G9Q08-200326-C-1410

CLOSURE REPORT

Property:

Breitburn Operating
Jalmat Sands Unit Water Injection
Lea County, New Mexico
Unit Letter "B", Section 14, Township 22 South, Range 35 East
Latitude 32.3987, Longitude -103.3362
1RP-5771

March 2020

Prepared for:

Breitburn Operating
PO Box 678
Andrews, TX

Attn: **Mr. Thomas Haigood**

Prepared by:

Thomas Franklin
Environmental Manager

Michael Dial
Environmental Field Supervisor

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APPENDICES

CLOSURE REPORT

Maverick Natural Resources
Jalmat Sands Water Injection Unit
Lea County, New Mexico
Unit Letter "B", Section 14, Township 22 South, Range 35 East
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1.0 INTRODUCTION

1.1 Site Description & Background

American Safety Services Inc. (ASSI) has prepared this Closure Report for the Breitburn Operating (i.e., Maverick Natural Resources) at the Jalmat Sands Unit Water Injection (referred to hereinafter as the "Site" or "subject Site"). This Closure Report is based upon data collected by ASSI on February 11, 2020 and the interpretation of that data.

The Site is located in Unit Letter "B", Section 14, Township 22 South, Range 35 East, Lea County, New Mexico (GPS 32.3987, -103.3362). Figures 1, 2, 3, 4, and 5 in Appendix A show the Site location.

Remedial action was conducted in accordance with the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), the New Mexico Oil Conservation Division (NMOCD), and rules under the New Mexico Administrative Code (*NMAC 19.15.29 Release Notification*).

1.2 Project Objective

The objective of the Closure Report is to present documentation of the remedial activities that were performed at the Site to the NMOCD.

1.3 Standard of Care

ASSI's services are performed in accordance with standards provided by a firm rendering the same or similar services in the area during the same time frame. ASSI makes no warranties, expressed or implied, as to the services performed hereunder. Additionally, ASSI does not warranty the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services will be performed in accordance with the scope of work agreed to by the client.

1.4 Reliance

This report has been prepared for the exclusive use of Breitburn Operating, and any authorization for use or reliance by any other party (except a governmental entity having

jurisdiction over the Site) is prohibited without the express written authorization of Breitburn Operating and ASSI. Any unauthorized distribution or reuse is at the sole risk of Breitburn Operating. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, the report, and ASSI's Agreement. The limitation of liability defined in the agreement is the aggregate limit of ASSI's liability to the client.

2.0 SITE RANKING & PROPOSED REMEDIAL ACTION GOALS

To address activities related to releases, the NMOCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the NMOCD rules, specifically the NMAC 19.15.29.9 *Release Notification*. These documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

In accordance with the NMAC 19.15.29, ASSI utilized the general site characteristics to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the table below:

Ranking Criteria			Ranking Score
Depth to Groundwater	<50 feet	20	**20**
	50 to 99 feet	10	
	>100 feet	0	
Wellhead Protection Area, <1,000 feet from a water source, or; <200 feet from private domestic water source.	Yes	20	**20**
	No	0	
Distance to Surface Water Body	<200 feet	20	**0**
	200 to 1,000 feet	10	
	>1,000 feet	0	
Total Ranking Score			**40**

Based on ASSI's evaluation of the scoring criteria, the Site would have a Total Ranking Score of 40. This ranking is based on the following:

- The depth to the initial groundwater-bearing zone is less than fifty feet at the Site.
- The impacted area is less than 1,000 feet from a water source.
- Distance to the nearest surface water body is greater than 1,000 ft.

Based on a Total Ranking Score of 40, cleanup goals for soils remaining in place include: 10 milligrams per kilogram (mg/Kg) for Benzene, 50 mg/Kg for Total Benzene, Toluene, Ethylbenzene, and Xylene (BTEX), 100 mg/Kg for Total Petroleum Hydrocarbons (TPH) and 600 mg/Kg for Chloride.

Figure 6 shows the location of the Site in Lea Co, New Mexico and surrounding topography.

3.0 INITIAL RESPONSE & SAMPLING ACTIVITIES

3.1 Initial Response

On January 26, 2020, ASSI personnel performed a site inspection in response to a release of seventy-five (75) barrels (bbls) of produced water (1RP-5771). The cause of the release was due to a pump malfunction, not allowing movement of water to the injection well. This caused tanks to overflow, which in-turn allowed the release to occur directly on to the ground. Seventy-five (75) bbls of produced water were recovered along with an additional five (5) bbls due to a local rain event prior to the release. The release footprint was determined to be approximately nine thousand five-hundred and thirty (9,530) square feet of production pad.

3.2 Soil Sampling Activities

Initial sampling activities were conducted on February 11th by ASSI personnel, using a stainless-steel hand auger. Seven (7) auger holes were installed at various locations collecting material at discrete intervals from surface to one and-a-half (1.5) foot below ground surface (bgs). Table 1 in Appendix B presents analytical results. Figures 3, 4, and 5 in Appendix A show sample locations. During sample collection activities soil was field screened for Chloride utilizing an electro conductivity meter.

3.3 Soil Sampling Analytical Results

Seventeen (17) soil samples were collected during sampling activities on February 11th from sample locations Auger Hole 1 through Auger Hole 7. Collected samples were delivered by ASSI personnel to the laboratory for analysis on February 12th. The samples were analyzed for BTEX, TPH, and Chloride (Table 1). Analytical results were compared to *Table I of the NMAC 19.15.29.12* and show BTEX, TPH, and Chloride concentrations are elevated above the NMOCD guidelines for clean-up goals at sample locations Auger Hole 2 (1' EB) at a depth of one and-a-half (1.5) feet bgs and Auger Hole 3 (1' EB) at a depth of one and-a-half (1.5) feet bgs. Furthermore, sample locations Auger Hole 1(1' EB), 4 (1' EB), 5 (1' EB), 6 (1' EB), and 7 (1' EB) are below the NMOCD guidelines for clean-up goals.

4.0 LABORATORY ANALYTICAL METHODS

The samples were analyzed for BTEX using EPA method EPA 8021B, TPH utilizing EPA method SW8015 Mod, and Chloride utilizing EPA method 300. Laboratory analysis is provided in Appendix D.

Soil was collected in laboratory prepared glassware, placed on ice, and packed in a cooler. The sample coolers and completed chain-of-custody forms were relinquished to Xenco Laboratories in Midland, TX for a normal turn-around time.

Figure 3 in Appendix A indicates the approximate location of the auger holes installed within and outside the release footprint in relation to pertinent land features.

5.0 Excavation

5.1 Excavation Activities

Excavation activities were conducted by ASSI beginning on January 27th inside the release footprint using mechanical and manual (i.e., backhoe tractor and hand tools) means. Remediation efforts continued through February 28th. Approximately eighty (80) cubic yards (yd^3) of impacted material was temporarily stockpiled then exported off the Site and transported to Sundance Services Inc. under appropriate manifest for proper disposal. Manifest's are compiled in Appendix F.

5.1.1 Excavation Confirmation Soil Sampling Program

Analytical results show both TPH and Chloride exceedances. Specifically, at Auger Hole 2 (1' EB) Chloride exceedances range from 2,082 mg/Kg to 2,738 mg/Kg. At Auger Hole 3 (1' EB) Chloride exceedances range from 753 mg/Kg to 1,420 mg/Kg. Furthermore, TPH exceedances exist at Auger Hole 3 (1' EB) ranging between 243 mg/Kg to 567 mg/Kg from surface to one and-a-half (1.5) foot bgs and Auger Hole 4 (1' EB) with an exceedance of 120 mg/Kg from surface to one-half (0.5) foot bgs.

Vertical delineation was not achieved for either TPH or Chloride at Auger Holes 2 or 3 thus requiring additional excavation to establish Excavation Bottoms (EB) and sample collection. However, vertical delineation was achieved for TPH at Auger Hole 4 (1' EB) at one (1) foot bgs.

Additional excavation activities were completed on February 28th. Area around both Auger Hole 2 and Auger Hole 3 were excavated to a depth of three (3) feet bgs. As a result of the excavation activities two (2) new sample locations were established namely Bottom Hole @ Auger Hole 2 (3' EB) and Bottom Hole @ Auger Hole 3 (3' EB). Approximately sixty (60) cubic yards (yd^3) of impacted material was temporarily stockpiled then exported off the Site and transported to Sundance Services Inc. under appropriate manifest for proper disposal. Manifest's are compiled in Appendix F.

Confirmation sampling activities were conducted on March 5th by ASSI personnel, using a stainless-steel hand auger. Two (2) auger holes were installed at sample locations Bottom Hole @ Auger Hole 2 (3' EB) and Bottom Hole @ Auger Hole 3 (3' EB). Sampling activities included collecting material at one-half (0.5) foot intervals below the EB. Vertical delineation for Chloride was achieved at a depth of one-half (0.5) foot below the 3' EB at both sample locations Auger Hole 2 and Auger Hole 3. Vertical delineation for TPH was achieved at sample location Auger Hole 3 as well. Table 1 in Appendix B presents analytical results.

Horizontal delineation was achieved for BTEX, TPH, and Chloride during sampling activities conducted on March 5th by ASSI. Seven (7) soil samples were collected (Sidewall 1 through Sidewall 7). The samples were analyzed for BTEX, TPH, and

Chloride. The seven (7) samples were below the NMOCD clean-up goals for BTEX, TPH, and Chloride. Table 1 in Appendix B presents analytical results.

Figures 3, 4, and 5 in Appendix A show sample locations. Soil was field screened for Chloride utilizing an electro conductivity meter during sample collection activities. Field screening results did not exceed the NMOCD clean-up goals for Chloride.

6.0 Closure Request

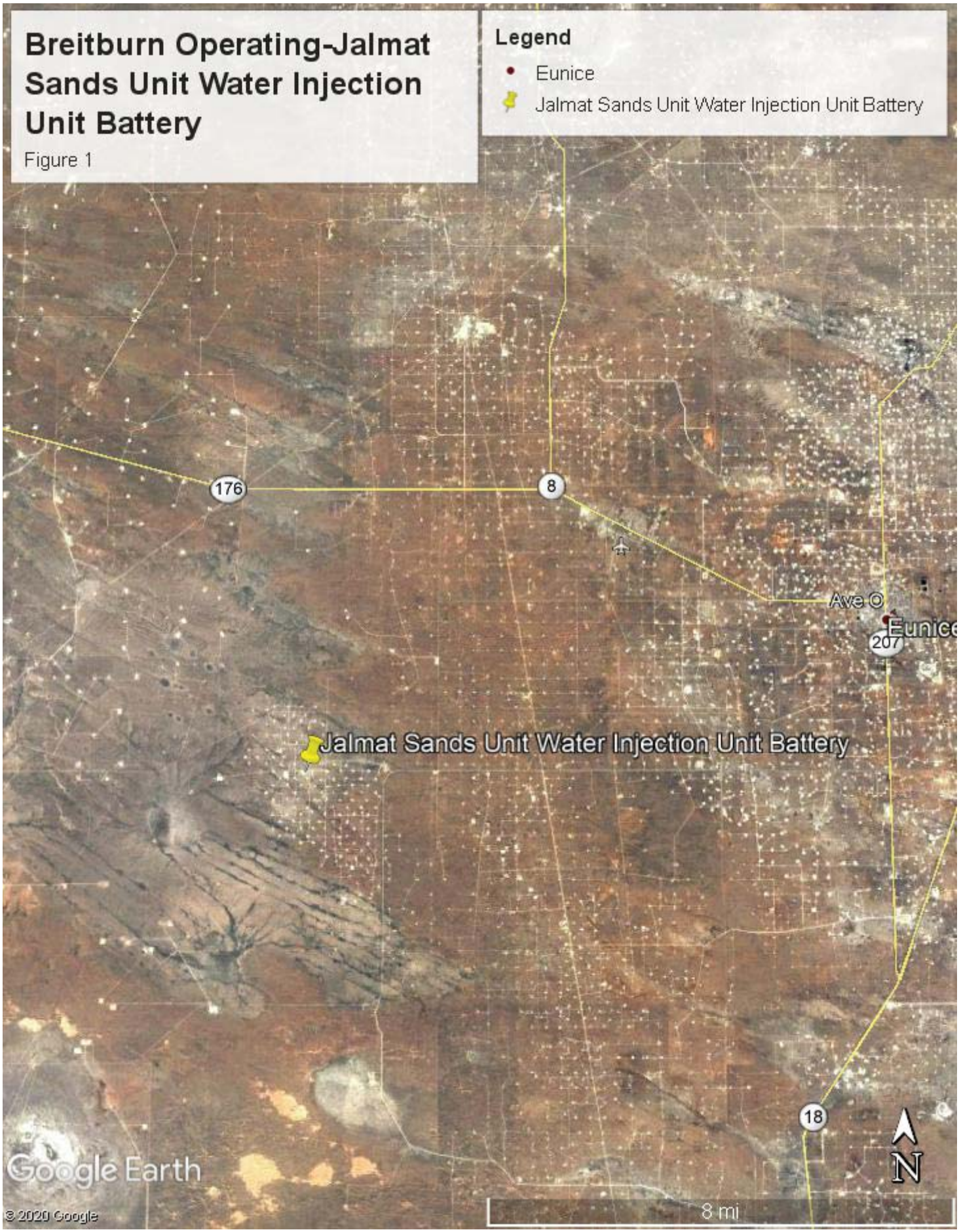
Based upon the data collected and the Site work completed by ASSI, the constitutes of concern (COCs) has been both vertically and horizontally delineated. Impacted material was removed from the excavated areas, temporarily stockpiled onsite before being exported offsite to the appropriate disposal. Approximately one hundred and forty (140) yd^3 of clean material (i.e., caliche) were imported onsite and used as backfilling material. Consequently, the clean material was re-placed (i.e., backfilled) into previously excavated areas. The surface was contoured to existing conditions.

Based on the success of the response actions which are affirmed by laboratory analytical results, no additional remediation appears necessary at this time. Copies of the Initial and Final C-141 are provided in Appendix E.

ASSI, on behalf of Breitburn Operating (i.e., Maverick Natural Resources), respectfully requests closure of the Site.

APPENDIX A

Figures


Breitburn Operating-Jalmat Sands Unit Water Injection Unit Battery
Figure 1
Legend
Eunice
Jalmat Sands Unit Water Injection Unit Battery
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Eunice
207
Jalmat Sands Unit Water Injection Unit Battery
18
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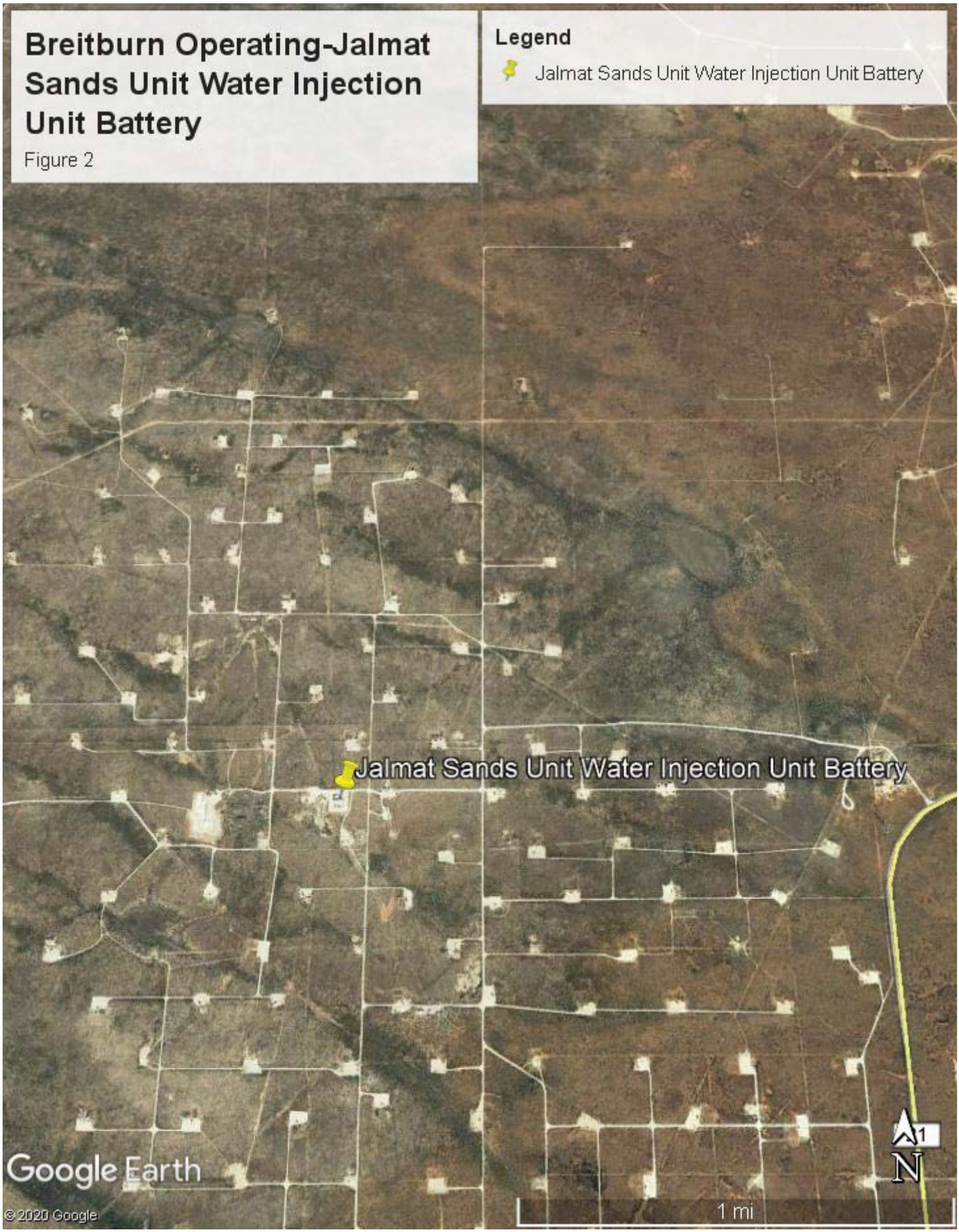
Breitburn Operating-Jalmat Sands Unit Water Injection Unit Battery
Figure 2
Legend
Jalmat Sands Unit Water Injection Unit Battery
Jalmat Sands Unit Water Injection Unit Battery
Google Earth
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Breitburn Operating-Jalmat Sands Unit Water Injection Unit Battery
Figure 3
Legend
Release Footprint
Sample Locations
Auger Hole 5 (1'EB)
Auger Hole 4 (1'EB)
Auger Hole 3 (1' EB)
Auger Hole 2 (1'EB)
Auger Hole 1 (1'EB)
Auger Hole 6 (1' EB)
Auger Hole 7 (1'EB)
Google Earth
© 2020 Google
100 ft
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Breitburn Operating-Jalmat Sands Unit Water Injection Unit Battery
Figure 4
Legend
Area Excavated to 1' EB
Area Excavated to 2' EB
Area Excavated to 3' EB
Sample Locations
Auger Hole 5 (1' EB)
Auger Hole 4 (1' EB)
Auger Hole3 (1' EB)
Auger Hole 2 (1' EB)
Auger Hole 1 (1' EB)
Auger Hole 7 (1' EB)
Auger Hole 6 (1'EB)
Google Earth
©2020 Google
100 ft
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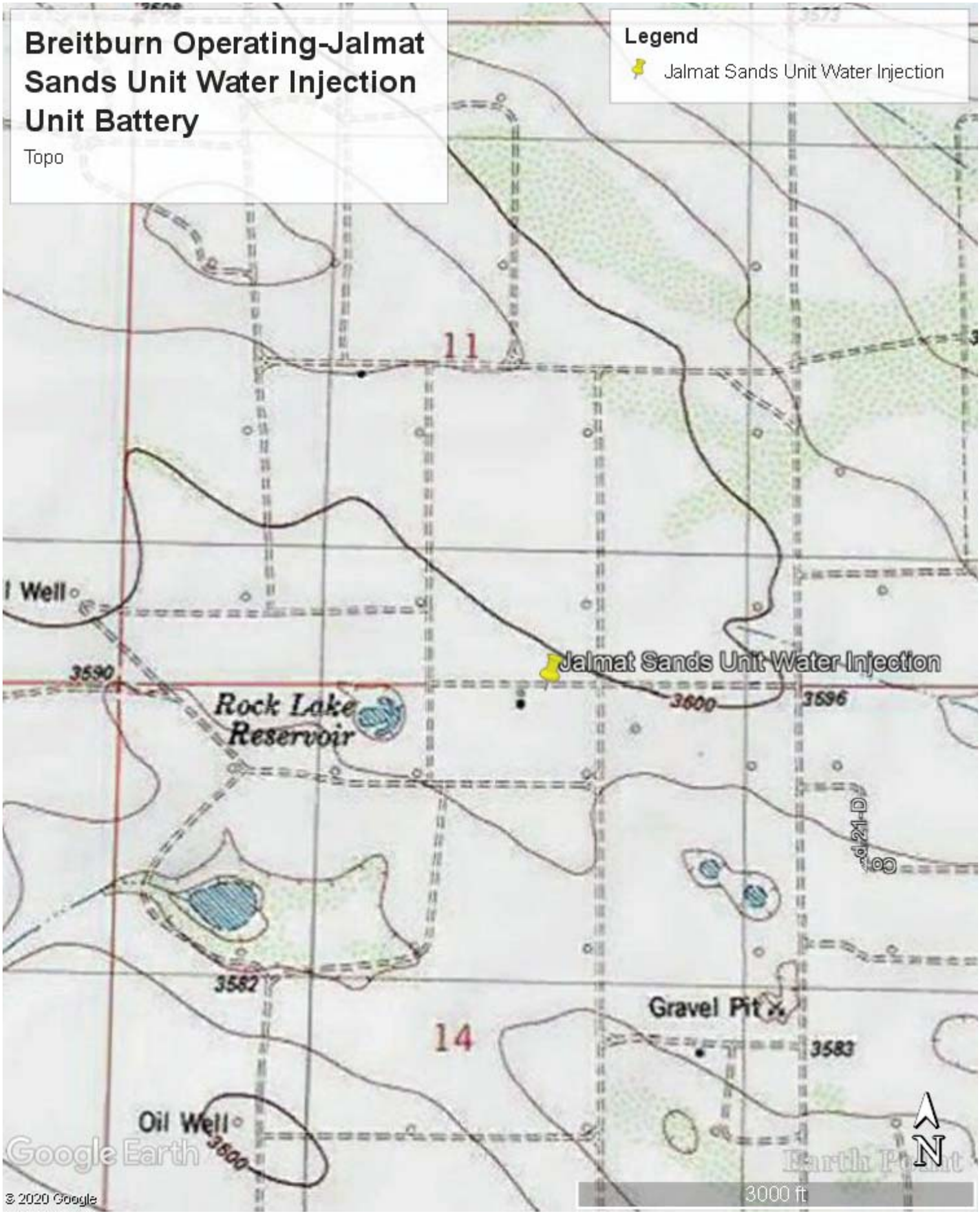
Breitburn Operating-Jalmat Sands Unit Water Injection Unit Battery
Figure 5
Legend
Area Excavared to 2' EB
Area Excavated to 1' EB
Area Excavated to 3' EB
Sample Locations
Side Wall 6
Side Wall 5
Side Wall 7
Side Wall 1
Bottom Hole @ Auger Hole 3
Side Wall 4
Side Wall 2
Bottom Hole @ Auger Hole 2
Side Wall 3
Google Earth
© 2020 Google
100 ft
N


