# Remediation Report, Soil Variance Request, and Groundwater Investigation

August 4, 2022

## Flying M SA Unit 4" Trunkline Crude Oil and Produced Water Release

Incident No.: NOY1827137381 1RP-5214

#### **Prepared For:**

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#### 1.0 Introduction

Crain Environmental (CE), on behalf of Southwest Royalties, Inc. (SWR), has prepared this *Remediation Report, Soil Variance Request and Groundwater Investigation* for the produced water release at the Flying M SA Unit 4" Trunkline (Flying M) Site, located in Unit Letter K, Section 29, Township 9 South, Range 33 East, Lea County, New Mexico. The global positioning system (GPS) coordinates for the Release Site are 33.501508, -103.59383. The property surface rights are privately owned. The location of the Release Site is depicted on Figure 1.

#### 2.0 Background

On September 25, 2018, a split in a flow line resulted in a release of approximately 5 barrels (bbls) of crude oil and 75 bbls of produced water. Immediately following the release, the area was secured, and the flow line was repaired.

The released fluid flowed on the ground approximately 150 feet south from the release point. Approximately 4 bbls of crude oil and 56 bbl of produced water was recovered, and impacted soil was excavated and stockpiled on plastic at the Site. Land use in the Site vicinity is primarily oil and gas production activity.

The release was immediately reported to the New Mexico Oil Conservation Division (NMOCD) via telephone. The NMOCD Form C-141 (Release Notification Report) was received by the NMOCD on September 28, 2018, and the Site was assigned Incident Number NOY1827137381 and RP identifier 1RP-5214. A copy of the NMOCD Form C-141, release volume calculations, and the NMOCD response is provided in Appendix A. Crude oil and produced water surface impacts at the Site covered approximately 4,300 square feet. The release point and the surface extent of the crude oil and produced water release are depicted on Figure 2.

On January 25, 2022, a *Remediation Report and Closure Request* was submitted to the NMOCD; however, the report was denied by the NMOCD on February 9, 2022, and a revised Closure Report was requested by April 11, 2022.

Due to delays in laboratory results, drilling permits, and equipment scheduling, a request for a 60-day extension was submitted to and approved by the NMOCD on April 4, 2022, with a new due date of June 6, 2022. Additional delays were encountered (survey scheduling, receipt of lab results, and collection of groundwater samples) and a request for an additional 60-day extension was submitted to and approved by the NMOCD on June 2, 2022, with a revised due date of August 5, 2022. Copies of NMOCD correspondence is included in Appendix B.

This Remediation Report, Soil Variance Request, and Groundwater Investigation provides a summary of soil remediation and groundwater investigation activities conducted to date.

#### 3.0 NMOCD Closure Criteria

Cleanup standards for produced water spills are provided in 19.15.29 NMAC. The cleanup standards (described in the rule as "Closure Criteria") are based primarily on depth to groundwater but are also based on other criteria. Three different Closure Criteria are provided in the rule. The most stringent apply to sites where groundwater is found within 50 feet of the ground surface or if the release occurred within one of the following areas:

- Within 300 feet of any continuously flowing watercourse or any other significant watercourse.
- Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary highwater mark).
- Within 300 feet from an occupied permanent residence, school, hospital, institution or church.
- Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes.

- Within 1,000 feet of any fresh water well or spring.
- Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended.
- Within 300 feet of a wetland.
- Within the area overlying a subsurface mine.
- Within an unstable area such as a karst formation.
- Within a 100-year floodplain.

CE reviewed available information to determine the Closure Criteria for the Site. The findings of this evaluation are summarized below.

#### 3.1 Groundwater Evaluation

Review of the New Mexico Office of the State Engineer (NMOSE) records indicated there are no water wells within a 0.5-mile radius of the Site. There are only three water wells within a seven-mile radius (L 13310 POD 8, L 13785 POD 1, and RA 10569) with depth to groundwater information provided. Recorded depths to groundwater are listed in the table below. Figure 3 provides a 0.5-mile radius circle around the Site and shows the location of each well listed below. Based on the water well data available in NMOSE records and the 2005 Chevron depth to groundwater map, it was estimated that depth to groundwater at the Site was approximately 62 feet bgs.

To prove depth to groundwater, soil boring BH-1 was drilled to a depth of 57 feet bgs on March 24, 2022. The boring was allowed to remain open for a period of at least 72 hours, and groundwater was measured in the borehole on March 29, 2022, at a depth of 42.37 feet bgs. On June 14, 2022, groundwater was measured at a depth of 46.13 feet bgs.

