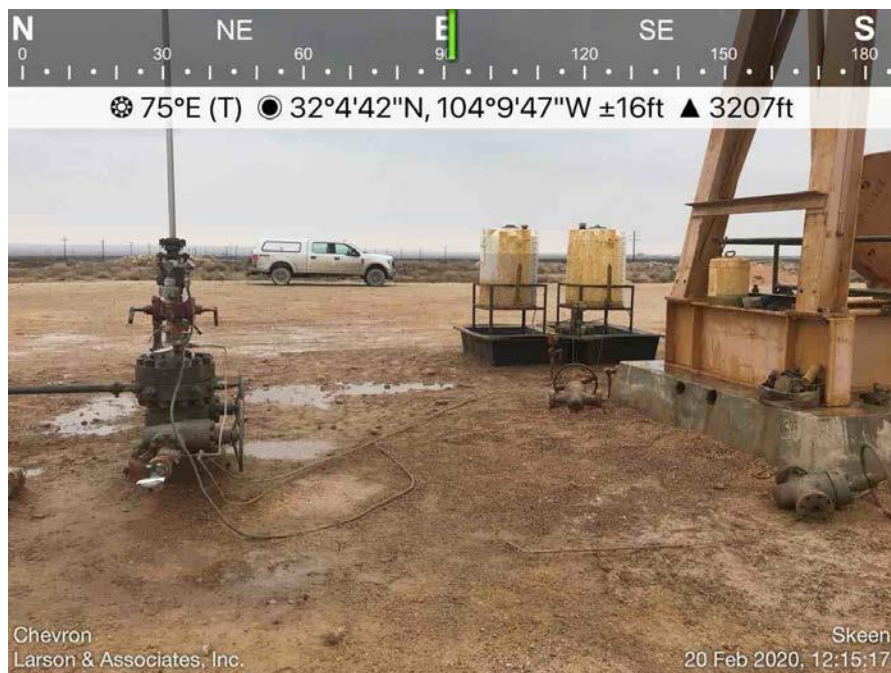
GENERATOR: COPY 1

TRANSPORTER: COPY 2

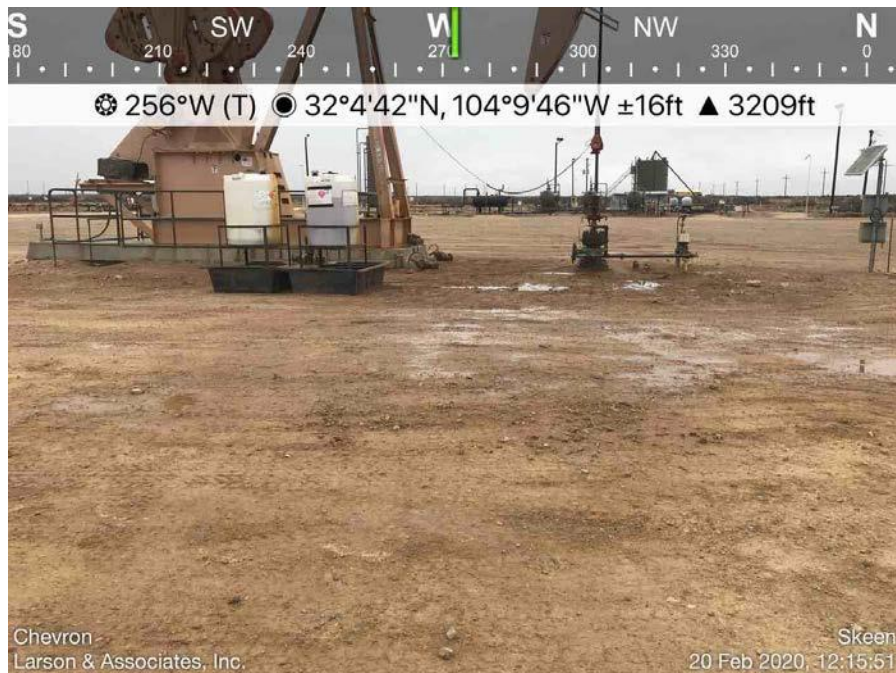
DISPOSAL SITE: COPY 3 & 4

Appendix C
Photographs

nRM2004350563
Closure Report
Chevron USA, Inc., Skeen 2H Pumping Unit
Produced Water Release
December 29, 2020