Breitburn Operating-Jalmat Sands Unit Water Injection Unit Battery
Topo
Legend
Jalmat Sands Unit Water Injection
11
Well
3590
Jalmat Sands Unit Water Injection
3600
3596
Rock Lake Reservoir
3582
Gravel Pit
14
3583
Oil Well
3600
Google Earth
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3000 ft
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APPENDIX B

Table 1

TABLE 1
Summary of Delineation Sampling Analytical Results
Concentrations of Benzene, BTEX, TPH & Chloride in Soil
Breitburn Operating (Maverick Natural Resources)
Jalmat Sands Unit Water Injection Unit Battery
Lea County, New Mexico
1RP-5771

SAMPLE LOCATION	SAMPLE DEPTH (feet)	SAMPLE DATE	SOIL STATUS	8021B					8015M				EPA 300
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYLBENZENE (mg/Kg)	XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	MRO (mg/Kg)	Total TPH (mg/Kg)	CHLORIDE (mg/Kg)
NMAC 19.15.29				10	NE	NE	NE	50	NE		NE	100	600
Delination Sampling													
Auger Hole 1 (1' EB)	0-0.5'	2/11/2020	In-situ	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	407.42
Auger Hole 1 (1' EB)	0.5'-1'	2/11/2020	In-situ	—	—	—	—	—	—	—	—	—	465.6
Auger Hole 1 (1' EB)	1'-1.5'	2/11/2020	In-situ	—	—	—	—	—	—	—	—	—	527.2
Auger Hole 2 (1' EB)	0-0.5'	2/11/2020	Excavated	<0.00202	<0.00202	<0.00614	<0.00202	<0.00614	<49.8	<49.8	<49.8	<49.8	**2,082.1**
Auger Hole 2 (1' EB)	0.5'-1'	2/11/2020	Excavated	—	—	—	—	—	—	—	—	—	**2,937.8**
Auger Hole 2 (1' EB)	1'-1.5'	2/11/2020	Excavated	—	—	—	—	—	—	—	—	—	**2,738.0**
Bottom Hole @ Auger Hole 2 (3' EB)	0-0.5'	3/5/2020	In-situ	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50	<5.0302
Auger Hole 3 (1' EB)	0-0.5'	2/11/2020	Excavated	<0.00200	<0.00200	<0.00200	<0.002	<0.002	<49.9	243	<49.9	**243**	**1,420.3**
Auger Hole 3 (1' EB)	0.5'-1'	2/11/2020	Excavated	—	—	—	—	—	<50	588	82.7	**670.7**	**934.3**
Auger Hole 3 (1' EB)	1'-1.5'	2/11/2020	Excavated	—	—	—	—	—	<49.9	493	74.9	**567.9**	**753.92**
Bottom Hole @ Auger Hole 3 (3' EB)	0-0.5'	3/5/2020	In-situ	<0.00200	<0.00200	<0.00200	<0.002	<0.002	<49.9	<49.9	<49.9	<49.9	<5.00
Auger Hole 4 (1' EB)	0-0.5'	2/11/2020	Excavated	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	120	<50.0	**120**	216.49
Auger Hole 4 (1' EB)	0.5'-1'	2/11/2020	Excavated	—	—	—	—	—	<49.9	52.6	<49.9	52.6	211.71
Auger Hole 4 (1' EB)	1'-1.5'	2/11/2020	In-situ	—	—	—	—	—	<50	66.6	<50	66.6	590.71
Auger Hole 5 (1' EB)	0-0.5'	2/11/2020	In-situ	<0.00200	<0.00200	<0.00200	<0.002	<0.002	<49.9	<49.9	<49.9	<49.9	405.9
Auger Hole 5 (1' EB)	0.5'-1'	2/11/2020	In-situ	—	—	—	—	—	—	—	—	—	344.82
Auger Hole 5 (1' EB)	1'-1.5'	2/11/2020	In-situ	—	—	—	—	—	—	—	—	—	194.72
Auger Hole 6 (1' EB)	0-0.5'	2/11/2020	In-situ	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	35.302
Auger Hole 7 (1' EB)	0-0.5'	2/11/2020	In-situ	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	17.219
Side Wall 1	—	3/5/2020	In-situ	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50	<5.0302
Side Wall 2	—	3/5/2020	In-situ	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50	9.251
Side Wall 3	—	3/5/2020	In-situ	<0.00200	<0.00200	<0.00200	<0.002	<0.002	<49.8	<49.8	<49.8	<49.8	9.6394
Side Wall 4	—	3/5/2020	In-situ	<0.00200	<0.00200	<0.00200	<0.002	<0.002	<49.9	<49.9	<49.9	<49.9	10.154
Side Wall 5	—	3/5/2020	In-situ	<0.00200	<0.00200	<0.00200	<0.002	<0.002	<50.0	<50.0	<50.0	<50	8.9578
Side Wall 6	—	3/5/2020	In-situ	<0.00200	<0.00200	<0.00200	<0.002	<0.002	<50.0	<50.0	<50.0	<50	9.6657
Side Wall 7	—	3/5/2020	In-situ	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50	9.535

mg/Kg - milligrams per Kilogram

Concentrations in **Bold** exceed remediation guidelines

NE - not established

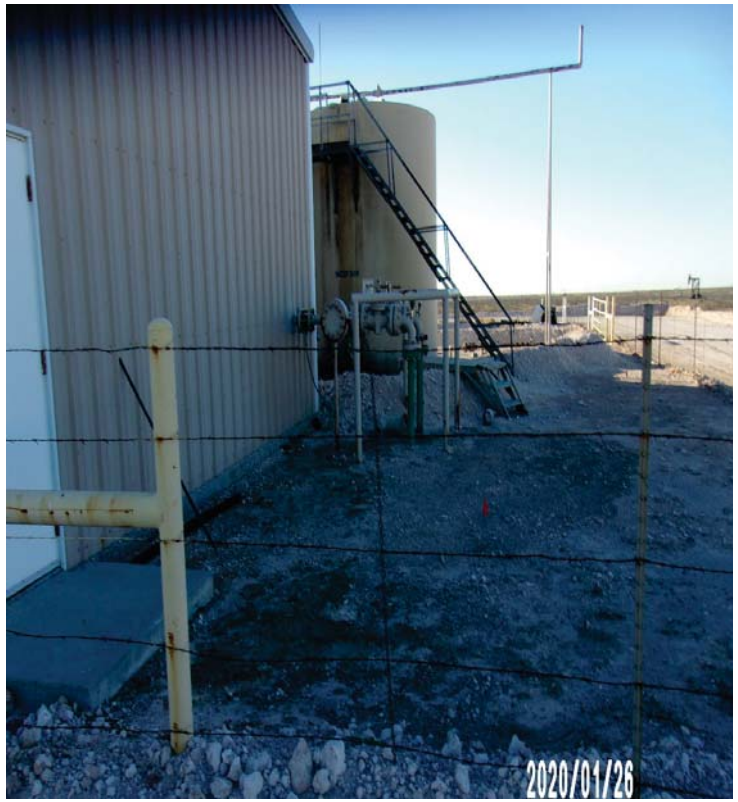
— = not determined

In-situ - sample collected in-place

Total TPH reported values are rounded-off to 3-significant figures using the LIMS Odd/Even Rounding Rule which is a laboratory accepted standard

APPENDIX C

Photo Page



View South – A portion of the spill flow path caused by the fluid release within the release footprint.

View East – A portion of the spill flow path caused by the fluid release within the release footprint.

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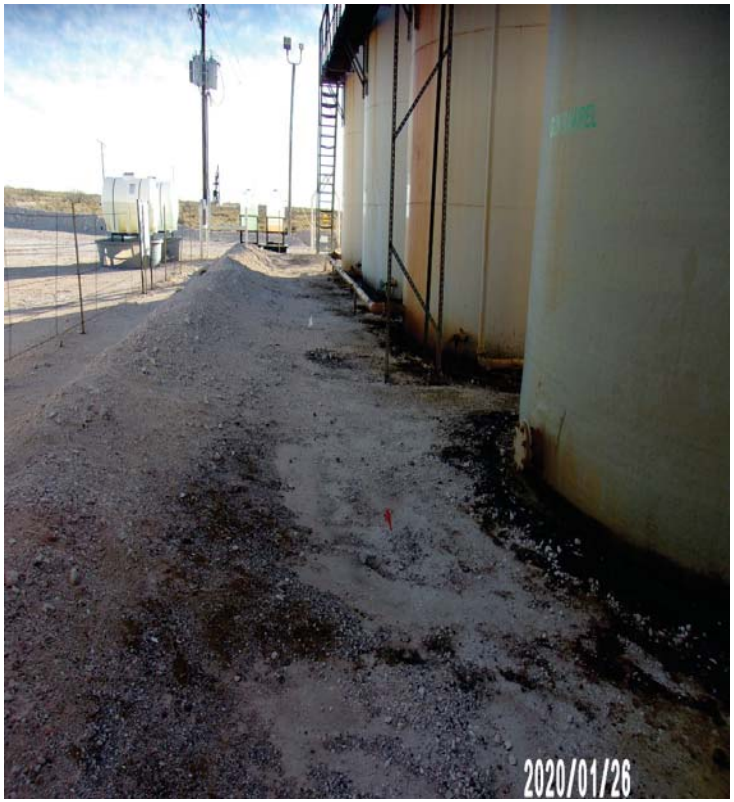
View East – A portion of the spill flow path caused by the fluid release within the release footprint.



View East – A portion of the spill flow path caused by the fluid release within the release footprint.

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View Southeast – Remediation activities (excavation of impacted material) ongoing.

View West – Remediation activities (excavation of impacted material) ongoing.

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View East – Remediation activities (excavation of impacted material) ongoing.

View South – Remediation activities (excavation of impacted material) ongoing.

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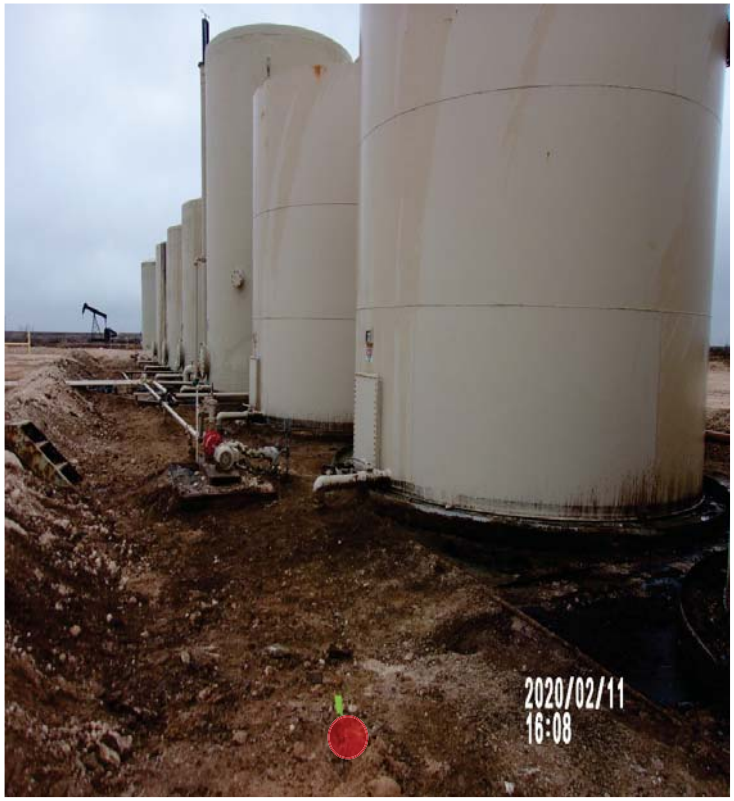

View West - Sample location Auger Hole 1 (1' EB) (red circle) middle of photograph.

View East – Sample location Auger Hole 2 (1' EB) (red circle) middle of photograph.

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View West - Sample location Auger Hole 3 (1’ EB) (red circle) middle of photograph.

View East – Sample location Auger Hole 4 (1’ EB) (red circle) middle of photograph.

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View South - Sample location Auger Hole 5 (1' EB) (red circle) middle of photograph.

View Northwest – Sample location Auger Hole 6 (1' EB) (red circle) middle of photograph.

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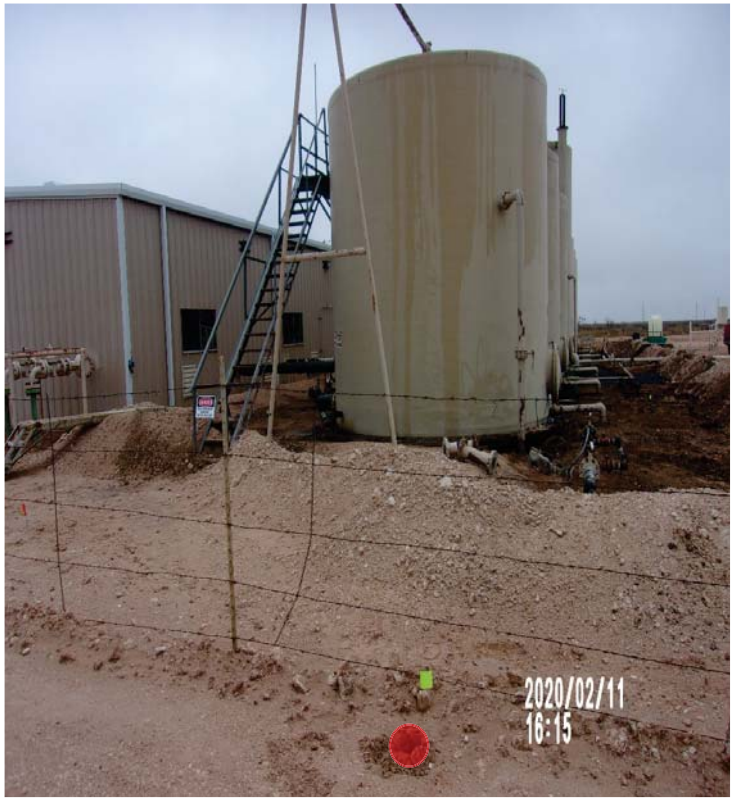

View East - Sample location Auger Hole 7 (1’ EB) (red circle) middle of photograph.

View West –Remediation activities (excavation of impacted material) ongoing.

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View West - Remediation activities (excavation of impacted material) ongoing.

View West – Remediation activities (stockpiling of excavated impacted material) ongoing.

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View North - Remediation activities (excavation of impacted material) ongoing.

View East – Remediation activities (excavation of impacted material) ongoing.

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View Southeast – Stockpiled excavated impacted material.

View Southwest – Sample location Bottom Hole @ Auger Hole 2 (3’ EB) (red circle) middle of photograph.