#### **Nearby Water Wells**

Well ID	Location from Release Site	Year Installed	Use	Well Depth and Depth to Water (feet bgs)
L 13310 POD 8	2.3 miles to the NE	2017	N/A	52 feet / 35 feet
L 13785 POD 1	5.8 miles to the NW	2015	N/A	175 feet / 120 feet
RA 10569	6.7 miles to the SW	No Data	N/A	198 feet / 175 feet

#### 3.2 Surface Features and Other Development

CE reviewed recent aerial photographs, topographic maps, the NMOSE Point of Discharge (POD) GIS website, and information available from the Lea County, New Mexico Central Appraisal District website. As shown on Figure 3, the Site is **not** located:

- Within 300 feet of any continuously flowing watercourse or any other significant watercourse.
  - No continuously flowing watercourses (rivers, streams, arroyos, etc.) are apparent within 300 feet of the Site in the topographic map (Figure 1).
- Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary highwater mark).
  - The topographic map (Figure 1) indicates there is not a lakebed, sinkhole or playa lake located within 200 feet of the Site.

- Within 300 feet from an occupied permanent residence, school, hospital, institution or church.
  - The Site Location Map (Figure 1) and information available from the Lea County, New Mexico Central Appraisal District do not show or list any permanent residence, school, hospital, institution or church located within 300 feet of the Site.
- Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes.
  - No wells or springs located within 500 feet of the Site appear in any of the NMOSE records reviewed by CE.
- Within 1,000 feet of any fresh water well or spring.
  - No fresh water wells or springs located within 1,000 feet of the Site appear in any of the records reviewed by CE.
- Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended.
  - Based on the property and other records review by CE, the Site is not located in incorporated municipal boundaries or within a defined municipal fresh water well field.
- Within the area overlying a subsurface mine
  - Based on the property and other records reviewed by CE, the Site is not located within an area overlying a subsurface mine.

#### 3.3 Wetlands, Floodplain, and Karst Geology

A review of the United States Fish and Wildlife Service (USFWS) wetlands map indicated the Site is not located within 300 feet of a wetland. The New Mexico Bureau of Land Management (BLM) karst potential map indicates the Site is located within a "low karst potential" area. Finally, review of the Federal Emergency Management Act (FEMA) floodplain map indicates the release at the Site is located outside of a 100-year floodplain. Figures 4 and 5 depict the FEMA floodplain information and the karst potential data, respectively.

#### 3.4 Closure Criteria Currently Assumed Applicable to the Site

The Closure Criteria applicable to the Site will be based on the depth to groundwater encountered in boring BH-1, which dictates the regulatory guidelines typically associated with groundwater depths less than or equal to 50 feet bgs. A summary of the Closure Criteria is provided in the table below and in Table 1.

#### **NMOCD Closure Criteria**

		Closure Criteria	Closure Criteria Based on Depth to Groundwater (m					
Constit	tuent of Concern	≤ 50 feet bgs	51 feet to 100 feet bgs	> 100 feet bgs				
Chlo	ride (EPA 300)	600	10,000	20,000				
TPH (EPA	GRO + DRO + MRO	100	2,500	2,500				
8015M)	GRO + DRO	NA	1,000	1,000				
Total BTEX (EPA 8021 or 8260)		50	50	50				
Benzene	(EPA 8021 or 8260)	10	10	10				

Notes: NA = not applicable

bgs = below ground surface
mg/kg = milligrams per kilogram
GRO = gasoline range organics
DRO = diesel range organics
MRO = motor oil range organics
TPH = total petroleum hydrocarbons

BTEX = benzene, toluene, ethylbenzene, and total xylenes Green highlighted cells denote applicable Closure Criteria.

#### 4.0 Site Assessment/Characterization Results

As per 19.15.29.11 NMAC, a Site Characterization Report will have the components described in Sections 4.1 through 4.5 of this document.

#### 4.1 Site Map

As required by 19.15.29.11 NMAC, a scaled diagram showing significant Site infrastructure, sample point locations, and known subsurface features such as utilities is provided as Figure 2.

#### 4.2 Depth to Groundwater

As discussed in Section 3.1, depth to groundwater beneath the Site was measured at 42.37 feet bgs on March 29, 2022, and at 46.13 feet bgs on June 14, 2022.

#### 4.3 Wellhead Protection Area

The 0.5-mile wellhead protection area is shown on Figure 3. As listed in the NMOSE database, there are no water wells within a 0.5-mile radius of the Site. There were no water sources, springs, or other sources of fresh water extraction identified within 0.5-mile of the Site.

#### 4.4 Distance to Nearest Significant Watercourse

The horizontal distance to the nearest significant watercourse as defined in Subsection P of 19.15.17.7 NMAC is greater than 0.5-mile from the Site.