Impacted area viewing east, February 20, 2020

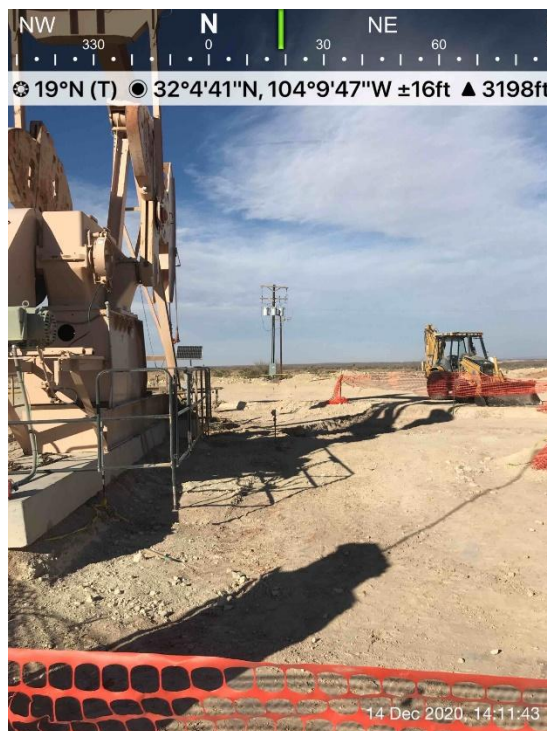


Impacted area viewing west, February 20, 2020

nRM2004350563
Closure Report
Chevron USA, Inc., Skeen 2H Pumping Unit
Produced Water Release
December 29, 2020

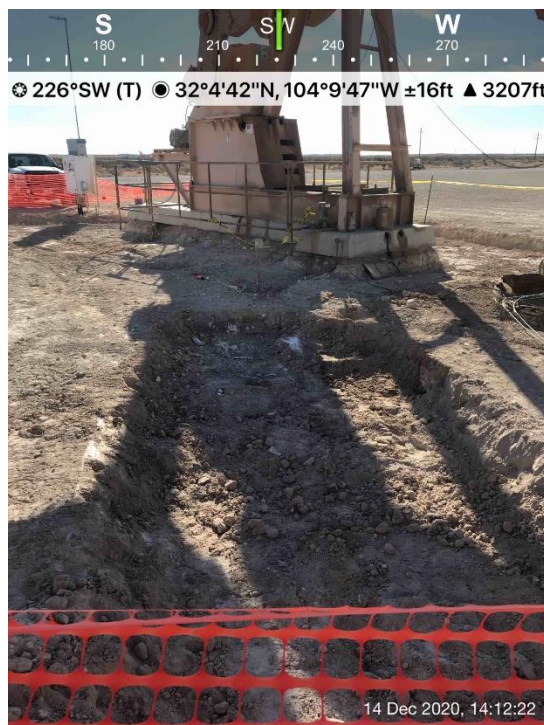


Impacted area viewing west/southwest, February 20, 2020



Excavated soil viewing north/northeast, December 14, 2020

nRM2004350563
Closure Report
Chevron USA, Inc., Skeen 2H Pumping Unit
Produced Water Release
December 29, 2020