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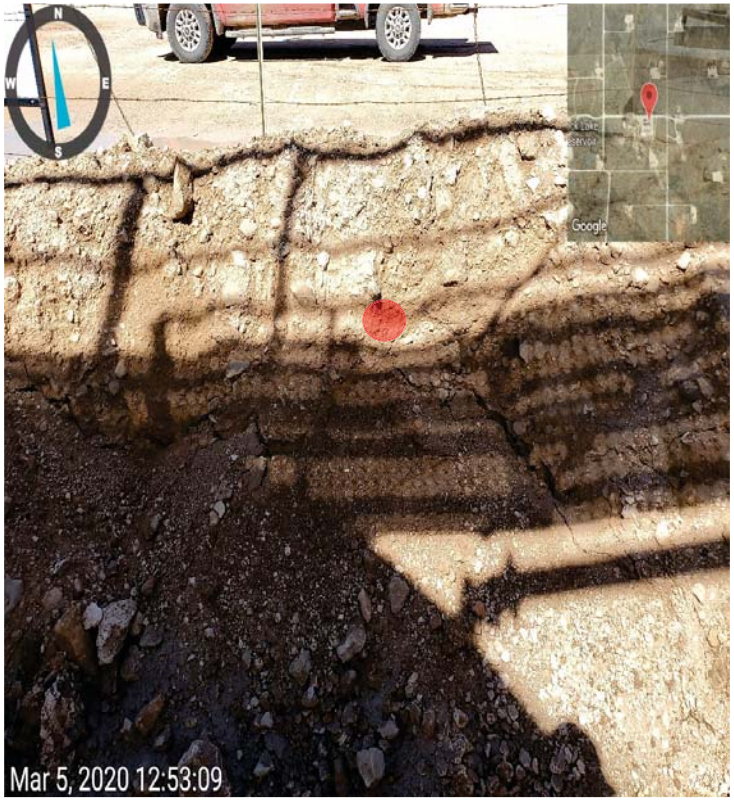
View West – Sample location Bottom Hole @ Auger Hole 3 (3’ EB) (red circle) middle of photograph.



View North – Sample location Side Wall 1(red circle) middle of photograph.

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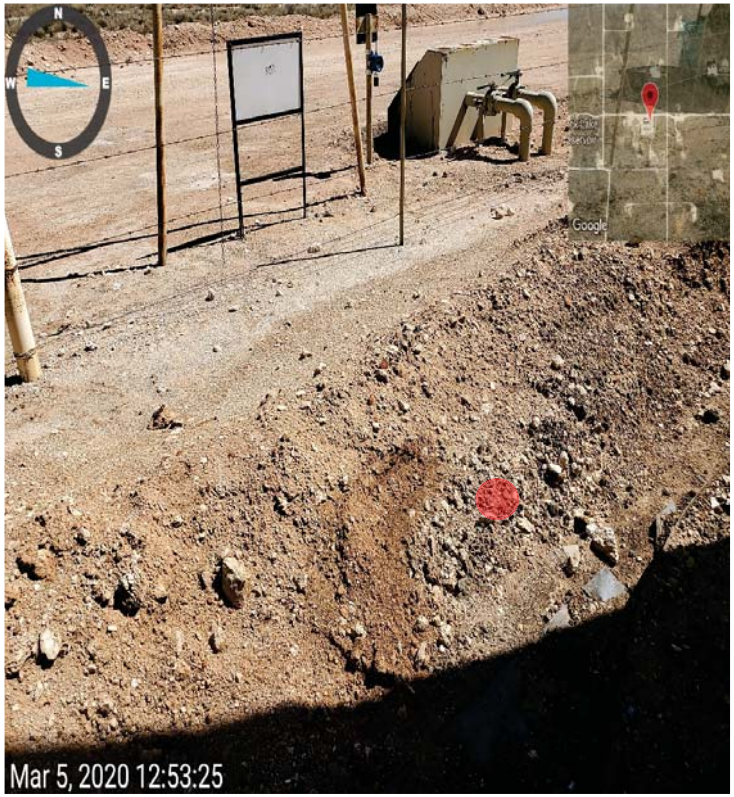
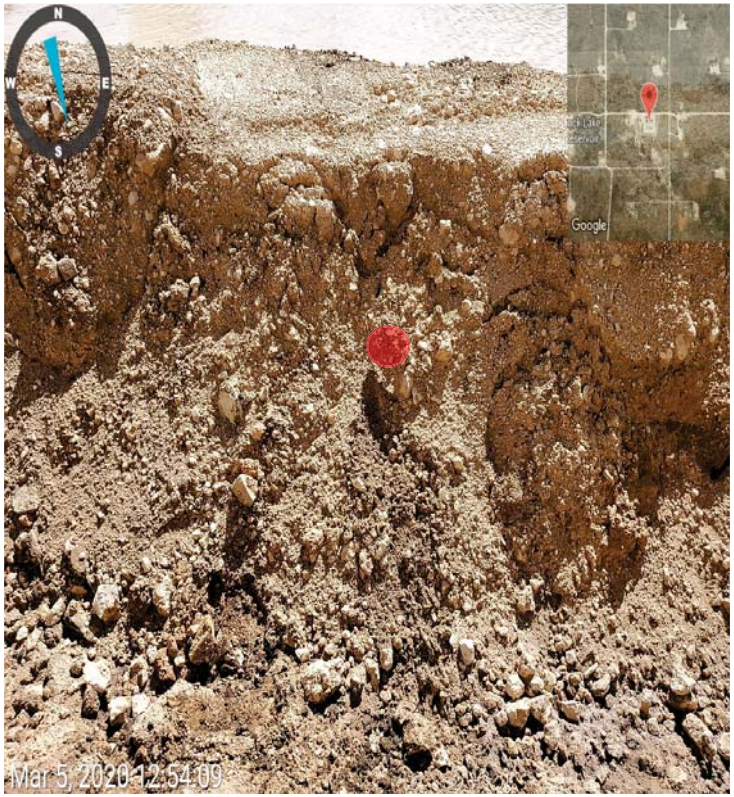


View East – Sample location Side Wall 2 (red circle) middle of photograph.



View South – Sample location Side Wall 3 (red circle) middle of photograph.

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View West – Sample location Side Wall 4 (red circle) middle of photograph.

View Northwest – Sample location Side Wall 5 (red circle) middle of photograph.

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View West – Sample location Side Wall 6 (red circle) middle of photograph.

View East – Sample location Side Wall 7 (red circle) middle of photograph.

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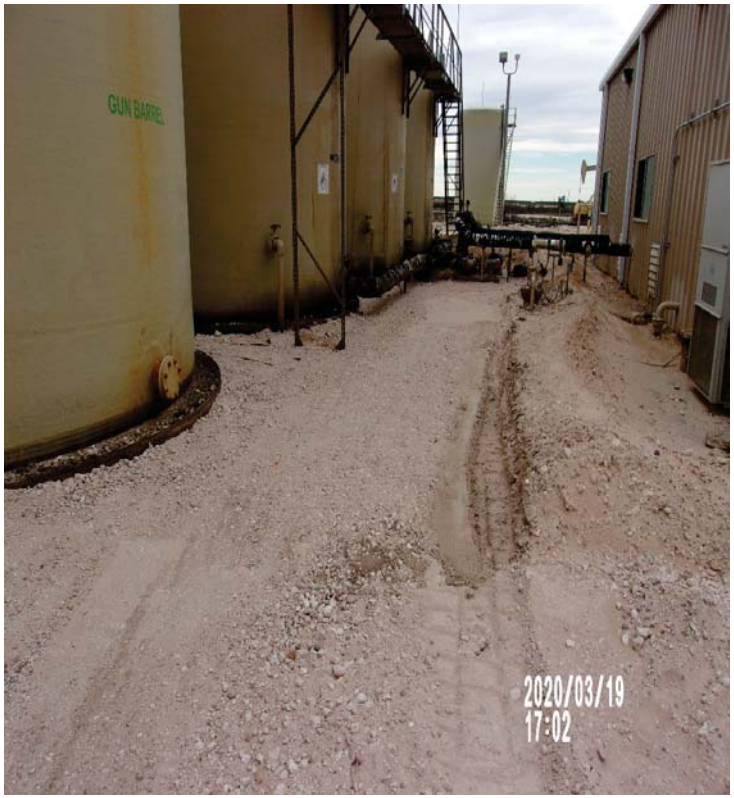
View East – Remedial activities completed to existing conditions.



View West – Remedial activities completed to existing conditions.

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View Southeast – Remedial activities completed to existing conditions.

View West – Remedial activities completed to existing conditions.

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AMERICAN SAFETY SERVICES INC

View Southwest – Remedial activities completed to existing conditions.

View West – Remedial activities completed to existing conditions.

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APPENDIX D

Laboratory Analysis

Certificate of Analysis Summary 652237

American Safety Services, Odessa, TX

Project Name: Jalmat Sands Unit Water Injection

Project Id:

Contact: Thomas Franklin

Project Location: Lea Co NM

Date Received in Lab: Wed Feb-12-20 04:15 pm

Report Date: 14-FEB-20

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	652237-001		652237-002		652237-003		652237-004		652237-005		652237-006	
	Field Id:	Auger Hole 1 (1' EB)		Auger Hole 1 (1' EB)		Auger Hole 1 (1' EB)		Auger Hole 2 (1' EB)		Auger Hole 2 (1' EB)		Auger Hole 2 (1' EB)	
	Depth:	0.0-0.5 ft		0.5-1 ft		1.0-1.5 ft		0.0-0.5 ft		0.5-1.0 ft		1.0-1.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-11-20 11:30		Feb-11-20 11:35		Feb-11-20 11:40		Feb-11-20 11:45		Feb-11-20 11:50		Feb-11-20 11:55	
BTEX by EPA 8021B	***Extracted:***	Feb-13-20 10:00						Feb-13-20 10:00					
	Analyzed:	Feb-13-20 12:39						Feb-13-20 12:59					
	Units/RL:	mg/kg	RL					mg/kg	RL				
Benzene		<0.00199	0.00199					<0.00202	0.00202				
Toluene		<0.00199	0.00199					0.00614	0.00202				
Ethylbenzene		<0.00199	0.00199					<0.00202	0.00202				
m,p-Xylenes		<0.00398	0.00398					<0.00403	0.00403				
o-Xylene		<0.00199	0.00199					<0.00202	0.00202				
Total Xylenes		<0.00199	0.00199					<0.00202	0.00202				
Total BTEX		<0.00199	0.00199					0.00614	0.00202				
Chloride by EPA 300	***Extracted:***	Feb-13-20 14:30		Feb-13-20 14:30		Feb-13-20 14:30		Feb-13-20 14:30		Feb-13-20 14:30		Feb-13-20 14:30	
	Analyzed:	Feb-13-20 17:25		Feb-13-20 17:41		Feb-13-20 17:46		Feb-13-20 18:02		Feb-13-20 18:07		Feb-13-20 18:12	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Chloride		407.42	4.9801	465.58	5.0505	527.21	5.0302	2082.1	25.000	2937.8	24.851	2738.0	24.802
TPH by SW8015 Mod	***Extracted:***	Feb-13-20 14:00						Feb-13-20 14:00					
	Analyzed:	Feb-13-20 21:18						Feb-13-20 21:39					
	Units/RL:	mg/kg	RL					mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8					<49.8	49.8				
Diesel Range Organics (DRO)		<49.8	49.8					<49.8	49.8				
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8					<49.8	49.8				
Total TPH		<49.8	49.8					<49.8	49.8				

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 652237

American Safety Services, Odessa, TX

Project Name: Jalmat Sands Unit Water Injection

Project Id:

Contact: Thomas Franklin

Project Location: Lea Co NM

Date Received in Lab: Wed Feb-12-20 04:15 pm

Report Date: 14-FEB-20

Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	652237-007	652237-008	652237-009	652237-010	652237-011	652237-012
	Field Id:	Auger Hole 2 (1' EB)	Auger Hole 3 (1' EB)	Auger Hole 3 (1' EB)	Auger Hole 3 (1' EB)	Auger Hole 4 (1' EB)	Auger Hole 4 (1' EB)
	Depth:	1.5-2.0 ft	0.0-0.5 ft	0.5-1.0 ft	1.0-1.5 ft	0.0-0.5 ft	0.5-1.0 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Feb-11-20 12:00	Feb-11-20 12:05	Feb-11-20 12:10	Feb-11-20 12:15	Feb-11-20 12:20	Feb-11-20 12:25
BTEX by EPA 8021B	*Extracted:*		Feb-13-20 10:00			Feb-13-20 10:00	
	Analyzed:		Feb-13-20 13:19			Feb-13-20 13:40	
	Units/RL:		mg/kg RL			mg/kg RL	
Benzene			<0.00200 0.00200			<0.00199 0.00199	
Toluene			<0.00200 0.00200			<0.00199 0.00199	
Ethylbenzene			<0.00200 0.00200			<0.00199 0.00199	
m,p-Xylenes			<0.00401 0.00401			<0.00398 0.00398	
o-Xylene			<0.00200 0.00200			<0.00199 0.00199	
Total Xylenes			<0.002 0.002			<0.00199 0.00199	
Total BTEX			<0.002 0.002			<0.00199 0.00199	
Chloride by EPA 300	*Extracted:*	Feb-13-20 14:30	Feb-13-20 14:30	Feb-13-20 14:30	Feb-13-20 14:30	Feb-13-20 16:00	Feb-13-20 16:00
	Analyzed:	Feb-13-20 18:18	Feb-13-20 18:23	Feb-13-20 18:28	Feb-13-20 18:33	Feb-13-20 23:39	Feb-13-20 23:55
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Chloride		3711.2 25.100	1420.3 24.950	934.25 4.9900	753.92 4.9603	216.49 5.0201	211.71 5.0000
TPH by SW8015 Mod	*Extracted:*		Feb-13-20 14:00			Feb-13-20 14:00	
	Analyzed:		Feb-13-20 22:00			Feb-13-20 22:42	
	Units/RL:		mg/kg RL			mg/kg RL	
Gasoline Range Hydrocarbons (GRO)			<49.9 49.9			<50.0 50.0	
Diesel Range Organics (DRO)			243 49.9			120 50.0	
Motor Oil Range Hydrocarbons (MRO)			<49.9 49.9			<50.0 50.0	
Total TPH			243 49.9			120 50	

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 652237

American Safety Services, Odessa, TX

Project Name: Jalmat Sands Unit Water Injection

Project Id:

Contact: Thomas Franklin

Project Location: Lea Co NM

Date Received in Lab: Wed Feb-12-20 04:15 pm

Report Date: 14-FEB-20

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	652237-013		652237-014		652237-015		652237-016		652237-017		652237-018	
	Field Id:	Auger Hole 4 (1' EB)		Auger Hole 5 (1' EB)		Auger Hole 5 (1' EB)		Auger Hole 5 (1' EB)		Auger Hole 6 (1' EB)		Auger Hole 7 (1' EB)	
	Depth:	1.0-1.5 ft		0.0-0.5 ft		0.5-1.0 ft		1.0-1.5 ft		0.0-0.5 ft		0.0-0.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-11-20 12:30		Feb-11-20 12:35		Feb-11-20 12:40		Feb-11-20 12:45		Feb-11-20 12:50		Feb-11-20 12:55	
BTEX by EPA 8021B	*Extracted:*			Feb-13-20 10:00						Feb-13-20 10:00		Feb-13-20 10:00	
	Analyzed:			Feb-13-20 14:00						Feb-13-20 14:20		Feb-13-20 15:11	
	Units/RL:			mg/kg	RL					mg/kg	RL	mg/kg	RL
Benzene				<0.00200	0.00200					<0.00200	0.00200	<0.00201	0.00201
Toluene				<0.00200	0.00200					<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene				<0.00200	0.00200					<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes				<0.00399	0.00399					<0.00399	0.00399	<0.00402	0.00402
o-Xylene				<0.00200	0.00200					<0.00200	0.00200	<0.00201	0.00201
Total Xylenes				<0.002	0.002					<0.002	0.002	<0.00201	0.00201
Total BTEX				<0.002	0.002					<0.002	0.002	<0.00201	0.00201
Chloride by EPA 300	*Extracted:*	Feb-13-20 16:00		Feb-13-20 16:00		Feb-13-20 16:00		Feb-13-20 16:00		Feb-13-20 16:00		Feb-13-20 16:00	
	Analyzed:	Feb-14-20 00:00		Feb-14-20 00:05		Feb-14-20 00:11		Feb-14-20 00:27		Feb-14-20 00:32		Feb-14-20 00:37	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Chloride		590.71	5.0302	405.92	5.0000	344.82	4.9801	194.72	4.9900	35.302	4.9900	17.219	4.9603
TPH by SW8015 Mod	*Extracted:*			Feb-13-20 14:00						Feb-13-20 14:00		Feb-13-20 14:00	
	Analyzed:			Feb-13-20 23:04						Feb-13-20 23:25		Feb-13-20 23:46	
	Units/RL:			mg/kg	RL					mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)				<49.9	49.9					<49.9	49.9	<50.0	50.0
Diesel Range Organics (DRO)				<49.9	49.9					<49.9	49.9	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)				<49.9	49.9					<49.9	49.9	<50.0	50.0
Total TPH				<49.9	49.9					<49.9	49.9	<50	50

Jessica Kramer
Project Assistant

Analytical Report 652237

for

American Safety Services

Project Manager: Thomas Franklin

Jalmat Sands Unit Water Injection

14-FEB-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)

14-FEB-20

Project Manager: **Thomas Franklin**
American Safety Services
8715 Andrews Hwy
Odessa, TX 79765

Reference: XENCO Report No(s): **652237**
Jalmat Sands Unit Water Injection
Project Address: Lea Co NM

Thomas Franklin:

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) 652237. 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. 652237 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,

Jessica Kramer

Jessica Kramer
Project Assistant

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 652237

American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Auger Hole 1 (1' EB)	S	02-11-20 11:30	0.0 - 0.5 ft	652237-001
Auger Hole 1 (1' EB)	S	02-11-20 11:35	0.5 - 1 ft	652237-002
Auger Hole 1 (1' EB)	S	02-11-20 11:40	1.0 - 1.5 ft	652237-003
Auger Hole 2 (1' EB)	S	02-11-20 11:45	0.0 - 0.5 ft	652237-004
Auger Hole 2 (1' EB)	S	02-11-20 11:50	0.5 - 1.0 ft	652237-005
Auger Hole 2 (1' EB)	S	02-11-20 11:55	1.0 - 1.5 ft	652237-006
Auger Hole 2 (1' EB)	S	02-11-20 12:00	1.5 - 2.0 ft	652237-007
Auger Hole 3 (1' EB)	S	02-11-20 12:05	0.0 - 0.5 ft	652237-008
Auger Hole 3 (1' EB)	S	02-11-20 12:10	0.5 - 1.0 ft	652237-009
Auger Hole 3 (1' EB)	S	02-11-20 12:15	1.0 - 1.5 ft	652237-010
Auger Hole 4 (1' EB)	S	02-11-20 12:20	0.0 - 0.5 ft	652237-011
Auger Hole 4 (1' EB)	S	02-11-20 12:25	0.5 - 1.0 ft	652237-012
Auger Hole 4 (1' EB)	S	02-11-20 12:30	1.0 - 1.5 ft	652237-013
Auger Hole 5 (1' EB)	S	02-11-20 12:35	0.0 - 0.5 ft	652237-014
Auger Hole 5 (1' EB)	S	02-11-20 12:40	0.5 - 1.0 ft	652237-015
Auger Hole 5 (1' EB)	S	02-11-20 12:45	1.0 - 1.5 ft	652237-016
Auger Hole 6 (1' EB)	S	02-11-20 12:50	0.0 - 0.5 ft	652237-017
Auger Hole 7 (1' EB)	S	02-11-20 12:55	0.0 - 0.5 ft	652237-018

CASE NARRATIVE

Client Name: American Safety Services

Project Name: Jalmat Sands Unit Water Injection

Project ID:
Work Order Number(s): *652237*

Report Date: *14-FEB-20*
Date Received: *02/12/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3116502 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered below QC limits. Samples affected are: 7696544-1-BLK.