#### 5.0 Summary of Remediation Activities

On November 5, 2018, an initial site assessment was conducted by C&M Services, LLC (C&M) of Hobbs, New Mexico. On January 29, 2019, surface samples were collected to delineate the horizontal limits of the release. Eleven soil samples (Background, SW North, SW East #1, SW East #2, SW East #3, SW East #4, SW South, SW West #4, SW West #3, SW West #2, and SW West #1) were submitted to Hall Environmental Analysis Laboratory (Hall) of Albuquerque, New Mexico, for analysis of total petroleum hydrocarbons (TPH) by Environmental Protection Agency (EPA) SW-846 Method 8015 Modified, for benzene, toluene, ethylbenzene and xylenes (collectively referred to as BTEX) by EPA SW-846 Method 8021B, and for chlorides by EPA Method 300.

Table 1 provides a summary of the laboratory results, and sample locations with concentrations are provided on Figure 2. The laboratory report and chain-of-custody documentation is provided in Appendix C. Referring to Table 1, the laboratory reported all sample results below the NMOCD Closure Criteria.

On February 21, 2019, Atkins Engineering Associates, Inc. (Atkins) of Roswell, New Mexico, drilled four soil borings (SP-1, SP-2, SP-3, and SP-4) to determine the vertical limits of the release. One sample from each boring was submitted to Hall for analysis of TPH, BTEX, and chlorides. Table 1 provides a summary of the laboratory results, and sample locations are provided on Figure 2. The laboratory report and chain-of-custody documentation is provided in Appendix C. Soil Boring Logs are provided in Appendix D. Referring to Table 1 all samples reported TPH, BTEX, and chloride concentrations below the NMOCD

Closure Criteria (SP-1 and SP-2 at a depth of 34 feet bgs, SP-3 at a depth of 39 feet bgs, and SP-4 at a depth of 19 feet bgs).

The upper six inches of soil was excavated from the release area, and from July 16, 2019, through July 19, 2019, approximately 360 cubic yards (cy) of soil was hauled to disposal at Gandy Marley Disposal Facility (GM). Appendix E provides copies of the Waste Manifests. Following initial excavation, gypsum was tilled into the surface soil of the release area, and fresh water was applied.

On February 23, 2021, Crain Environmental (CE) conducted a site assessment, and collected samples from the surface (0-6" bgs) at sample points SP-1, SP-2, SP-3, and SP-4 to assess current soil conditions. Soil samples were placed in clean glass sample jars, properly labeled, immediately placed on ice and hand delivered to Eurofins/Xenco Environmental Testing (Eurofins) in Midland, Texas under proper chain-of-custody control. All samples were analyzed for TPH, BTEX, and chlorides.

Table 1 provides a summary of the laboratory results. The laboratory report and chain-of-custody documentation is provided in Appendix C. Referring to Table 1, chloride concentrations were reported above the Closure Criteria in each sample, and TPH concentrations were reported above the Closure Criteria in samples SP-1, SP-2, and SP-4. All BTEX concentrations were reported below the test method detection limit in each sample.

On March 10, 2021, samples were collected from the surface to a depth of four feet bgs at sample points SP-1, SP-2, SP-3, and SP-4 using a backhoe. Soil samples from depths of 1', 2', 3', and 4' at sample locations SP-1, SP-2, and SP-4 were submitted to Eurofins for analysis of TPH and chlorides. As the surface sample from SP-3, reported TPH concentrations below the detection limits, samples from SP-3 were submitted to Eurofins for analysis of chlorides only. As surface samples reported BTEX concentrations below the detection limits, samples were not analyzed for BTEX. All samples reported chloride concentrations above the NMOCD Closure Criteria, and all TPH concentrations below the test method detection limits. The laboratory report and chain-of-custody documentation is provided in Appendix C.

Following several months of heavy rain, samples were collected at locations SP-1, SP-2, SP-3, and SP-4 on October 27, 2021, using a backhoe. Samples were collected from SP-1 and SP-4 at depths of 0-6", 1', 2', and 3', until backhoe refusal was encountered due to hard rock. Samples were collected from SP-2 and SP-3 at depths of 0-6", 1', 2', 3', and 4'. All samples were delivered to Eurofins for analysis of chlorides. Table 1 provides a summary of the laboratory results. The laboratory report and chain-of-custody documentation is provided in Appendix C.

Referring to Table 1, chloride concentrations at SP-1 were reported below the Closure Criteria at depths of 1', 2', and 3' bgs. Chloride concentrations at SP-2 were reported below the Closure Criteria at depths of 1', 2', 3', and 4' bgs. Chloride concentrations at SP-3 were reported below the Closure Criteria at depths of 1' and 4' bgs. All chloride concentrations at SP-4 were reported above the Closure Criteria.