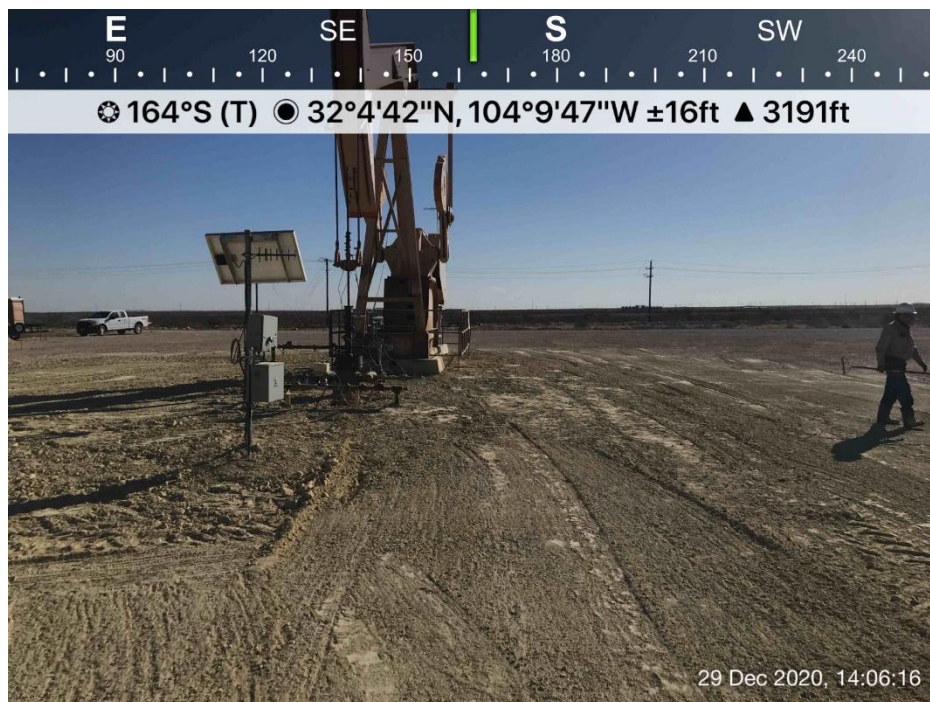


Additional 1 foot excavated from C-5 viewing southwest, December 14, 2020

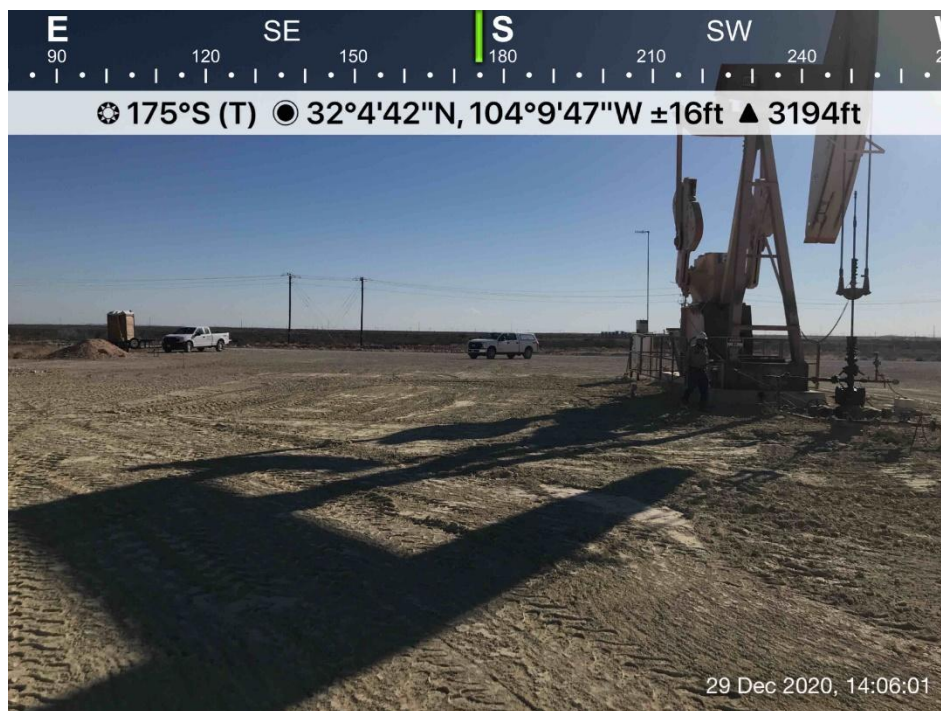


Excavated soil viewing south, December 14, 2020

nRM2004350563
Closure Report
Chevron USA, Inc., Skeen 2H Pumping Unit
Produced Water Release
December 29, 2020



Backfilled excavation viewing south, December 29, 2020

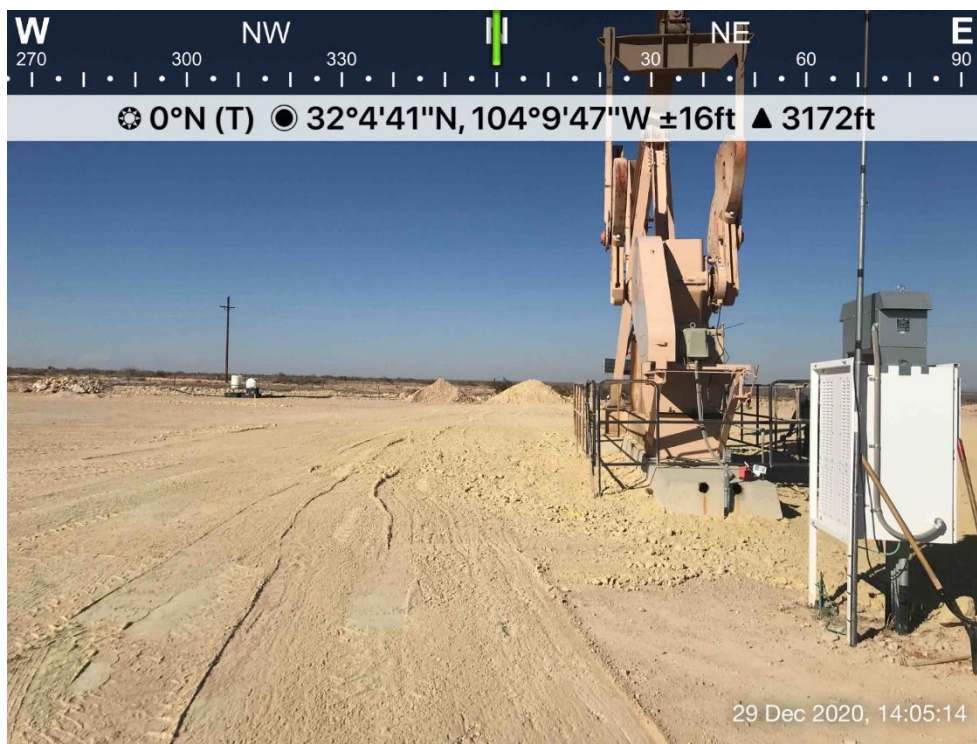


Backfilled excavation viewing south, December 29, 2020

nRM2004350563
Closure Report
Chevron USA, Inc., Skeen 2H Pumping Unit
Produced Water Release
December 29, 2020



Backfilled Excavation viewing west, December 29, 2020



Backfilled excavation viewing north, December 29, 2020

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 14350

CONDITIONS OF APPROVAL

Operator:	CHEVRON U S A INC	6301 Deauville Blvd	Midland, TX79706	OGRID:	4323	Action Number:	14350	Action Type:	C-141
OCD Reviewer	Condition								
kcollins	None								