Certificate of Analytical Results 652237

American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 1 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-001	Date Collected:	02.11.20 11.30	Sample Depth:	0.0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 14.30	Basis:	Wet Weight
Seq Number:	3116532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**407.42**	4.9801	mg/L	02.13.20 17.25		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.13.20 14.00	Basis:	Wet Weight
Seq Number:	3116504				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.13.20 21.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.13.20 21.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.13.20 21.18	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.13.20 21.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	02.13.20 21.18	
o-Terphenyl	84-15-1	93	%	70-135	02.13.20 21.18	

Certificate of Analytical Results 652237

American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 1 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-001	Date Collected:	02.11.20 11.30	Sample Depth:	0.0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	02.13.20 10.00	Basis:	Wet Weight
Seq Number:	3116502				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.13.20 12.39	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.13.20 12.39	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.13.20 12.39	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.13.20 12.39	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.13.20 12.39	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.13.20 12.39	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.13.20 12.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	114	%	70-130	02.13.20 12.39	
4-Bromofluorobenzene	460-00-4	83	%	70-130	02.13.20 12.39	

Certificate of Analytical Results 652237

American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 1 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-002	Date Collected:	02.11.20 11.35	Sample Depth:	0.5 - 1 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 14.30	Basis:	Wet Weight
Seq Number:	3116532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**465.58**	5.0505	mg/L	02.13.20 17.41		1

Certificate of Analytical Results 652237

American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 1 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-003	Date Collected:	02.11.20 11.40	Sample Depth:	1.0 - 1.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 14.30	Basis:	Wet Weight
Seq Number:	3116532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**527.21**	5.0302	mg/L	02.13.20 17.46		1

Certificate of Analytical Results 652237

American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id: **Auger Hole 2 (1' EB)** Matrix: Soil Date Received:02.12.20 16.15

Lab Sample Id: 652237-004 Date Collected: 02.11.20 11.45 Sample Depth: 0.0 - 0.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: SPC % Moisture:

Analyst: SPC Date Prep: 02.13.20 14.30 Basis: Wet Weight

Seq Number: 3116532

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2082.1**	25.000	mg/L	02.13.20 18.02		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 02.13.20 14.00 Basis: Wet Weight

Seq Number: 3116504

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.13.20 21.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.13.20 21.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.13.20 21.39	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.13.20 21.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	02.13.20 21.39	
o-Terphenyl	84-15-1	92	%	70-135	02.13.20 21.39	

Certificate of Analytical Results 652237

American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 2 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-004	Date Collected:	02.11.20 11.45	Sample Depth:	0.0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	02.13.20 10.00	Basis:	Wet Weight
Seq Number:	3116502				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.13.20 12.59	U	1
Toluene	108-88-3	**0.00614**	0.00202	mg/kg	02.13.20 12.59		1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.13.20 12.59	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.13.20 12.59	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.13.20 12.59	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.13.20 12.59	U	1
Total BTEX		**0.00614**	0.00202	mg/kg	02.13.20 12.59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	02.13.20 12.59	
4-Bromofluorobenzene	460-00-4	78	%	70-130	02.13.20 12.59	

Certificate of Analytical Results 652237

American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 2 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-005	Date Collected:	02.11.20 11.50	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 14.30	Basis:	Wet Weight
Seq Number:	3116532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2937.8**	24.851	mg/L	02.13.20 18.07		5

Certificate of Analytical Results 652237

American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 2 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-006	Date Collected:	02.11.20 11.55	Sample Depth:	1.0 - 1.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 14.30	Basis:	Wet Weight
Seq Number:	3116532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2738.0**	24.802	mg/L	02.13.20 18.12		5

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American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 2 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-007	Date Collected:	02.11.20 12.00	Sample Depth:	1.5 - 2.0 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 14.30	Basis:	Wet Weight
Seq Number:	3116532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3711.2**	25.100	mg/L	02.13.20 18.18		5

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American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 3 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-008	Date Collected:	02.11.20 12.05	Sample Depth:	0.0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 14.30	Basis:	Wet Weight
Seq Number:	3116532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1420.3**	24.950	mg/L	02.13.20 18.23		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.13.20 14.00	Basis:	Wet Weight
Seq Number:	3116504				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.13.20 22.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	**243**	49.9	mg/kg	02.13.20 22.00		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.13.20 22.00	U	1
Total TPH	PHC635	**243**	49.9	mg/kg	02.13.20 22.00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	02.13.20 22.00	
o-Terphenyl	84-15-1	101	%	70-135	02.13.20 22.00	

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Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 3 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-008	Date Collected:	02.11.20 12.05	Sample Depth:	0.0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	02.13.20 10.00	Basis:	Wet Weight
Seq Number:	3116502				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.13.20 13.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.13.20 13.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.13.20 13.19	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.13.20 13.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.13.20 13.19	U	1
Total Xylenes	1330-20-7	<0.002	0.002	mg/kg	02.13.20 13.19	U	1
Total BTEX		<0.002	0.002	mg/kg	02.13.20 13.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	02.13.20 13.19	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.13.20 13.19	

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American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 3 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-009	Date Collected:	02.11.20 12.10	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 14.30	Basis:	Wet Weight
Seq Number:	3116532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**934.25**	4.9900	mg/L	02.13.20 18.28		1

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American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 3 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-010	Date Collected:	02.11.20 12.15	Sample Depth:	1.0 - 1.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 14.30	Basis:	Wet Weight
Seq Number:	3116532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**753.92**	4.9603	mg/L	02.13.20 18.33		1

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American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 4 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-011	Date Collected:	02.11.20 12.20	Sample Depth:	0.0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 16.00	Basis:	Wet Weight
Seq Number:	3116534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**216.49**	5.0201	mg/L	02.13.20 23.39		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.13.20 14.00	Basis:	Wet Weight
Seq Number:	3116504				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.13.20 22.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	**120**	50.0	mg/kg	02.13.20 22.42		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.13.20 22.42	U	1
Total TPH	PHC635	**120**	50	mg/kg	02.13.20 22.42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	02.13.20 22.42	
o-Terphenyl	84-15-1	91	%	70-135	02.13.20 22.42	

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Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 4 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-011	Date Collected:	02.11.20 12.20	Sample Depth:	0.0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	02.13.20 10.00	Basis:	Wet Weight
Seq Number:	3116502				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.13.20 13.40	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.13.20 13.40	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.13.20 13.40	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.13.20 13.40	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.13.20 13.40	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.13.20 13.40	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.13.20 13.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	02.13.20 13.40	
4-Bromofluorobenzene	460-00-4	79	%	70-130	02.13.20 13.40	

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Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 4 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-012	Date Collected:	02.11.20 12.25	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 16.00	Basis:	Wet Weight
Seq Number:	3116534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**211.71**	5.0000	mg/L	02.13.20 23.55		1

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Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 4 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-013	Date Collected:	02.11.20 12.30	Sample Depth:	1.0 - 1.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 16.00	Basis:	Wet Weight
Seq Number:	3116534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**590.71**	5.0302	mg/L	02.14.20 00.00		1

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American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 5 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-014	Date Collected:	02.11.20 12.35	Sample Depth:	0.0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 16.00	Basis:	Wet Weight
Seq Number:	3116534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**405.92**	5.0000	mg/L	02.14.20 00.05		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.13.20 14.00	Basis:	Wet Weight
Seq Number:	3116504				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.13.20 23.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.13.20 23.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.13.20 23.04	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.13.20 23.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	02.13.20 23.04	
o-Terphenyl	84-15-1	90	%	70-135	02.13.20 23.04	

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American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 5 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-014	Date Collected:	02.11.20 12.35	Sample Depth:	0.0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	02.13.20 10.00	Basis:	Wet Weight
Seq Number:	3116502				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.13.20 14.00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.13.20 14.00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.13.20 14.00	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.13.20 14.00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.13.20 14.00	U	1
Total Xylenes	1330-20-7	<0.002	0.002	mg/kg	02.13.20 14.00	U	1
Total BTEX		<0.002	0.002	mg/kg	02.13.20 14.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	78	%	70-130	02.13.20 14.00	
1,4-Difluorobenzene	540-36-3	113	%	70-130	02.13.20 14.00	

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Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 5 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-015	Date Collected:	02.11.20 12.40	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 16.00	Basis:	Wet Weight
Seq Number:	3116534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**344.82**	4.9801	mg/L	02.14.20 00.11		1

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Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 5 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-016	Date Collected:	02.11.20 12.45	Sample Depth:	1.0 - 1.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 16.00	Basis:	Wet Weight
Seq Number:	3116534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**194.72**	4.9900	mg/L	02.14.20 00.27		1

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Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 6 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-017	Date Collected:	02.11.20 12.50	Sample Depth:	0.0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 16.00	Basis:	Wet Weight
Seq Number:	3116534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**35.302**	4.9900	mg/L	02.14.20 00.32		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.13.20 14.00	Basis:	Wet Weight
Seq Number:	3116504				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.13.20 23.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.13.20 23.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.13.20 23.25	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.13.20 23.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	02.13.20 23.25	
o-Terphenyl	84-15-1	96	%	70-135	02.13.20 23.25	

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Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 6 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-017	Date Collected:	02.11.20 12.50	Sample Depth:	0.0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	02.13.20 10.00	Basis:	Wet Weight
Seq Number:	3116502				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.13.20 14.20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.13.20 14.20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.13.20 14.20	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.13.20 14.20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.13.20 14.20	U	1
Total Xylenes	1330-20-7	<0.002	0.002	mg/kg	02.13.20 14.20	U	1
Total BTEX		<0.002	0.002	mg/kg	02.13.20 14.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	75	%	70-130	02.13.20 14.20	
1,4-Difluorobenzene	540-36-3	114	%	70-130	02.13.20 14.20	

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Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 7 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-018	Date Collected:	02.11.20 12.55	Sample Depth:	0.0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 16.00	Basis:	Wet Weight
Seq Number:	3116534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**17.219**	4.9603	mg/L	02.14.20 00.37		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.13.20 14.00	Basis:	Wet Weight
Seq Number:	3116504				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.13.20 23.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.13.20 23.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.13.20 23.46	U	1
Total TPH	PHC635	<50	50	mg/kg	02.13.20 23.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	02.13.20 23.46	
o-Terphenyl	84-15-1	96	%	70-135	02.13.20 23.46	

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Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 7 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-018	Date Collected:	02.11.20 12.55	Sample Depth:	0.0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	02.13.20 10.00	Basis:	Wet Weight
Seq Number:	3116502				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.13.20 15.11	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.13.20 15.11	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.13.20 15.11	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.13.20 15.11	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.13.20 15.11	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.13.20 15.11	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.13.20 15.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	114	%	70-130	02.13.20 15.11	
4-Bromofluorobenzene	460-00-4	86	%	70-130	02.13.20 15.11	

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

QC Summary 652237

American Safety Services

Jalmat Sands Unit Water Injection

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3116532 Matrix: Solid Date Prep: 02.13.20
MB Sample Id: 7696641-1-BLK LCS Sample Id: 7696641-1-BKS LCSD Sample Id: 7696641-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.0000	250.00	258.60	103	258.47	103	90-110	0	20	mg/L	02.13.20 16:01	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3116534 Matrix: Solid Date Prep: 02.13.20
MB Sample Id: 7696642-1-BLK LCS Sample Id: 7696642-1-BKS LCSD Sample Id: 7696642-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.0000	250.00	257.73	103	257.17	103	90-110	0	20	mg/L	02.13.20 23:29	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3116532 Matrix: Soil Date Prep: 02.13.20
Parent Sample Id: 652236-001 MS Sample Id: 652236-001 S MSD Sample Id: 652236-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.8048	249.00	267.16	104	266.35	103	90-110	0	20	mg/L	02.13.20 16:17	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3116532 Matrix: Soil Date Prep: 02.13.20
Parent Sample Id: 652237-001 MS Sample Id: 652237-001 S MSD Sample Id: 652237-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	407.42	249.00	650.79	98	648.61	97	90-110	0	20	mg/L	02.13.20 17:30	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3116534 Matrix: Soil Date Prep: 02.13.20
Parent Sample Id: 652085-001 MS Sample Id: 652085-001 S MSD Sample Id: 652085-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	43.706	250.00	311.67	107	310.09	107	90-110	1	20	mg/L	02.14.20 00:58	

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

QC Summary 652237

American Safety Services

Jalmat Sands Unit Water Injection

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3116534 Matrix: Soil Date Prep: 02.13.20
Parent Sample Id: 652237-011 MS Sample Id: 652237-011 S MSD Sample Id: 652237-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	216.49	251.00	486.08	107	486.06	107	90-110	0	20	mg/L	02.13.20 23:44	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3116504 Matrix: Solid Date Prep: 02.13.20
MB Sample Id: 7696636-1-BLK LCS Sample Id: 7696636-1-BKS LCSD Sample Id: 7696636-1-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	837	84	840	84	70-135	0	20	mg/kg	02.13.20 17:29	
Diesel Range Organics (DRO)	<50.0	1000	934	93	909	91	70-135	3	20	mg/kg	02.13.20 17:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		104		101		70-135	%	02.13.20 17:29
o-Terphenyl	102		111		106		70-135	%	02.13.20 17:29

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3116504 Matrix: Solid Date Prep: 02.13.20
MB Sample Id: 7696636-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.13.20 17:01	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3116504 Matrix: Soil Date Prep: 02.13.20
Parent Sample Id: 652236-001 MS Sample Id: 652236-001 S MSD Sample Id: 652236-001 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	832	83	836	84	70-135	0	20	mg/kg	02.13.20 18:31	
Diesel Range Organics (DRO)	<49.9	998	863	86	948	95	70-135	9	20	mg/kg	02.13.20 18:31	
Motor Oil Range Hydrocarbons (MRO)	<49.9	998	<49.9	0	<49.8	0	70-135	NC	20	mg/kg	02.13.20 18:31	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		99		70-135	%	02.13.20 18:31
o-Terphenyl	95		127		70-135	%	02.13.20 18:31

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

QC Summary 652237

American Safety Services

Jalmat Sands Unit Water Injection

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3116502 Matrix: Solid Date Prep: 02.13.20

MB Sample Id: 7696544-1-BLK LCS Sample Id: 7696544-1-BKS LCSD Sample Id: 7696544-1-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	0.115	115	0.107	107	70-130	7	35	mg/kg	02.13.20 10:20	
Toluene	<0.000456	0.100	0.109	109	0.106	106	70-130	3	35	mg/kg	02.13.20 10:20	
Ethylbenzene	<0.000565	0.100	0.105	105	0.102	102	70-130	3	35	mg/kg	02.13.20 10:20	
m,p-Xylenes	<0.00101	0.200	0.205	103	0.202	101	70-130	1	35	mg/kg	02.13.20 10:20	
o-Xylene	<0.000344	0.100	0.100	100	0.0996	100	70-130	0	35	mg/kg	02.13.20 10:20	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		109		110		70-130	%	02.13.20 10:20
4-Bromofluorobenzene	69	**	83		88		70-130	%	02.13.20 10:20

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3116502 Matrix: Soil Date Prep: 02.13.20

Parent Sample Id: 652237-001 MS Sample Id: 652237-001 S MSD Sample Id: 652237-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.0991	99	0.105	105	70-130	6	35	mg/kg	02.13.20 11:00	
Toluene	0.000488	0.100	0.0980	98	0.103	103	70-130	5	35	mg/kg	02.13.20 11:00	
Ethylbenzene	<0.000565	0.100	0.0934	93	0.0982	98	70-130	5	35	mg/kg	02.13.20 11:00	
m,p-Xylenes	<0.00101	0.200	0.183	92	0.192	96	70-130	5	35	mg/kg	02.13.20 11:00	
o-Xylene	0.000369	0.100	0.0898	89	0.0947	94	70-130	5	35	mg/kg	02.13.20 11:00	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		115		70-130	%	02.13.20 11:00
4-Bromofluorobenzene	83		88		70-130	%	02.13.20 11:00

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike

Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added

LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec

Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

652237

AMERICAN SAFETY SERVICES INC

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

8715 Andrews Hwy
Odessa, TX 79768

Phone: 432-552-7625

Project Manager: Thomas Franklin

Company Name: American Safety Services Inc.

Company Address: 8715 Andrews Hwy.

City/State/Zip: Odessa, TX 79765

Telephone No: 432-552-7625 / 432-661-0015 Fax No:

Sampler Signature: MIGUEL DE LEON e-mail: tfranklin@americansafety.net

Project Name: Jalmat Sands Unit Water injection

Project #:

Project Loc: Lea Co. NM

PO #:

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)

ORDER #:

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1	TPH: TX 1005	TCLP: 8015M	TPH: TX 1006	TCLP: Cations (Ca, Mg, Na, K)	TCLP: Anions (Cl, SO4, Alkalinity)	TCLP: SAR / ESP / CEC	TCLP: Metals: As Ag Ba Cd Cr Pb Hg Se	TCLP: Volatiles	TCLP: Semivolatiles	TCLP: BTEX 8021B/5030 or BTEX 8260	TOTAL: RCI	TOTAL: N.O.R.M.	TOTAL: 8015B	TOTAL: Chloride	On Hold	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
	Auger Hole 1 (1'EB)	0.0'	0.5'	2/11/2020	1130	N	1	X								S- GRAB	X										X				X			X
	Auger Hole 1 (1'EB)	0.5'	1.0'	2/11/2020	1135	N	1	X								S- GRAB															X			X
	Auger Hole 1 (1'EB)	1.0'	1.5'	2/11/2020	1140	N	1	X								S- GRAB															X			X
	Auger Hole 2(1'EB)	0.0'	0.5'	2/11/2020	1145	N	1	X								S- GRAB	X										X				X			X
	Auger Hole 2(1'EB)	0.5'	1.0'	2/11/2020	1150	N	1	X								S- GRAB															X			X
	Auger Hole 2(1'EB)	1.0'	1.5'	2/11/2020	1155	N	1	X								S- GRAB															X			X
	Auger Hole 2(1'EB)	1.5'	2.0'	2/11/2020	1200	N	1	X								S- GRAB															X			X
	Auger Hole 3 (1'EB)	0.0'	0.5'	2/11/2020	1205	N	1	X								S- GRAB	X										X				X			X
	Auger Hole 3 (1'EB)	0.5'	1.0'	2/11/2020	1210	N	1	X								S- GRAB															X			X
	Auger Hole 3 (1'EB)	1.0'	1.5'	2/11/2020	1215	N	1	X								S- GRAB															X			X

Special Instructions: Invoice American Safety - Thomas Franklin

Relinquished by:	Date	Time	Received by:	Date	Time
Miguel De Leon	02-12-20	1615			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	Date	Time

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt:
Received: °C
Adjusted: °C Factor 4.1

652237

AMERICAN SAFETY SERVICES INC

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

8715 Andrews Hwy
Odessa, TX 79768

Phone: 432-552-7625

Project Manager: Thomas Franklin

Company Name: American Safety Services Inc.

Company Address: 8715 Andrews Hwy.