From November 17, 2021, until December 15, 2021, affected soil was excavated from the area and hauled to GM for disposal. Soil was excavated to a depth of 1.5' bgs in the areas of SP-1, extending down to 2' bgs at SP-2, to 4' bgs at SP-3, and to 10' bgs at SP-4. Soil was excavated at those depths to the horizontal limits of the release area. Confirmation samples were collected from the bottom and sidewalls of the excavation to 10' bgs. All sample results reported chloride concentrations below the midlevel Closure Criteria of 10,000 mg/kg, as depth to groundwater was thought to be greater than 50 feet bgs at that time.

Table 1 provides a summary of the laboratory results, and sample locations with concentrations are provided on Figure 2. The laboratory reports and chain-of-custody documentation are provided in Appendix C.

On March 24, 2022, soil borings BH-1, BH-2, and BH-3 were drilled on the west (BH-1), east (BH-2), and south (BH-3) sides of the formerly excavated area by Talon, LPE (Talon) using an air rotary drilling rig. Boring BH-1 was drilled to a depth of 57 feet bgs, and borings BH-2 and BH-3 were drilled to a depth of 4.5 feet bgs. Soil samples were collected from a depth of 4.5 feet bgs in each boring, and additional samples were collected from depths of 10, 20, 30, 40, and 50 feet bgs in boring BH-1. All samples were submitted to Eurofins for analysis of chlorides.

Table 1 provides a summary of the laboratory results, and sample locations with concentrations are provided on Figure 2. The laboratory reports and chain-of-custody documentation are provided in Appendix C.

Referring to Table 1, vertical delineation of chloride concentrations was achieved in boring BH-1 at a depth of 40 feet bgs (325 mg/kg).

#### 5.1 Soil Disposal and Variance Request

From July 16 through July 19, 2019, approximately 360 cy of soil was hauled to GM for disposal. From November 18 through November 24, 2021, an additional 494 cy of soil was hauled to GM for disposal. Clean soil was brought back from GM to be used as backfill. The northern portion of the excavation was backfilled with clean soil in December of 2021, and the southern portion of the excavation was backfilled with clean soil in January of 2022, as confirmation samples reported chloride concentrations below the mid-level Closure Criteria. Copies of the Waste Manifests are provided in Appendix E. Photographic documentation is provided in Appendix F.

Referring to Table 1 and Figure 2, vertical and horizontal delineation has been achieved at the southern portion of the Site (shown in red on Figure 2), the source of chloride impacts has been repaired, and impacted soil has been excavated to a depth of 10 feet bgs and disposed at an approved disposal facility.

As the excavation has been backfilled with clean soil from a depth of 10 feet bgs to the surface, SWR proposes to re-excavate the southern portion of the Site (shown in red on Figure 2) to a depth of 4 feet bgs, install a polyethylene liner, and backfill the excavation from a depth of 4 feet bgs to surface with clean soil.

As impacted soil to a depth of 10 feet bgs was previously excavated and disposed, placement of a liner at a depth of 4 feet would ensure that future rainfall event would not push remaining chloride concentrations toward groundwater; therefore, remaining chloride concentrations would not pose a threat to fresh water, public health, or the environment. Excavation of approximately 8,000 cubic yards of soil, liner placement, backfill, and re-seeding would be completed within 90 days of NMOCD approval. Following backfilling, the surface will be contoured to natural grade, and the entire release area will be re-seeded with a seed mixture approved by the landowner.

#### 5.2 Groundwater Monitoring Results and Proposed Actions

On March 24, 2022, soil boring BH-1 was drilled on the west side of the formerly excavated area to a depth of 57 feet bgs. Soil boring BH-1 was allowed to remain open for a period of at least 72 hours before the boring was checked for the presence of groundwater. On March 29, 2022, groundwater was measured at a depth of 42.37 feet bgs and a groundwater sample was collected. The groundwater sample was placed in laboratory prepared containers, properly labeled, immediately placed on ice, and hand delivered to Eurofins for analysis of BTEX, TPH, and chlorides.

Table 2 provides a summary of groundwater elevation data, and Table 3 provides a summary of groundwater analytical results. Figure 6 shows the location of the boring/monitor well. The laboratory report and chain-of-custody documentation is provided in Appendix C. The soil boring log is provided in Appendix D. Referring to Table 3, concentrations of TPH and BTEX were reported below the test method detection limits, and the chloride concentration (1,220 milligrams per liter [mg/L]) was reported above the NMOCD Criteria of 250 mg/L.