City/State/Zip: Odessa, TX 79765

Telephone No: 432-552-7625 / 432-661-0015

Fax No:

Sampler Signature: MIGUEL DE LEON

e-mail: tfranklin@americansafety.net

Project Name: Jalmat Sands Unit Water injection

Project #:

Project Loc: Lea Co. NM

PO #:

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)

ORDER #:

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge / GW = Groundwater S=Soil/Solid / NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1	TOTAL: 8015M	8015B TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chloride	On Hold	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
	Auger Hole 4 (1'EB)	0.0'	0.5'	2/11/2020	1220	N	1	X								S- GRAB	X									X			X			X
	Auger Hole 4 (1'EB)	0.5'	1.0'	2/11/2020	1225	N	1	X								S- GRAB													X			X
	Auger Hole 4 (1'EB)	1.0'	1.5'	2/11/2020	1230	N	1	X								S- GRAB													X			X
	Auger Hole 5 (1'EB)	0.0'	0.5'	2/11/2020	1235	N	1	X								S- GRAB	X									X			X			X
	Auger Hole 5 (1'EB)	0.5'	1.0'	2/11/2020	1240	N	1	X								S- GRAB													X			X
	Auger Hole 5 (1'EB)	1.0'	1.5'	2/11/2020	1245	N	1	X								S- GRAB													X			X
	Auger Hole 6 (1'EB)	0.0'	0.5'	2/11/2020	1250	N	1	X								S- GRAB	X									X			X			X
	Auger Hole 7 (1'EB)	0.0'	0.5'	2/11/2020	1255	N	1	X								S- GRAB	X									X			X			X
	[redacted]																															

Special Instructions: Invoice American Safety - Thomas Franklin

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt:
Received: °C
Adjusted: °C Factor 4.1

Relinquished by:	Date	Time	Received by:	Date	Time
Miguel DeLeon.	02-12-20	1615		2/12	1615
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	Date	Time

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: American Safety Services

Date/ Time Received: 02.12.2020 04.15.00 PM

Work Order #: 652237

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.1
#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?	**Yes**
#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#: r8

Checklist completed by: Allison Johnson Date: 02.13.2020

Checklist reviewed by: Jessica Kramer Date: 02.13.2020

Jessica Kramer

Certificate of Analysis Summary 652237

American Safety Services, Odessa, TX

Project Name: Jalmat Sands Unit Water Injection

Project Id:

Contact: Thomas Franklin

Project Location: Lea Co NM

Date Received in Lab: Wed Feb-12-20 04:15 pm

Report Date: 27-FEB-20

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	652237-001		652237-002		652237-003		652237-004		652237-005		652237-006	
	Field Id:	Auger Hole 1 (1' EB)		Auger Hole 1 (1' EB)		Auger Hole 1 (1' EB)		Auger Hole 2 (1' EB)		Auger Hole 2 (1' EB)		Auger Hole 2 (1' EB)	
	Depth:	0.0-0.5 ft		0.5-1 ft		1.0-1.5 ft		0.0-0.5 ft		0.5-1.0 ft		1.0-1.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-11-20 11:30		Feb-11-20 11:35		Feb-11-20 11:40		Feb-11-20 11:45		Feb-11-20 11:50		Feb-11-20 11:55	
BTEX by EPA 8021B	***Extracted:***	Feb-13-20 10:00						Feb-13-20 10:00					
	Analyzed:	Feb-13-20 12:39						Feb-13-20 12:59					
	Units/RL:	mg/kg	RL					mg/kg	RL				
Benzene		<0.00199	0.00199					<0.00202	0.00202				
Toluene		<0.00199	0.00199					0.00614	0.00202				
Ethylbenzene		<0.00199	0.00199					<0.00202	0.00202				
m,p-Xylenes		<0.00398	0.00398					<0.00403	0.00403				
o-Xylene		<0.00199	0.00199					<0.00202	0.00202				
Total Xylenes		<0.00199	0.00199					<0.00202	0.00202				
Total BTEX		<0.00199	0.00199					0.00614	0.00202				
Chloride by EPA 300	***Extracted:***	Feb-13-20 14:30		Feb-13-20 14:30		Feb-13-20 14:30		Feb-13-20 14:30		Feb-13-20 14:30		Feb-13-20 14:30	
	Analyzed:	Feb-13-20 17:25		Feb-13-20 17:41		Feb-13-20 17:46		Feb-13-20 18:02		Feb-13-20 18:07		Feb-13-20 18:12	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Chloride		407.42	4.9801	465.58	5.0505	627.21	5.0302	2082.1	25.000	2937.8	24.851	2738.0	24.802
TPH by SW8015 Mod	***Extracted:***	Feb-13-20 14:00						Feb-13-20 14:00					
	Analyzed:	Feb-13-20 21:18						Feb-13-20 21:39					
	Units/RL:	mg/kg	RL					mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8					<49.8	49.8				
Diesel Range Organics (DRO)		<49.8	49.8					<49.8	49.8				
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8					<49.8	49.8				
Total TPH		<49.8	49.8					<49.8	49.8				

Certificate of Analysis Summary 652237

American Safety Services, Odessa, TX

Project Name: Jalmat Sands Unit Water Injection

Project Id:

Contact: Thomas Franklin

Project Location: Lea Co NM

Date Received in Lab: Wed Feb-12-20 04:15 pm

Report Date: 27-FEB-20

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	652237-007		652237-008		652237-009		652237-010		652237-011		652237-012	
	Field Id:	Auger Hole 2 (1' EB)		Auger Hole 3 (1' EB)		Auger Hole 3 (1' EB)		Auger Hole 3 (1' EB)		Auger Hole 4 (1' EB)		Auger Hole 4 (1' EB)	
	Depth:	1.5-2.0 ft		0.0-0.5 ft		0.5-1.0 ft		1.0-1.5 ft		0.0-0.5 ft		0.5-1.0 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-11-20 12:00		Feb-11-20 12:05		Feb-11-20 12:10		Feb-11-20 12:15		Feb-11-20 12:20		Feb-11-20 12:25	
BTEX by EPA 8021B	Extracted:			Feb-13-20 10:00						Feb-13-20 10:00			
	Analyzed:			Feb-13-20 13:19						Feb-13-20 13:40			
	Units/RL:			mg/kg	RL					mg/kg	RL		
Benzene				<0.00200	0.00200					<0.00199	0.00199		
Toluene				<0.00200	0.00200					<0.00199	0.00199		
Ethylbenzene				<0.00200	0.00200					<0.00199	0.00199		
m,p-Xylenes				<0.00401	0.00401					<0.00398	0.00398		
o-Xylene				<0.00200	0.00200					<0.00199	0.00199		
Total Xylenes				<0.002	0.002					<0.00199	0.00199		
Total BTEX				<0.002	0.002					<0.00199	0.00199		
Chloride by EPA 300	Extracted:	Feb-13-20 14:30		Feb-13-20 14:30		Feb-13-20 14:30		Feb-13-20 14:30		Feb-13-20 16:00		Feb-13-20 16:00	
	Analyzed:	Feb-13-20 18:18		Feb-13-20 18:23		Feb-13-20 18:28		Feb-13-20 18:33		Feb-13-20 23:39		Feb-13-20 23:55	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Chloride		3711.2	25.100	1420.3	24.950	934.25	4.9900	753.92	4.9603	216.49	5.0201	211.71	5.0000
TPH by SW8015 Mod	Extracted:			Feb-13-20 14:00		Feb-25-20 10:30		Feb-25-20 10:30		Feb-13-20 14:00		Feb-25-20 10:30	
	Analyzed:			Feb-13-20 22:00		Feb-26-20 19:53		Feb-26-20 20:12		Feb-13-20 22:42		Feb-26-20 20:31	
	Units/RL:			mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)				<49.9	49.9	<50.0	50.0	<49.9	49.9	<50.0	50.0	<49.9	49.9
Diesel Range Organics (DRO)				243	49.9	588	50.0	493	49.9	120	50.0	52.6	49.9
Motor Oil Range Hydrocarbons (MRO)				<49.9	49.9	82.7	50.0	74.9	49.9	<50.0	50.0	<49.9	49.9
Total TPH				243	49.9	670.7	50	567.9	49.9	120	50	52.6	49.9

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 652237

American Safety Services, Odessa, TX

Project Name: Jalmat Sands Unit Water Injection

Project Id:

Contact: Thomas Franklin

Project Location: Lea Co NM

Date Received in Lab: Wed Feb-12-20 04:15 pm

Report Date: 27-FEB-20

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	652237-013		652237-014		652237-015		652237-016		652237-017		652237-018	
	Field Id:	Auger Hole 4 (1' EB)		Auger Hole 5 (1' EB)		Auger Hole 5 (1' EB)		Auger Hole 5 (1' EB)		Auger Hole 6 (1' EB)		Auger Hole 7 (1' EB)	
	Depth:	1.0-1.5 ft		0.0-0.5 ft		0.5-1.0 ft		1.0-1.5 ft		0.0-0.5 ft		0.0-0.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-11-20 12:30		Feb-11-20 12:35		Feb-11-20 12:40		Feb-11-20 12:45		Feb-11-20 12:50		Feb-11-20 12:55	
BTEX by EPA 8021B	***Extracted:***			Feb-13-20 10:00						Feb-13-20 10:00		Feb-13-20 10:00	
	Analyzed:			Feb-13-20 14:00						Feb-13-20 14:20		Feb-13-20 15:11	
	Units/RL:			mg/kg	RL					mg/kg	RL	mg/kg	RL
Benzene				<0.00200	0.00200					<0.00200	0.00200	<0.00201	0.00201
Toluene				<0.00200	0.00200					<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene				<0.00200	0.00200					<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes				<0.00399	0.00399					<0.00399	0.00399	<0.00402	0.00402
o-Xylene				<0.00200	0.00200					<0.00200	0.00200	<0.00201	0.00201
Total Xylenes				<0.002	0.002					<0.002	0.002	<0.00201	0.00201
Total BTEX				<0.002	0.002					<0.002	0.002	<0.00201	0.00201
Chloride by EPA 300	***Extracted:***	Feb-13-20 16:00		Feb-13-20 16:00		Feb-13-20 16:00		Feb-13-20 16:00		Feb-13-20 16:00		Feb-13-20 16:00	
	Analyzed:	Feb-14-20 00:00		Feb-14-20 00:05		Feb-14-20 00:11		Feb-14-20 00:27		Feb-14-20 00:32		Feb-14-20 00:37	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Chloride		590.71	5.0302	405.92	5.0000	344.82	4.9801	194.72	4.9900	35.302	4.9900	17.219	4.9603
TPH by SW8015 Mod	***Extracted:***	Feb-25-20 11:00		Feb-13-20 14:00						Feb-13-20 14:00		Feb-13-20 14:00	
	Analyzed:	Feb-25-20 20:33		Feb-13-20 23:04						Feb-13-20 23:25		Feb-13-20 23:46	
	Units/RL:	mg/kg	RL	mg/kg	RL					mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<49.9	49.9					<49.9	49.9	<50.0	50.0
Diesel Range Organics (DRO)		66.6	50.0	<49.9	49.9					<49.9	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		66.6	50	<49.9	49.9					<49.9	49.9	<50	50

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Version: 1.%

Jessica Kramer
Project Assistant

Analytical Report 652237

for

American Safety Services

Project Manager: Thomas Franklin

Jalmat Sands Unit Water Injection

27-FEB-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)

27-FEB-20

Project Manager: **Thomas Franklin**
American Safety Services
8715 Andrews Hwy
Odessa, TX 79765

Reference: XENCO Report No(s): **652237**
Jalmat Sands Unit Water Injection
Project Address: Lea Co NM

Thomas Franklin:

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) 652237. 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. 652237 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,

Jessica Kramer

Jessica Kramer
Project Assistant

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 652237

American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Auger Hole 1 (1' EB)	S	02-11-20 11:30	0.0 - 0.5 ft	652237-001
Auger Hole 1 (1' EB)	S	02-11-20 11:35	0.5 - 1 ft	652237-002
Auger Hole 1 (1' EB)	S	02-11-20 11:40	1.0 - 1.5 ft	652237-003
Auger Hole 2 (1' EB)	S	02-11-20 11:45	0.0 - 0.5 ft	652237-004
Auger Hole 2 (1' EB)	S	02-11-20 11:50	0.5 - 1.0 ft	652237-005
Auger Hole 2 (1' EB)	S	02-11-20 11:55	1.0 - 1.5 ft	652237-006
Auger Hole 2 (1' EB)	S	02-11-20 12:00	1.5 - 2.0 ft	652237-007
Auger Hole 3 (1' EB)	S	02-11-20 12:05	0.0 - 0.5 ft	652237-008
Auger Hole 3 (1' EB)	S	02-11-20 12:10	0.5 - 1.0 ft	652237-009
Auger Hole 3 (1' EB)	S	02-11-20 12:15	1.0 - 1.5 ft	652237-010
Auger Hole 4 (1' EB)	S	02-11-20 12:20	0.0 - 0.5 ft	652237-011
Auger Hole 4 (1' EB)	S	02-11-20 12:25	0.5 - 1.0 ft	652237-012
Auger Hole 4 (1' EB)	S	02-11-20 12:30	1.0 - 1.5 ft	652237-013
Auger Hole 5 (1' EB)	S	02-11-20 12:35	0.0 - 0.5 ft	652237-014
Auger Hole 5 (1' EB)	S	02-11-20 12:40	0.5 - 1.0 ft	652237-015
Auger Hole 5 (1' EB)	S	02-11-20 12:45	1.0 - 1.5 ft	652237-016
Auger Hole 6 (1' EB)	S	02-11-20 12:50	0.0 - 0.5 ft	652237-017
Auger Hole 7 (1' EB)	S	02-11-20 12:55	0.0 - 0.5 ft	652237-018

CASE NARRATIVE

Client Name: American Safety Services

Project Name: Jalmat Sands Unit Water Injection

Project ID:
Work Order Number(s): *652237*

Report Date: *27-FEB-20*
Date Received: *02/12/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3116502 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered below QC limits. Samples affected are: 7696544-1-BLK.

Certificate of Analytical Results 652237

American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 1 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-001	Date Collected:	02.11.20 11.30	Sample Depth:	0.0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 14.30	Basis:	Wet Weight
Seq Number:	3116532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**407.42**	4.9801	mg/L	02.13.20 17.25		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.13.20 14.00	Basis:	Wet Weight
Seq Number:	3116504				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.13.20 21.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.13.20 21.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.13.20 21.18	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.13.20 21.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	02.13.20 21.18	
o-Terphenyl	84-15-1	93	%	70-135	02.13.20 21.18	

Certificate of Analytical Results 652237

American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 1 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-001	Date Collected:	02.11.20 11.30	Sample Depth:	0.0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	02.13.20 10.00	Basis:	Wet Weight
Seq Number:	3116502				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.13.20 12.39	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.13.20 12.39	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.13.20 12.39	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.13.20 12.39	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.13.20 12.39	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.13.20 12.39	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.13.20 12.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	114	%	70-130	02.13.20 12.39	
4-Bromofluorobenzene	460-00-4	83	%	70-130	02.13.20 12.39	

Certificate of Analytical Results 652237

American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 1 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-002	Date Collected:	02.11.20 11.35	Sample Depth:	0.5 - 1 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 14.30	Basis:	Wet Weight
Seq Number:	3116532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**465.58**	5.0505	mg/L	02.13.20 17.41		1

Certificate of Analytical Results 652237

American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 1 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-003	Date Collected:	02.11.20 11.40	Sample Depth:	1.0 - 1.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 14.30	Basis:	Wet Weight
Seq Number:	3116532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**627.21**	5.0302	mg/L	02.13.20 17.46		1

Certificate of Analytical Results 652237

American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 2 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-004	Date Collected:	02.11.20 11.45	Sample Depth:	0.0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 14.30	Basis:	Wet Weight
Seq Number:	3116532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2082.1**	25.000	mg/L	02.13.20 18.02		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.13.20 14.00	Basis:	Wet Weight
Seq Number:	3116504				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.13.20 21.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.13.20 21.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.13.20 21.39	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.13.20 21.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	02.13.20 21.39	
o-Terphenyl	84-15-1	92	%	70-135	02.13.20 21.39	

Certificate of Analytical Results 652237

American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 2 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-004	Date Collected:	02.11.20 11.45	Sample Depth:	0.0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	02.13.20 10.00	Basis:	Wet Weight
Seq Number:	3116502				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.13.20 12.59	U	1
Toluene	108-88-3	**0.00614**	0.00202	mg/kg	02.13.20 12.59		1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.13.20 12.59	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.13.20 12.59	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.13.20 12.59	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.13.20 12.59	U	1
Total BTEX		**0.00614**	0.00202	mg/kg	02.13.20 12.59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	02.13.20 12.59	
4-Bromofluorobenzene	460-00-4	78	%	70-130	02.13.20 12.59	

Certificate of Analytical Results 652237

American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 2 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-005	Date Collected:	02.11.20 11.50	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 14.30	Basis:	Wet Weight
Seq Number:	3116532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2937.8**	24.851	mg/L	02.13.20 18.07		5

Certificate of Analytical Results 652237

American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 2 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-006	Date Collected:	02.11.20 11.55	Sample Depth:	1.0 - 1.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 14.30	Basis:	Wet Weight
Seq Number:	3116532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2738.0**	24.802	mg/L	02.13.20 18.12		5

Certificate of Analytical Results 652237

American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 2 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-007	Date Collected:	02.11.20 12.00	Sample Depth:	1.5 - 2.0 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 14.30	Basis:	Wet Weight
Seq Number:	3116532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3711.2**	25.100	mg/L	02.13.20 18.18		5

Certificate of Analytical Results 652237

American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 3 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-008	Date Collected:	02.11.20 12.05	Sample Depth:	0.0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 14.30	Basis:	Wet Weight
Seq Number:	3116532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1420.3**	24.950	mg/L	02.13.20 18.23		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.13.20 14.00	Basis:	Wet Weight
Seq Number:	3116504				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.13.20 22.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	**243**	49.9	mg/kg	02.13.20 22.00		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.13.20 22.00	U	1
Total TPH	PHC635	**243**	49.9	mg/kg	02.13.20 22.00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	02.13.20 22.00	
o-Terphenyl	84-15-1	101	%	70-135	02.13.20 22.00	

Certificate of Analytical Results 652237

American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 3 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-008	Date Collected:	02.11.20 12.05	Sample Depth:	0.0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	02.13.20 10.00	Basis:	Wet Weight
Seq Number:	3116502				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.13.20 13.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.13.20 13.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.13.20 13.19	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.13.20 13.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.13.20 13.19	U	1
Total Xylenes	1330-20-7	<0.002	0.002	mg/kg	02.13.20 13.19	U	1
Total BTEX		<0.002	0.002	mg/kg	02.13.20 13.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	02.13.20 13.19	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.13.20 13.19	

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American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 3 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-009	Date Collected:	02.11.20 12.10	Sample Depth:	0.5 - 1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 14.30	Basis:	Wet Weight
Seq Number:	3116532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**934.25**	4.9900	mg/L	02.13.20 18.28		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	02.25.20 10.30	Basis:	Wet Weight
Seq Number:	3117889				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.26.20 19.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	**588**	50.0	mg/kg	02.26.20 19.53		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**82.7**	50.0	mg/kg	02.26.20 19.53		1
Total TPH	PHC635	**670.7**	50	mg/kg	02.26.20 19.53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	02.26.20 19.53	
o-Terphenyl	84-15-1	101	%	70-135	02.26.20 19.53	

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American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 3 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-010	Date Collected:	02.11.20 12.15	Sample Depth:	1.0 - 1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 14.30	Basis:	Wet Weight
Seq Number:	3116532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**753.92**	4.9603	mg/L	02.13.20 18.33		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	02.25.20 10.30	Basis:	Wet Weight
Seq Number:	3117889				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.26.20 20.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	**493**	49.9	mg/kg	02.26.20 20.12		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**74.9**	49.9	mg/kg	02.26.20 20.12		1
Total TPH	PHC635	**567.9**	49.9	mg/kg	02.26.20 20.12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	02.26.20 20.12	
o-Terphenyl	84-15-1	95	%	70-135	02.26.20 20.12	

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American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 4 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-011	Date Collected:	02.11.20 12.20	Sample Depth:	0.0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 16.00	Basis:	Wet Weight
Seq Number:	3116534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**216.49**	5.0201	mg/L	02.13.20 23.39		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.13.20 14.00	Basis:	Wet Weight
Seq Number:	3116504				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.13.20 22.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	**120**	50.0	mg/kg	02.13.20 22.42		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.13.20 22.42	U	1
Total TPH	PHC635	**120**	50	mg/kg	02.13.20 22.42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	02.13.20 22.42	
o-Terphenyl	84-15-1	91	%	70-135	02.13.20 22.42	

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American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 4 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-011	Date Collected:	02.11.20 12.20	Sample Depth:	0.0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	02.13.20 10.00	Basis:	Wet Weight
Seq Number:	3116502				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.13.20 13.40	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.13.20 13.40	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.13.20 13.40	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.13.20 13.40	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.13.20 13.40	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.13.20 13.40	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.13.20 13.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	02.13.20 13.40	
4-Bromofluorobenzene	460-00-4	79	%	70-130	02.13.20 13.40	

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American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id: **Auger Hole 4 (1' EB)** Matrix: Soil Date Received:02.12.20 16.15

Lab Sample Id: 652237-012 Date Collected: 02.11.20 12.25 Sample Depth: 0.5 - 1.0 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: SPC % Moisture:

Analyst: SPC Date Prep: 02.13.20 16.00 Basis: Wet Weight

Seq Number: 3116534

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**211.71**	5.0000	mg/L	02.13.20 23.55		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 02.25.20 10.30 Basis: Wet Weight

Seq Number: 3117889

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.26.20 20.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	**52.6**	49.9	mg/kg	02.26.20 20.31		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.26.20 20.31	U	1
Total TPH	PHC635	**52.6**	49.9	mg/kg	02.26.20 20.31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	02.26.20 20.31	
o-Terphenyl	84-15-1	89	%	70-135	02.26.20 20.31	

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American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id: **Auger Hole 4 (1' EB)** Matrix: Soil Date Received:02.12.20 16.15

Lab Sample Id: 652237-013 Date Collected: 02.11.20 12.30 Sample Depth: 1.0 - 1.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: SPC % Moisture:

Analyst: SPC Date Prep: 02.13.20 16.00 Basis: Wet Weight

Seq Number: 3116534

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**590.71**	5.0302	mg/L	02.14.20 00.00		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 02.25.20 11.00 Basis: Wet Weight

Seq Number: 3117689

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.25.20 20.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	**66.6**	50.0	mg/kg	02.25.20 20.33		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.25.20 20.33	U	1
Total TPH	PHC635	**66.6**	50	mg/kg	02.25.20 20.33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	02.25.20 20.33	
o-Terphenyl	84-15-1	109	%	70-135	02.25.20 20.33	

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American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 5 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-014	Date Collected:	02.11.20 12.35	Sample Depth:	0.0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 16.00	Basis:	Wet Weight
Seq Number:	3116534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**405.92**	5.0000	mg/L	02.14.20 00.05		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.13.20 14.00	Basis:	Wet Weight
Seq Number:	3116504				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.13.20 23.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.13.20 23.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.13.20 23.04	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.13.20 23.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	02.13.20 23.04	
o-Terphenyl	84-15-1	90	%	70-135	02.13.20 23.04	

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American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 5 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-014	Date Collected:	02.11.20 12.35	Sample Depth:	0.0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	02.13.20 10.00	Basis:	Wet Weight
Seq Number:	3116502				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.13.20 14.00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.13.20 14.00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.13.20 14.00	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.13.20 14.00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.13.20 14.00	U	1
Total Xylenes	1330-20-7	<0.002	0.002	mg/kg	02.13.20 14.00	U	1
Total BTEX		<0.002	0.002	mg/kg	02.13.20 14.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	78	%	70-130	02.13.20 14.00	
1,4-Difluorobenzene	540-36-3	113	%	70-130	02.13.20 14.00	

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American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 5 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-015	Date Collected:	02.11.20 12.40	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 16.00	Basis:	Wet Weight
Seq Number:	3116534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**344.82**	4.9801	mg/L	02.14.20 00.11		1

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American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 5 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-016	Date Collected:	02.11.20 12.45	Sample Depth:	1.0 - 1.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 16.00	Basis:	Wet Weight
Seq Number:	3116534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**194.72**	4.9900	mg/L	02.14.20 00.27		1

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Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 6 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-017	Date Collected:	02.11.20 12.50	Sample Depth:	0.0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 16.00	Basis:	Wet Weight
Seq Number:	3116534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**35.302**	4.9900	mg/L	02.14.20 00.32		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.13.20 14.00	Basis:	Wet Weight
Seq Number:	3116504				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.13.20 23.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.13.20 23.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.13.20 23.25	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.13.20 23.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	02.13.20 23.25	
o-Terphenyl	84-15-1	96	%	70-135	02.13.20 23.25	

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Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 6 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-017	Date Collected:	02.11.20 12.50	Sample Depth:	0.0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	02.13.20 10.00	Basis:	Wet Weight
Seq Number:	3116502				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.13.20 14.20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.13.20 14.20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.13.20 14.20	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.13.20 14.20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.13.20 14.20	U	1
Total Xylenes	1330-20-7	<0.002	0.002	mg/kg	02.13.20 14.20	U	1
Total BTEX		<0.002	0.002	mg/kg	02.13.20 14.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	75	%	70-130	02.13.20 14.20	
1,4-Difluorobenzene	540-36-3	114	%	70-130	02.13.20 14.20	

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Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 7 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-018	Date Collected:	02.11.20 12.55	Sample Depth:	0.0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	02.13.20 16.00	Basis:	Wet Weight
Seq Number:	3116534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**17.219**	4.9603	mg/L	02.14.20 00.37		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.13.20 14.00	Basis:	Wet Weight
Seq Number:	3116504				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.13.20 23.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.13.20 23.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.13.20 23.46	U	1
Total TPH	PHC635	<50	50	mg/kg	02.13.20 23.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	02.13.20 23.46	
o-Terphenyl	84-15-1	96	%	70-135	02.13.20 23.46	

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American Safety Services, Odessa, TX

Jalmat Sands Unit Water Injection

Sample Id:	**Auger Hole 7 (1' EB)**	Matrix:	Soil	Date Received:	02.12.20 16.15
Lab Sample Id:	652237-018	Date Collected:	02.11.20 12.55	Sample Depth:	0.0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	02.13.20 10.00	Basis:	Wet Weight
Seq Number:	3116502				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.13.20 15.11	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.13.20 15.11	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.13.20 15.11	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.13.20 15.11	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.13.20 15.11	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.13.20 15.11	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.13.20 15.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	114	%	70-130	02.13.20 15.11	
4-Bromofluorobenzene	460-00-4	86	%	70-130	02.13.20 15.11	

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

QC Summary 652237

American Safety Services

Jalmat Sands Unit Water Injection

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3116532 Matrix: Solid Date Prep: 02.13.20
MB Sample Id: 7696641-1-BLK LCS Sample Id: 7696641-1-BKS LCSD Sample Id: 7696641-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.0000	250.00	258.60	103	258.47	103	90-110	0	20	mg/L	02.13.20 16:01	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3116534 Matrix: Solid Date Prep: 02.13.20
MB Sample Id: 7696642-1-BLK LCS Sample Id: 7696642-1-BKS LCSD Sample Id: 7696642-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.0000	250.00	257.73	103	257.17	103	90-110	0	20	mg/L	02.13.20 23:29	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3116532 Matrix: Soil Date Prep: 02.13.20
Parent Sample Id: 652236-001 MS Sample Id: 652236-001 S MSD Sample Id: 652236-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.8048	249.00	267.16	104	266.35	103	90-110	0	20	mg/L	02.13.20 16:17	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3116532 Matrix: Soil Date Prep: 02.13.20
Parent Sample Id: 652237-001 MS Sample Id: 652237-001 S MSD Sample Id: 652237-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	407.42	249.00	650.79	98	648.61	97	90-110	0	20	mg/L	02.13.20 17:30	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3116534 Matrix: Soil Date Prep: 02.13.20
Parent Sample Id: 652085-001 MS Sample Id: 652085-001 S MSD Sample Id: 652085-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	43.706	250.00	311.67	107	310.09	107	90-110	1	20	mg/L	02.14.20 00:58	

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

QC Summary 652237

American Safety Services

Jalmat Sands Unit Water Injection

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3116534 Matrix: Soil Date Prep: 02.13.20
Parent Sample Id: 652237-011 MS Sample Id: 652237-011 S MSD Sample Id: 652237-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	216.49	251.00	486.08	107	486.06	107	90-110	0	20	mg/L	02.13.20 23:44	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3116504 Matrix: Solid Date Prep: 02.13.20
MB Sample Id: 7696636-1-BLK LCS Sample Id: 7696636-1-BKS LCSD Sample Id: 7696636-1-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	837	84	840	84	70-135	0	20	mg/kg	02.13.20 17:29	
Diesel Range Organics (DRO)	<50.0	1000	934	93	909	91	70-135	3	20	mg/kg	02.13.20 17:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		104		101		70-135	%	02.13.20 17:29
o-Terphenyl	102		111		106		70-135	%	02.13.20 17:29

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3117689 Matrix: Solid Date Prep: 02.25.20
MB Sample Id: 7697433-1-BLK LCS Sample Id: 7697433-1-BKS LCSD Sample Id: 7697433-1-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)	<15.0	1000	925	93	938	94	70-135	1	20	mg/kg	02.25.20 12:09	
Diesel Range Organics (DRO)	<15.0	1000	1070	107	1060	106	70-135	1	20	mg/kg	02.25.20 12:09	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	100		109		110		70-135	%	02.25.20 12:09
o-Terphenyl	112		119		118		70-135	%	02.25.20 12:09

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3117889 Matrix: Solid Date Prep: 02.26.20
MB Sample Id: 7697536-1-BLK LCS Sample Id: 7697536-1-BKS LCSD Sample Id: 7697536-1-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)	<15.0	1000	880	88	903	90	70-135	3	20	mg/kg	02.26.20 18:21	
Diesel Range Organics (DRO)	<15.0	1000	957	96	981	98	70-135	2	20	mg/kg	02.26.20 18:21	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		107		111		70-135	%	02.26.20 18:21
o-Terphenyl	93		101		108		70-135	%	02.26.20 18:21

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

QC Summary 652237

American Safety Services

Jalmat Sands Unit Water Injection

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3116504 Matrix: Solid Date Prep: 02.13.20
MB Sample Id: 7696636-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.13.20 17:01	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3117689 Matrix: Solid Date Prep: 02.25.20
MB Sample Id: 7697433-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.25.20 11:48	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3117889 Matrix: Solid Date Prep: 02.26.20
MB Sample Id: 7697536-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.26.20 18:02	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3116504 Matrix: Soil Date Prep: 02.13.20
Parent Sample Id: 652236-001 MS Sample Id: 652236-001 S MSD Sample Id: 652236-001 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	832	83	836	84	70-135	0	20	mg/kg	02.13.20 18:31	
Diesel Range Organics (DRO)	<49.9	998	863	86	948	95	70-135	9	20	mg/kg	02.13.20 18:31	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		99		70-135	%	02.13.20 18:31
o-Terphenyl	95		127		70-135	%	02.13.20 18:31

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

QC Summary 652237

American Safety Services

Jalmat Sands Unit Water Injection

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3117689 — Matrix: Soil — Date Prep: 02.25.20
Parent Sample Id: 653428-002 — MS Sample Id: 653428-002 S — MSD Sample Id: 653428-002 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)	1240	997	2270	103	2310	107	70-135	2	20	mg/kg	02.25.20 13:12	
Diesel Range Organics (DRO)	5260	997	6230	97	6320	106	70-135	1	20	mg/kg	02.25.20 13:12	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		120		70-135	%	02.25.20 13:12
o-Terphenyl	104		103		70-135	%	02.25.20 13:12

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3117889 — Matrix: Soil — Date Prep: 02.26.20
Parent Sample Id: 653717-001 — MS Sample Id: 653717-001 S — MSD Sample Id: 653717-001 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)	<15.0	998	831	83	829	83	70-135	0	20	mg/kg	02.26.20 19:16	
Diesel Range Organics (DRO)	<15.0	998	928	93	930	93	70-135	0	20	mg/kg	02.26.20 19:16	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		96		70-135	%	02.26.20 19:16
o-Terphenyl	88		84		70-135	%	02.26.20 19:16

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3116502 — Matrix: Solid — Date Prep: 02.13.20
MB Sample Id: 7696544-1-BLK — LCS Sample Id: 7696544-1-BKS — LCSD Sample Id: 7696544-1-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	0.115	115	0.107	107	70-130	7	35	mg/kg	02.13.20 10:20	
Toluene	<0.000456	0.100	0.109	109	0.106	106	70-130	3	35	mg/kg	02.13.20 10:20	
Ethylbenzene	<0.000565	0.100	0.105	105	0.102	102	70-130	3	35	mg/kg	02.13.20 10:20	
m,p-Xylenes	<0.00101	0.200	0.205	103	0.202	101	70-130	1	35	mg/kg	02.13.20 10:20	
o-Xylene	<0.000344	0.100	0.100	100	0.0996	100	70-130	0	35	mg/kg	02.13.20 10:20	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		109		110		70-130	%	02.13.20 10:20
4-Bromofluorobenzene	69	**	83		88		70-130	%	02.13.20 10:20

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

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

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

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

QC Summary 652237

American Safety Services

Jalmat Sands Unit Water Injection

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3116502 Matrix: Soil Date Prep: 02.13.20

Parent Sample Id: 652237-001 MS Sample Id: 652237-001 S MSD Sample Id: 652237-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.0991	99	0.105	105	70-130	6	35	mg/kg	02.13.20 11:00	
Toluene	0.000488	0.100	0.0980	98	0.103	103	70-130	5	35	mg/kg	02.13.20 11:00	
Ethylbenzene	<0.000565	0.100	0.0934	93	0.0982	98	70-130	5	35	mg/kg	02.13.20 11:00	
m,p-Xylenes	<0.00101	0.200	0.183	92	0.192	96	70-130	5	35	mg/kg	02.13.20 11:00	
o-Xylene	0.000369	0.100	0.0898	89	0.0947	94	70-130	5	35	mg/kg	02.13.20 11:00	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		115		70-130	%	02.13.20 11:00
4-Bromofluorobenzene	83		88		70-130	%	02.13.20 11:00

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike

Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added

LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec

Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

652237

AMERICAN SAFETY SERVICES INC

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

8715 Andrews Hwy
Odessa, TX 79768

Phone: 432-552-7625

Project Manager: Thomas Franklin

Project Name: Jalmat Sands Unit Water injection

Company Name: American Safety Services Inc.

Project #:

Company Address: 8715 Andrews Hwy.

Project Loc: Lea Co. NM

City/State/Zip: Odessa, TX 79765

PO #:

Telephone No: 432-552-7625 / 432-661-0015

Fax No:

Report Format: [X] Standard [ ] TRRP [ ] NPDES

Sampler Signature: MIGUEL DE LEON

e-mail: tfranklin@americansafety.net

(lab use only)

ORDER #:

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1	TOTAL: 8015M	8015B	TPH: TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chloride	On Hold	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
	Auger Hole 1 (1'EB)	0.0'	0.5'	2/11/2020	1130	N	1	X								S- GRAB	X										X				X			X
	Auger Hole 1 (1'EB)	0.5'	1.0'	2/11/2020	1135	N	1	X								S- GRAB															X			X
	Auger Hole 1 (1'EB)	1.0'	1.5'	2/11/2020	1140	N	1	X								S- GRAB															X			X
	Auger Hole 2(1'EB)	0.0'	0.5'	2/11/2020	1145	N	1	X								S- GRAB	X										X				X			X
	Auger Hole 2(1'EB)	0.5'	1.0'	2/11/2020	1150	N	1	X								S- GRAB															X			X
	Auger Hole 2(1'EB)	1.0'	1.5'	2/11/2020	1155	N	1	X								S- GRAB															X			X
	Auger Hole 2(1'EB)	1.5'	2.0'	2/11/2020	1200	N	1	X								S- GRAB															X			X
	Auger Hole 3 (1'EB)	0.0'	0.5'	2/11/2020	1205	N	1	X								S- GRAB	X										X				X			X
	Auger Hole 3 (1'EB)	0.5'	1.0'	2/11/2020	1210	N	1	X								S- GRAB															X			X
	Auger Hole 3 (1'EB)	1.0'	1.5'	2/11/2020	1215	N	1	X								S- GRAB															X			X

Special Instructions: Invoice American Safety - Thomas Franklin

Relinquished by:	Date	Time	Received by:	Date	Time
Miguel De Leon	02-12-20	1615			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	Date	Time

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt:
Received: °C
Adjusted: °C Factor 4.1

652237

AMERICAN SAFETY SERVICES INC

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

8715 Andrews Hwy
Odessa, TX 79768

Phone: 432-552-7625

Project Manager: Thomas Franklin

Company Name: American Safety Services Inc.

Company Address: 8715 Andrews Hwy.

City/State/Zip: Odessa, TX 79765

Telephone No: 432-552-7625 / 432-661-0015

Fax No:

Sampler Signature: MIGUEL DE LEON

e-mail: tfranklin@americansafety.net

Project Name: Jalmat Sands Unit Water injection

Project #:

Project Loc: Lea Co. NM

PO #:

Report Format: [x] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #:

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge / GW = Groundwater S=Soil/Solid / NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1	8015M	TPH: TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	TOTAL: BTEX 8021B	5030 or BTEX 8260	RCI	N.O.R.M.	Chloride	On Hold	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
	Auger Hole 4 (1'EB)	0.0'	0.5'	2/11/2020	1220	N	1	X								S- GRAB	X									X				X			X
	Auger Hole 4 (1'EB)	0.5'	1.0'	2/11/2020	1225	N	1	X								S- GRAB														X			X
	Auger Hole 4 (1'EB)	1.0'	1.5'	2/11/2020	1230	N	1	X								S- GRAB														X			X
	Auger Hole 5 (1'EB)	0.0'	0.5'	2/11/2020	1235	N	1	X								S- GRAB	X									X				X			X
	Auger Hole 5 (1'EB)	0.5'	1.0'	2/11/2020	1240	N	1	X								S- GRAB														X			X
	Auger Hole 5 (1'EB)	1.0'	1.5'	2/11/2020	1245	N	1	X								S- GRAB														X			X
	Auger Hole 6 (1'EB)	0.0'	0.5'	2/11/2020	1250	N	1	X								S- GRAB	X									X				X			X
	Auger Hole 7 (1'EB)	0.0'	0.5'	2/11/2020	1255	N	1	X								S- GRAB	X									X				X			X
	[redacted]																																

Special Instructions: Invoice American Safety - Thomas Franklin

Relinquished by:	Date	Time	Received by:	Date	Time
Miguel DeLeon	02-12-20	1615		2/12	1615
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	Date	Time

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt:
Received: °C
Adjusted: °C Factor 4.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: American Safety Services

Date/ Time Received: 02.12.2020 04.15.00 PM

Work Order #: 652237

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.1
#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?	**Yes**
#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#: r8

Checklist completed by: Allison Johnson Date: 02.13.2020

Checklist reviewed by: Jessica Kramer Date: 02.13.2020

Jessica Kramer

Certificate of Analysis Summary 654787

American Safety Services, Odessa, TX

Project Name: Maverick Natural Resources-Jalmat Sands Water Injection

Project Id:

Contact: Thomas Franklin

Project Location: Lea Co.NM

Date Received in Lab: Fri Mar-06-20 09:45 am

Report Date: 16-MAR-20

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	654787-001		654787-002		654787-003		654787-004		654787-005		654787-006	
	Field Id:	Bottom Hole @ Auger Hole		Bottom Hole @ Auger Hole		Side Wall 1		Side Wall 2		Side Wall 3		Side Wall 4	
	Depth:	0.0-0.5		0.0-0.5									
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-05-20 13:30		Mar-05-20 13:35		Mar-05-20 13:40		Mar-05-20 13:45		Mar-05-20 13:50		Mar-05-20 13:55	
BTEX by EPA 8021B	***Extracted:***	Mar-14-20 09:00		Mar-14-20 09:00		Mar-14-20 09:00		Mar-14-20 09:00		Mar-14-20 09:00		Mar-14-20 09:00	
	Analyzed:	Mar-14-20 18:32		Mar-14-20 18:52		Mar-14-20 19:12		Mar-14-20 19:32		Mar-14-20 19:52		Mar-14-20 20:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00402	0.00402	<0.00400	0.00400	<0.00402	0.00402	<0.00398	0.00398	<0.00399	0.00399	<0.00399	0.00399
o-Xylene		<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00201	0.00201	<0.002	0.002	<0.00201	0.00201	<0.00199	0.00199	<0.002	0.002	<0.002	0.002
Total BTEX		<0.00201	0.00201	<0.002	0.002	<0.00201	0.00201	<0.00199	0.00199	<0.002	0.002	<0.002	0.002
Chloride by EPA 300	***Extracted:***	Mar-09-20 09:10		Mar-09-20 09:10		Mar-09-20 09:10		Mar-09-20 09:10		Mar-09-20 09:10		Mar-09-20 09:10	
	Analyzed:	Mar-09-20 14:48		Mar-09-20 16:02		Mar-09-20 16:23		Mar-09-20 16:43		Mar-09-20 16:48		Mar-09-20 16:54	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Chloride		<5.0302	5.0302	<5.0000	5.0000	9.1437	4.9900	9.2510	5.0403	9.6394	4.9801	10.154	4.9801
TPH by SW8015 Mod	***Extracted:***	Mar-07-20 11:00		Mar-07-20 11:00		Mar-07-20 11:00		Mar-07-20 11:00		Mar-07-20 11:00		Mar-07-20 11:00	
	Analyzed:	Mar-07-20 23:44		Mar-08-20 00:41		Mar-08-20 00:59		Mar-08-20 01:18		Mar-08-20 01:37		Mar-08-20 01:55	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.8	49.8	<49.9	49.9
Diesel Range Organics (DRO)		<50.0	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.8	49.8	<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.8	49.8	<49.9	49.9
Total TPH		<50	50	<49.9	49.9	<50	50	<50	50	<49.8	49.8	<49.9	49.9

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

Jessica Kramer
Project Manager

Certificate of Analysis Summary 654787

American Safety Services, Odessa, TX

Project Name: Maverick Natural Resources-Jalmat Sands Water Injection

Project Id:

Contact: Thomas Franklin

Project Location: Lea Co.NM

Date Received in Lab: Fri Mar-06-20 09:45 am

Report Date: 16-MAR-20

Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	654787-007		654787-008		654787-009			
	Field Id:	Side Wall 5		Side Wall 6		Side Wall 7			
	Depth:								
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Mar-05-20 14:00		Mar-05-20 14:05		Mar-05-20 14:10			
BTEX by EPA 8021B	***Extracted:***	Mar-14-20 09:00		Mar-14-20 09:00		Mar-14-20 09:00			
	Analyzed:	Mar-14-20 20:32		Mar-14-20 20:53		Mar-14-20 21:13			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198		
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198		
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198		
m,p-Xylenes		<0.00400	0.00400	<0.00399	0.00399	<0.00396	0.00396		
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198		
Total Xylenes		<0.002	0.002	<0.002	0.002	<0.00198	0.00198		
Total BTEX		<0.002	0.002	<0.002	0.002	<0.00198	0.00198		
Chloride by EPA 300	***Extracted:***	Mar-09-20 09:10		Mar-09-20 09:10		Mar-09-20 09:10			
	Analyzed:	Mar-09-20 16:59		Mar-09-20 17:04		Mar-09-20 17:09			
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL		
Chloride		8.9578	5.0302	9.6657	4.9900	9.5350	5.0000		
TPH by SW8015 Mod	***Extracted:***	Mar-07-20 11:00		Mar-07-20 11:00		Mar-07-20 11:00			
	Analyzed:	Mar-08-20 02:14		Mar-08-20 02:33		Mar-08-20 02:52			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0		
Diesel Range Organics (DRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0		
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0		
Total TPH		<50	50	<50	50	<50	50		

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

Jessica Kramer
Project Manager

Analytical Report 654787

for

American Safety Services

Project Manager: Thomas Franklin

Maverick Natural Resources-Jalmat Sands Water Injection

16-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)

16-MAR-20

Project Manager: **Thomas Franklin**
American Safety Services
8715 Andrews Hwy
Odessa, TX 79765

Reference: XENCO Report No(s): **654787**
Maverick Natural Resources-Jalmat Sands Water Injection
Project Address: Lea Co.NM

Thomas Franklin:

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) 654787. 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. 654787 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,

Jessica Kramer

Jessica Kramer
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 654787

American Safety Services, Odessa, TX

Maverick Natural Resources-Jalmat Sands Water Injection

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Bottom Hole @ Auger Hole 2 (3'EB)	S	03-05-20 13:30	0.0 - 0.5	654787-001
Bottom Hole @ Auger Hole 3 (3'EB)	S	03-05-20 13:35	0.0 - 0.5	654787-002
Side Wall 1	S	03-05-20 13:40		654787-003
Side Wall 2	S	03-05-20 13:45		654787-004
Side Wall 3	S	03-05-20 13:50		654787-005
Side Wall 4	S	03-05-20 13:55		654787-006
Side Wall 5	S	03-05-20 14:00		654787-007
Side Wall 6	S	03-05-20 14:05		654787-008
Side Wall 7	S	03-05-20 14:10		654787-009

CASE NARRATIVE

Client Name: American Safety Services

Project Name: Maverick Natural Resources-Jalmat Sands Water Injection

Project ID:
Work Order Number(s): *654787*

Report Date: *16-MAR-20*
Date Received: *03/06/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3119678 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected.
Samples affected are: 654787-009,654787-008.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results 654787

American Safety Services, Odessa, TX

Maverick Natural Resources-Jalmat Sands Water Injection

Sample Id:	**Bottom Hole @ Auger Hole 2 (3'EB)**	Matrix:	Soil	Date Received:	03.06.20 09.45
Lab Sample Id:	654787-001	Date Collected:	03.05.20 13.30	Sample Depth:	0.0 - 0.5

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.09.20 09.10	Basis:	Wet Weight
Seq Number:	3119010				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.0302	5.0302	mg/L	03.09.20 14.48	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	03.07.20 11.00	Basis:	Wet Weight
Seq Number:	3118858				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.07.20 23.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.07.20 23.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.07.20 23.44	U	1
Total TPH	PHC635	<50	50	mg/kg	03.07.20 23.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	03.07.20 23.44	
o-Terphenyl	84-15-1	92	%	70-135	03.07.20 23.44	

Certificate of Analytical Results 654787

American Safety Services, Odessa, TX

Maverick Natural Resources-Jalmat Sands Water Injection

Sample Id:	**Bottom Hole @ Auger Hole 2 (3'EB)**	Matrix:	Soil	Date Received:	03.06.20 09.45
Lab Sample Id:	654787-001	Date Collected:	03.05.20 13.30	Sample Depth:	0.0 - 0.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.14.20 09.00	Basis:	Wet Weight
Seq Number:	3119678				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.14.20 18.32	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.14.20 18.32	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.14.20 18.32	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.14.20 18.32	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.14.20 18.32	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.14.20 18.32	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.14.20 18.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	82	%	70-130	03.14.20 18.32	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.14.20 18.32	

Certificate of Analytical Results 654787

American Safety Services, Odessa, TX

Maverick Natural Resources-Jalmat Sands Water Injection

Sample Id: **Bottom Hole @ Auger Hole 3 (3'EB)** Matrix: Soil Date Received:03.06.20 09.45

Lab Sample Id: 654787-002 Date Collected: 03.05.20 13.35 Sample Depth: 0.0 - 0.5

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 03.09.20 09.10 Basis: Wet Weight

Seq Number: 3119010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.0000	5.0000	mg/L	03.09.20 16.02	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 03.07.20 11.00 Basis: Wet Weight

Seq Number: 3118858

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.08.20 00.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.08.20 00.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.08.20 00.41	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.08.20 00.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	03.08.20 00.41	
o-Terphenyl	84-15-1	93	%	70-135	03.08.20 00.41	

Certificate of Analytical Results 654787

American Safety Services, Odessa, TX

Maverick Natural Resources-Jalmat Sands Water Injection

Sample Id:	**Bottom Hole @ Auger Hole 3 (3'EB)**	Matrix:	Soil	Date Received:	03.06.20 09.45
Lab Sample Id:	654787-002	Date Collected:	03.05.20 13.35	Sample Depth:	0.0 - 0.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.14.20 09.00	Basis:	Wet Weight
Seq Number:	3119678				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.14.20 18.52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.14.20 18.52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.14.20 18.52	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.14.20 18.52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.14.20 18.52	U	1
Total Xylenes	1330-20-7	<0.002	0.002	mg/kg	03.14.20 18.52	U	1
Total BTEX		<0.002	0.002	mg/kg	03.14.20 18.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	03.14.20 18.52	
4-Bromofluorobenzene	460-00-4	75	%	70-130	03.14.20 18.52	

Certificate of Analytical Results 654787

American Safety Services, Odessa, TX

Maverick Natural Resources-Jalmat Sands Water Injection

Sample Id: **Side Wall 1** Matrix: Soil Date Received:03.06.20 09.45

Lab Sample Id: 654787-003 Date Collected: 03.05.20 13.40

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 03.09.20 09.10 Basis: Wet Weight

Seq Number: 3119010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.1437**	4.9900	mg/L	03.09.20 16.23		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 03.07.20 11.00 Basis: Wet Weight

Seq Number: 3118858

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.08.20 00.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.08.20 00.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.08.20 00.59	U	1
Total TPH	PHC635	<50	50	mg/kg	03.08.20 00.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	03.08.20 00.59	
o-Terphenyl	84-15-1	91	%	70-135	03.08.20 00.59	

Certificate of Analytical Results 654787

American Safety Services, Odessa, TX

Maverick Natural Resources-Jalmat Sands Water Injection

Sample Id:	**Side Wall 1**	Matrix:	Soil	Date Received:	03.06.20 09.45
Lab Sample Id:	654787-003	Date Collected:	03.05.20 13.40		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.14.20 09.00	Basis:	Wet Weight
Seq Number:	3119678				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.14.20 19.12	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.14.20 19.12	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.14.20 19.12	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.14.20 19.12	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.14.20 19.12	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.14.20 19.12	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.14.20 19.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	73	%	70-130	03.14.20 19.12	
1,4-Difluorobenzene	540-36-3	104	%	70-130	03.14.20 19.12	

Certificate of Analytical Results 654787

American Safety Services, Odessa, TX

Maverick Natural Resources-Jalmat Sands Water Injection

Sample Id: **Side Wall 2** Matrix: Soil Date Received:03.06.20 09.45

Lab Sample Id: 654787-004 Date Collected: 03.05.20 13.45

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 03.09.20 09.10 Basis: Wet Weight

Seq Number: 3119010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.2510**	5.0403	mg/L	03.09.20 16.43		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 03.07.20 11.00 Basis: Wet Weight

Seq Number: 3118858

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.08.20 01.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.08.20 01.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.08.20 01.18	U	1
Total TPH	PHC635	<50	50	mg/kg	03.08.20 01.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	03.08.20 01.18	
o-Terphenyl	84-15-1	90	%	70-135	03.08.20 01.18	

Certificate of Analytical Results 654787

American Safety Services, Odessa, TX

Maverick Natural Resources-Jalmat Sands Water Injection

Sample Id:	**Side Wall 2**	Matrix:	Soil	Date Received:	03.06.20 09.45
Lab Sample Id:	654787-004	Date Collected:	03.05.20 13.45		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.14.20 09.00	Basis:	Wet Weight
Seq Number:	3119678				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.14.20 19.32	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.14.20 19.32	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.14.20 19.32	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.14.20 19.32	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.14.20 19.32	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.14.20 19.32	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.14.20 19.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	70	%	70-130	03.14.20 19.32	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.14.20 19.32	

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American Safety Services, Odessa, TX

Maverick Natural Resources-Jalmat Sands Water Injection

Sample Id: **Side Wall 3** Matrix: Soil Date Received:03.06.20 09.45

Lab Sample Id: 654787-005 Date Collected: 03.05.20 13.50

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 03.09.20 09.10 Basis: Wet Weight

Seq Number: 3119010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.6394**	4.9801	mg/L	03.09.20 16.48		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 03.07.20 11.00 Basis: Wet Weight

Seq Number: 3118858

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.08.20 01.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.08.20 01.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.08.20 01.37	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.08.20 01.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	03.08.20 01.37	
o-Terphenyl	84-15-1	90	%	70-135	03.08.20 01.37	

Certificate of Analytical Results 654787

American Safety Services, Odessa, TX

Maverick Natural Resources-Jalmat Sands Water Injection

Sample Id:	**Side Wall 3**	Matrix:	Soil	Date Received:	03.06.20 09.45
Lab Sample Id:	654787-005	Date Collected:	03.05.20 13.50		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.14.20 09.00	Basis:	Wet Weight
Seq Number:	3119678				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.14.20 19.52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.14.20 19.52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.14.20 19.52	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.14.20 19.52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.14.20 19.52	U	1
Total Xylenes	1330-20-7	<0.002	0.002	mg/kg	03.14.20 19.52	U	1
Total BTEX		<0.002	0.002	mg/kg	03.14.20 19.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	03.14.20 19.52	
4-Bromofluorobenzene	460-00-4	74	%	70-130	03.14.20 19.52	

Certificate of Analytical Results 654787

American Safety Services, Odessa, TX

Maverick Natural Resources-Jalmat Sands Water Injection

Sample Id: **Side Wall 4** Matrix: Soil Date Received:03.06.20 09.45

Lab Sample Id: 654787-006 Date Collected: 03.05.20 13.55

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 03.09.20 09.10 Basis: Wet Weight

Seq Number: 3119010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.154**	4.9801	mg/L	03.09.20 16.54		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 03.07.20 11.00 Basis: Wet Weight

Seq Number: 3118858

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.08.20 01.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.08.20 01.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.08.20 01.55	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.08.20 01.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	03.08.20 01.55	
o-Terphenyl	84-15-1	90	%	70-135	03.08.20 01.55	

Certificate of Analytical Results 654787

American Safety Services, Odessa, TX

Maverick Natural Resources-Jalmat Sands Water Injection

Sample Id:	**Side Wall 4**	Matrix:	Soil	Date Received:	03.06.20 09.45
Lab Sample Id:	654787-006	Date Collected:	03.05.20 13.55		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.14.20 09.00	Basis:	Wet Weight
Seq Number:	3119678				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.14.20 20.12	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.14.20 20.12	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.14.20 20.12	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.14.20 20.12	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.14.20 20.12	U	1
Total Xylenes	1330-20-7	<0.002	0.002	mg/kg	03.14.20 20.12	U	1
Total BTEX		<0.002	0.002	mg/kg	03.14.20 20.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	03.14.20 20.12	
4-Bromofluorobenzene	460-00-4	84	%	70-130	03.14.20 20.12	

Certificate of Analytical Results 654787

American Safety Services, Odessa, TX

Maverick Natural Resources-Jalmat Sands Water Injection

Sample Id: **Side Wall 5** Matrix: Soil Date Received:03.06.20 09.45

Lab Sample Id: 654787-007 Date Collected: 03.05.20 14.00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 03.09.20 09.10 Basis: Wet Weight

Seq Number: 3119010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.9578**	5.0302	mg/L	03.09.20 16.59		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 03.07.20 11.00 Basis: Wet Weight

Seq Number: 3118858

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.08.20 02.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.08.20 02.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.08.20 02.14	U	1
Total TPH	PHC635	<50	50	mg/kg	03.08.20 02.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	03.08.20 02.14	
o-Terphenyl	84-15-1	93	%	70-135	03.08.20 02.14	

Certificate of Analytical Results 654787

American Safety Services, Odessa, TX

Maverick Natural Resources-Jalmat Sands Water Injection

Sample Id:	**Side Wall 5**	Matrix:	Soil	Date Received:	03.06.20 09.45
Lab Sample Id:	654787-007	Date Collected:	03.05.20 14.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.14.20 09.00	Basis:	Wet Weight
Seq Number:	3119678				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.14.20 20.32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.14.20 20.32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.14.20 20.32	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.14.20 20.32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.14.20 20.32	U	1
Total Xylenes	1330-20-7	<0.002	0.002	mg/kg	03.14.20 20.32	U	1
Total BTEX		<0.002	0.002	mg/kg	03.14.20 20.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	73	%	70-130	03.14.20 20.32	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.14.20 20.32	

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American Safety Services, Odessa, TX

Maverick Natural Resources-Jalmat Sands Water Injection

Sample Id: **Side Wall 6** Matrix: Soil Date Received:03.06.20 09.45

Lab Sample Id: 654787-008 Date Collected: 03.05.20 14.05

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 03.09.20 09.10 Basis: Wet Weight

Seq Number: 3119010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.6657**	4.9900	mg/L	03.09.20 17.04		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 03.07.20 11.00 Basis: Wet Weight

Seq Number: 3118858

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.08.20 02.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.08.20 02.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.08.20 02.33	U	1
Total TPH	PHC635	<50	50	mg/kg	03.08.20 02.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	03.08.20 02.33	
o-Terphenyl	84-15-1	89	%	70-135	03.08.20 02.33	

Certificate of Analytical Results 654787

American Safety Services, Odessa, TX

Maverick Natural Resources-Jalmat Sands Water Injection

Sample Id:	**Side Wall 6**	Matrix:	Soil	Date Received:	03.06.20 09.45
Lab Sample Id:	654787-008	Date Collected:	03.05.20 14.05		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.14.20 09.00	Basis:	Wet Weight
Seq Number:	3119678				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.14.20 20.53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.14.20 20.53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.14.20 20.53	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.14.20 20.53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.14.20 20.53	U	1
Total Xylenes	1330-20-7	<0.002	0.002	mg/kg	03.14.20 20.53	U	1
Total BTEX		<0.002	0.002	mg/kg	03.14.20 20.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.14.20 20.53	
4-Bromofluorobenzene	460-00-4	65	%	70-130	03.14.20 20.53	**

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American Safety Services, Odessa, TX

Maverick Natural Resources-Jalmat Sands Water Injection

Sample Id: **Side Wall 7** Matrix: Soil Date Received:03.06.20 09.45

Lab Sample Id: 654787-009 Date Collected: 03.05.20 14.10

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 03.09.20 09.10 Basis: Wet Weight

Seq Number: 3119010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.5350**	5.0000	mg/L	03.09.20 17.09		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 03.07.20 11.00 Basis: Wet Weight

Seq Number: 3118858

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.08.20 02.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.08.20 02.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.08.20 02.52	U	1
Total TPH	PHC635	<50	50	mg/kg	03.08.20 02.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	03.08.20 02.52	
o-Terphenyl	84-15-1	92	%	70-135	03.08.20 02.52	

Certificate of Analytical Results 654787

American Safety Services, Odessa, TX

Maverick Natural Resources-Jalmat Sands Water Injection

Sample Id:	**Side Wall 7**	Matrix:	Soil	Date Received:	03.06.20 09.45
Lab Sample Id:	654787-009	Date Collected:	03.05.20 14.10		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.14.20 09.00	Basis:	Wet Weight
Seq Number:	3119678				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.14.20 21.13	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.14.20 21.13	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.14.20 21.13	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	03.14.20 21.13	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.14.20 21.13	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.14.20 21.13	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.14.20 21.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.14.20 21.13	
4-Bromofluorobenzene	460-00-4	69	%	70-130	03.14.20 21.13	**

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.

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

QC Summary 654787

American Safety Services

Maverick Natural Resources-Jalmat Sands Water Injection

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3119010 — Matrix: Solid — Date Prep: 03.09.20
MB Sample Id: 7698340-1-BLK — LCS Sample Id: 7698340-1-BKS — LCSD Sample Id: 7698340-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.0000	250.00	240.60	96	239.79	96	90-110	0	20	mg/L	03.09.20 14:38	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3119010 — Matrix: Soil — Date Prep: 03.09.20
Parent Sample Id: 654787-001 — MS Sample Id: 654787-001 S — MSD Sample Id: 654787-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4.0986	251.51	257.88	101	258.86	101	90-110	0	20	mg/L	03.09.20 14:54	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3119010 — Matrix: Soil — Date Prep: 03.09.20
Parent Sample Id: 654787-002 — MS Sample Id: 654787-002 S — MSD Sample Id: 654787-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.2350	250.00	251.80	99	243.81	96	90-110	3	20	mg/L	03.09.20 16:08	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3118858 — Matrix: Solid — Date Prep: 03.07.20
MB Sample Id: 7698322-1-BLK — LCS Sample Id: 7698322-1-BKS — LCSD Sample Id: 7698322-1-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)	<15.0	1000	873	87	990	99	70-135	13	20	mg/kg	03.07.20 10:12	
Diesel Range Organics (DRO)	<15.0	1000	951	95	1070	107	70-135	12	20	mg/kg	03.07.20 10:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	84		99		115		70-135	%	03.07.20 10:12
o-Terphenyl	88		92		103		70-135	%	03.07.20 10:12

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3118858 — Matrix: Solid — Date Prep: 03.07.20
MB Sample Id: 7698322-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.07.20 09:53	

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

1.000

QC Summary 654787

American Safety Services

Maverick Natural Resources-Jalmat Sands Water Injection

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3118858 — Matrix: Soil — Date Prep: 03.07.20
Parent Sample Id: 654855-001 — MS Sample Id: 654855-001 S — MSD Sample Id: 654855-001 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)	<15.0	997	920	92	925	93	70-135	1	20	mg/kg	03.07.20 11:09	
Diesel Range Organics (DRO)	103	997	1010	91	1010	91	70-135	0	20	mg/kg	03.07.20 11:09	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		108		70-135	%	03.07.20 11:09
o-Terphenyl	99		104		70-135	%	03.07.20 11:09

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3119678 — Matrix: Solid — Date Prep: 03.14.20
MB Sample Id: 7698893-1-BLK — LCS Sample Id: 7698893-1-BKS — LCSD Sample Id: 7698893-1-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	0.103	103	0.115	115	70-130	11	35	mg/kg	03.14.20 11:32	
Toluene	<0.000456	0.100	0.100	100	0.109	109	70-130	9	35	mg/kg	03.14.20 11:32	
Ethylbenzene	<0.000565	0.100	0.0934	93	0.105	105	70-130	12	35	mg/kg	03.14.20 11:32	
m,p-Xylenes	<0.00101	0.200	0.183	92	0.207	104	70-130	12	35	mg/kg	03.14.20 11:32	
o-Xylene	<0.000344	0.100	0.0949	95	0.102	102	70-130	7	35	mg/kg	03.14.20 11:32	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		105		108		70-130	%	03.14.20 11:32
4-Bromofluorobenzene	77		92		94		70-130	%	03.14.20 11:32

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3119678 — Matrix: Soil — Date Prep: 03.14.20
Parent Sample Id: 654907-006 — MS Sample Id: 654907-006 S — MSD Sample Id: 654907-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.0960	96	0.0911	91	70-130	5	35	mg/kg	03.14.20 12:13	
Toluene	0.000456	0.0998	0.0943	94	0.0905	90	70-130	4	35	mg/kg	03.14.20 12:13	
Ethylbenzene	<0.000564	0.0998	0.0824	83	0.0808	81	70-130	2	35	mg/kg	03.14.20 12:13	
m,p-Xylenes	<0.00101	0.200	0.161	81	0.158	79	70-130	2	35	mg/kg	03.14.20 12:13	
o-Xylene	<0.000344	0.0998	0.0794	80	0.0781	78	70-130	2	35	mg/kg	03.14.20 12:13	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		104		70-130	%	03.14.20 12:13
4-Bromofluorobenzene	96		86		70-130	%	03.14.20 12:13

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

1.000

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200)

Dallas Texas (214-902-0300)

San Antonio, Texas (210-509-3334)

Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

www.xenco.com

CHAIN OF CUSTODY

Page 1 Of 1

Xenco Quote #

Xenco Job # 605787

Client / Reporting Information

Company Name / Branch: American Safety Services Inc.

Company Address: 8715 Andrews Hwy, Odessa Tx 79765

Email: tfranklin@americansafety.net; mdial@americansafety.net

Phone No: 432-557-9868; 432-557-6195

Project Contact: Thomas Franklin

Samplers's Name Michael Dial

Project Information

Project Name/Number: Maverick Natural Resources-Jalmat Sands Unit Water Injection

Project Location: Lea Co. NM

Invoice To: ASSI-tfranklin@americansafety.net

PO Number:

Analytical Information

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH 8015m	Chloride	BTEX 8021B	Field Comments
1	Bottom Hole @ Auger Hole 2 (3'EB)	0.0-0.5	3/5/2020	1330	S	1									X	X	X	
2	Bottom Hole @ Auger Hole 3 (3'EB)	0.0-0.5	3/5/2020	1335	S	1									X	X	X	
3	Side Wall 1	N/A	3/5/2020	1340	S	1									X	X	X	
4	Side Wall 2	N/A	3/5/2020	1345	S	1									X	X	X	
5	Side Wall 3	N/A	3/5/2020	1350	S	1									X	X	X	
6	Side Wall 4	N/A	3/5/2020	1355	S	1									X	X	X	
7	Side Wall 5	N/A	3/5/2020	1400	S	1									X	X	X	
8	Side Wall 6	N/A	3/5/2020	1405	S	1									X	X	X	
9	Side Wall 7	N/A	3/5/2020	1410	S	1									X	X	X	
10																		

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] Next Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 3 Day EMERGENCY
- [X] 5 Day TAT
- [ ] 7 Day TAT
- [ ] Contract TAT

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level III Std QC+ Forms
- [ ] Level 3 (CLP Forms)
- [ ] TRRP Checklist
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] TRRP Level IV
- [ ] UST / RG -411

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		3/6/2020 6:45		2		2
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
			3	4		4
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice: X
			5			Cooler Temp. 3.0 / 3.9 Thermo. Corr. Factor

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: American Safety Services

Date/ Time Received: 03.06.2020 09.45.00 AM

Work Order #: 654787

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)?	3.9
#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**

*** 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: 03.06.2020

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 03.09.2020

Jessica Kramer

APPENDIX E

C-141

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	NRM1930258857
District RP	1RP-5771
Facility ID	
Application ID	pRM1930259185

Release Notification

Responsible Party

Responsible Party Maverick Natural Resources	OGRID 370080
Contact Name Thomas Haigood	Contact Telephone (432) 701-7802
Contact email Thomas.haigood@maversources.com	Incident # *NRM1930258857*
Contact mailing address P.O. Box 678 Andrews, TX	

Location of Release Source

Latitude 32.398801 Longitude -103.336184
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Jalmat Sands Unit Water Injection Unit	Site Type Tank Battery
Date Release Discovered 07/02/2019	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
B	14	22S	35E	Lea

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 75	Volume Recovered (bbls) 80
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: The pump malfunctioned, not allowing movement of water to the injection well. This caused the tanks to overflow. 90% of the fluid was captured in the containment area, and a vac truck was dispatched to recover the fluid. Some fluid overflowed the containment traversing a portion of the production pad. An environmental company had been contacted to remediate the area in accordance with the NMOCD guidelines.

Prior to the release a local rain storm produced and additional five (5) barrels (bbls) of fluid that was recovered during vacuum operations.

State of New Mexico
Oil Conservation Division

Incident ID	NRM1930258857
District RP	1RP-5771
Facility ID	
Application ID	pRM1930259185

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

Initial Response

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

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

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

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

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

Printed Name: Thomas Haigood Title: HSE Specialist

Signature: Thomas James Haigood Date: 03/23/2020

Email: thomas.haigood@mavresources.com Telephone: (432) 701-7802

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NRM1930258857
District RP	1RP-5771
Facility ID	
Application ID	pRM1930259185

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?	185 (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.

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Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NRM1930258857
District RP	1RP-5771
Facility ID	
Application ID	pRM1930259185

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: Thomas Haigood Title: HSE Specialist

Signature Thomas James Haigood Date: 03/23/2020

Email: thomas.haigood@mavresources.com Telephone: (432) 701-7802

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NRM1930258857
District RP	1RP-5771
Facility ID	
Application ID	pRM1930259185

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: Thomas Haigood — Title: HSE Specialist

Signature: Thomas James Haigood — Date: 03/23/2020

Email: Thomas.haigood@wavesources.com — Telephone: (432) 701-7802

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NRM1930258857
District RP	1RP-5771
Facility ID	
Application ID	pRM1930259185

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: Thomas Haigood Title: HSE Specialist

Signature: Thomas James Haigood Date: 03/23/2020

email: Thomas.haigood@mavresources.com Telephone: (432) 701-7802

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: _____

APPENDIX F

Manifests

SUNDANCE SERVICES, Inc.

P.O. Box 1737 Eunice, New Mexico 88231
Business: (575) 394-2511 • Disposal: (575) 390-7842

TICKET No. 552974

LEASE OPERATOR/SHIPPER/COMPANY: Maverick / Breitburn	DATE: 2-10-20
LEASE NAME: Jalmat Sands Unit Water Injection	TIME: 1:04 AM/PM
RIG NAME & NUMBER:	VEHICLE NO: 1135
TRANSPORTER COMPANY: ASST	PHONE:
GENERATOR COMPANY MAN'S NAME: Cecile Trujillo	PHONE: 575-394-3307

CHARGE TO: Maverick / Breitburn

TYPE OF MATERIAL

[ ] Tank Bottoms [ ] Drilling Fluids [ ] Rinsate [ ] BS&W Content: _____

[ ] Solids [ ] Contaminated Soil [ ] Jet Out

Description: 90

VOLUME OF MATERIAL

[ ] BBLS._____: [X] YARD 20 : [ ] _____

RRC or API # **C-133#** NMM

STICKERS, CODES, NUMBERS, ETC.

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001 et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET. TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO SUNDANCE SERVICES, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY *that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.*

DRIVER: _____
(SIGNATURE)

FACILITY REPRESENTATIVE: _____
(SIGNATURE)

Sundance Services West, Inc.
P.O. Box 1737
Eunice, NM 88231
575-390-7842
Permit # NM 1-62

White - Sundance Canary - Sundance Acct #1 Pink - Transporter

SUNDANCE SERVICES, Inc.

P.O. Box 1737 Eunice, New Mexico 88231
Business: (575) 394-2511 • Disposal: (575) 390-7842

TICKET No. 553057 (553017)

LEASE OPERATOR/SHIPPER/COMPANY: Maverick/Brietburn	DATE: 2-10-20
LEASE NAME: Jalmat Sands Unit Water Injection	TIME: 5:42 AM/PM
RIG NAME & NUMBER:	VEHICLE NO: 1135
TRANSPORTER COMPANY: SSI	PHONE:
GENERATOR COMPANY MAN'S NAME: Eddie Trujillo	PHONE:

CHARGE TO: Maverick/Brietburn

TYPE OF MATERIAL

[ ] Tank Bottoms [ ] Drilling Fluids [ ] Rinsate [ ] BS&W Content:
[ ] Solids [X] Contaminated Soil [ ] Jet Out _____

Description: OD

VOLUME OF MATERIAL

[ ] BBLS._____: [X] YARD 12 _____: [ ] _____

RRC or API # **C-133#** N.M

STICKERS, CODES, NUMBERS, ETC.

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001 et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET. TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO SUNDANCE SERVICES, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY *that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.*

DRIVER: _____ (SIGNATURE)

FACILITY REPRESENTATIVE: R Maguire (SIGNATURE)

Sundance Services West, Inc.
P.O. Box 1737
Eunice, NM 88231
575-390-7842
Permit # NM 1-62

White - Sundance Canary - Sundance Acct #1 Pink - Transporter

SUNDANCE SERVICES, Inc.

P.O. Box 1737 Eunice, New Mexico 88231
Business: (575) 394-2511 • Disposal: (575) 390-7842

TICKET No. 552939

LEASE OPERATOR/SHIPPER/COMPANY: Breitburn/Maverick	DATE: 2-10-20
LEASE NAME: Jalmat Sands Unit Water Injection	TIME: 1020 AM/PM
RIG NAME & NUMBER:	VEHICLE NO: 1135
TRANSPORTER COMPANY: ASI	PHONE:
GENERATOR COMPANY MAN'S NAME: Eddie Trujillo	PHONE: 575-394-2251

CHARGE TO: Maverick Resources

TYPE OF MATERIAL

[ ] Tank Bottoms [ ] Drilling Fluids [ ] Rinsate [ ] BS&W Content: _____

[ ] Solids [ ] Contaminated Soil [ ] Jet Out

Description: GO

VOLUME OF MATERIAL

[ ] BBLS. _____: [ ] YARD 20 : [ ] _____

RRC or API # **C-133#** NM

STICKERS, CODES, NUMBERS, ETC.

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001 et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

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DRIVER: _____ *(SIGNATURE)*

FACILITY REPRESENTATIVE: _____ *(SIGNATURE)*

Sundance Services West, Inc.
P.O. Box 1737
Eunice, NM 88231
575-390-7842
Permit # NM 1-62

White - Sundance Canary - Sundance Acct #1 Pink - Transporter

SUNDANCE SERVICES, Inc.

P.O. Box 1737 Eunice, New Mexico 88231
Business: (575) 394-2511 • Disposal: (575) 390-7842

TICKET No. 553017

LEASE OPERATOR/SHIPPER/COMPANY: Maverick / Breitburn	DATE: 2-10-20
LEASE NAME: Jalmat Sand Unit Water Injection	TIME: 5:33 AM/PM
RIG NAME & NUMBER:	VEHICLE NO: 1135
TRANSPORTER COMPANY: ASSI	PHONE:
GENERATOR COMPANY MAN'S NAME: Eddie Tyler	PHONE: 575 394 2329

CHARGE TO: Maverick / Breitburn.

TYPE OF MATERIAL

[ ] Tank Bottoms [ ] Drilling Fluids [ ] Rinsate [ ] BS&W Content: _____

[ ] Solids [ ] Contaminated Soil [ ] Jet Out

Description: CD

VOLUME OF MATERIAL

[ ] BBLS._____: [ ] YARD 20 : [ ] _____

RRC or API # **C-133#** Unm.

STICKERS, CODES, NUMBERS, ETC.

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DRIVER: _____ (SIGNATURE)

FACILITY REPRESENTATIVE: _____ (SIGNATURE)

Sundance Services West, Inc.
P.O. Box 1737
Eunice, NM 88231
575 390-7842
Permit # NM 1-62

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SUNDANCE SERVICES WEST, INC.

P.O. Box 1737 Eunice, New Mexico 88231
Business: (575) 394-2511 • Disposal: (575) 390-7842

TICKET No. 560782

LEASE OPERATOR/SHIPPER/COMPANY: Maverick K.	DATE: 3-19-20
LEASE NAME: Jalmat Sands Int water Injection Plant	TIME: 1:48 AM/PM
RIG NAME & NUMBER:	VEHICLE NO: 1141
TRANSPORTER COMPANY: NESR	PHONE:
GENERATOR COMPANY MAN'S NAME: Danny Sanchez	PHONE: 240-9464

CHARGE TO: Maverick K. (395)

TYPE OF MATERIAL

[ ] Tank Bottoms [ ] Drilling Fluids [ ] Rinsate [ ] BS&W Content: _____

[ ] Solids [ ] Contaminated Soil [ ] Jet Out

Description: _____

VOLUME OF MATERIAL

[ ] BBLS._____: [ ] YARD 20 : [ ] _____

RRC or API # **C-133#** NVM

STICKERS, CODES, NUMBERS, ETC.

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DRIVER: _____
(SIGNATURE)

FACILITY REPRESENTATIVE: _____
(SIGNATURE)

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SUNDANCE SERVICES WEST, INC.

P.O. Box 1737 Eunice, New Mexico 88231
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TICKET No. 560866

LEASE OPERATOR/SHIPPER/COMPANY: Maverick.	DATE: 3-19-20
LEASE NAME: Jalmat Cmar Unit Water	TIME: AM/PM
RIG NAME & NUMBER: Injection Sta	VEHICLE NO: 1141
TRANSPORTER COMPANY: West	PHONE:
GENERATOR COMPANY MAN'S NAME: Danny Sanchez	PHONE: 575.390.9161

CHARGE TO: Maverick

TYPE OF MATERIAL

[ ] Tank Bottoms [ ] Drilling Fluids [ ] Rinsate [ ] BS&W Content: _____

[ ] Solids [ ] Contaminated Soil [ ] Jet Out

Description: _____

VOLUME OF MATERIAL

[ ] BBLS. _____: [ ] YARD 20 : [ ] _____

RRC or API # **C-133#** KM

STICKERS, CODES, NUMBERS, ETC.

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DRIVER: Efrain B
(SIGNATURE)

FACILITY REPRESENTATIVE: _____
(SIGNATURE)

White - Sundance Canary - Sundance Acct #1 Pink - Transporter

SUNDANCE SERVICES WEST, INC.

P.O. Box 1737 Eunice, New Mexico 88231
Business: (575) 394-2511 • Disposal: (575) 390-7842

TICKET No. 560902

LEASE OPERATOR/SHIPPER/COMPANY: Maverick	DATE: 3-19-20
LEASE NAME: Jalmat Sands Glazier	TIME: 2:45 AM/PM
RIG NAME & NUMBER: Injection P.M.	VEHICLE NO: 1141
TRANSPORTER COMPANY: ASST	PHONE:
GENERATOR COMPANY MAN'S NAME: Danny Sanchez	PHONE: 575-390-5716

CHARGE TO: Maverick.

TYPE OF MATERIAL

[ ] Tank Bottoms [ ] Drilling Fluids [ ] Rinsate [ ] BS&W Content: _____

[ ] Solids [ ] Contaminated Soil [ ] Jet Out

Description: 40

VOLUME OF MATERIAL

[ ] BBLS._____: [ ] YARD 12 : [ ] _____

RRC or API # **C-133#** NM

STICKERS, CODES, NUMBERS, ETC.

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DRIVER: Efrain B
(SIGNATURE)

FACILITY REPRESENTATIVE: _____
(SIGNATURE)

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