On May 5, 2022, borings BH-2 and BH-3 were drilled by Talon using an air rotary drilling rig. Boring BH-2 was drilled to a total depth of 53 feet bgs, and boring BH-3 was drilled to a total depth of 57 feet bgs. On May 19, 2022, groundwater samples were collected from boring BH-2 (MW-2) and BH-3 (MW-3) and submitted to Eurofins for analysis of TPH, BTEX, and chlorides. Also on May 19, 2022, Basin Surveys of Hobbs, New Mexico, surveyed top of casing and ground elevations at the 3 borings/monitor wells.

Table 2 provides a summary of groundwater elevation data, and Table 3 provides a summary of groundwater analytical results. Figure 6 shows the locations of the borings/monitor wells. The laboratory report and chain-of-custody documentation is provided in Appendix C. The soil boring logs are provided in Appendix D. Referring to Table 3, concentrations of TPH and BTEX were reported below the test method detection limits, and the chloride concentrations were reported above the NMOCD Criteria of 250 mg/L in MW-2 (908 mg/L) and MW-3 (490 mg/L) samples.

On June 14, 2022, depth to groundwater measurement were collected from monitor wells MW-1, MW-2, and MW-3. Each well was then purged of two and a half times the well volume using dedicated disposable bailers for each well. Groundwater samples were collected from each well and hand delivered to Eurofins for analysis of TPH, BTEX, and chlorides.

Table 2 provides a summary of groundwater elevation data, and Table 3 provides a summary of groundwater analytical results. Figure 6 shows the locations of the borings/monitor wells. The laboratory report and chain-of-custody documentation is provided in Appendix C. Referring to Table 3, concentrations of TPH and BTEX were reported below the test method detection limits, and the chloride concentrations were reported above the NMOCD Criteria of 250 mg/L in MW-1 (1,400 mg/L), MW-2 (1,440 mg/L) and MW-3 (469 mg/L) samples. Referring to Figure 6, the groundwater flow direction is from northwest to southeast, with the lowest chloride concentration reported in upgradient well MW-3.

As chloride concentrations in all three monitor wells were reported above the NMOCD Criteria of 250 mg/L, SWR proposes the installation of an additional monitor well upgradient of well MW-3 to determine if chloride impacts to groundwater are regional in nature.

#### 6.0 Distribution

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**TABLES** 

# TABLE 1 SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS SOUTHWEST ROYALTIES, LLC FLYING M SA #2 PRODUCED WATER RELEASE NMOCD TRACKING NO.: 1RP-5214

Sample ID	Sample Date	Sample Depth (feet	Soil Status	TPH (GRO)	TPH (DRO)	TPH (MRO)	Total TPH	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	Chloride
	Date	bgs)	Status					milligram	s per kilograr	n (mg/kg)			
NMO	CD Closure C	riteria		-	-	-	100	10	-	-	-	50	600
Background	01/29/19	0-1	In Situ	<4.7	<9.5	<47	<47	<0.024	<0.047	<0.047	<0.094	<0.094	<60
SW South	01/29/19	0-1	In Situ	<4.7	<9.9	<49	<49	<0.023	<0.047	<0.047	<0.094	<0.094	<60
SW North	01/29/19	0-1	In Situ	<5.0	<9.8	<49	<49	<0.025	<0.050	<0.050	<0.10	<0.10	66
SW West #1	01/29/19	0-1	In Situ	<5.0	<9.8	<49	<49	<0.025	<0.050	<0.050	<0.099	<0.099	<60
SW West #2	01/29/19	0-1	In Situ	<4.8	<9.6	<48	<48	<0.024	0.048	<0.048	<0.097	<0.097	<60
SW West #3	01/29/19	0-1	In Situ	<4.8	<9.8	<49	<49	<0.024	<0.048	<0.048	<0.097	<0.097	120
SW West #4	01/29/19	0-1	In Situ	<4.7	<9.6	<48	<48	<0.024	<0.047	<0.047	<0.095	<0.095	93
SW East #1	01/29/19	0-1	In Situ	<4.6	<9.6	<48	<48	<0.023	<0.046	<0.046	<0.093	<0.093	160
SW East #2	01/29/19	0-1	In Situ	<4.7	<9.6	<48	<48	<0.023	<0.047	<0.047	<0.093	<0.093	<60
SW East #3	01/29/19	0-1	In Situ	<4.8	<9.7	<48	<48	<0.024	<0.048	0.048	<0.096	<0.096	68
SW East #4	01/29/19	0-1	In Situ	<4.9	<9.6	<48	<48	<0.025	<0.049	<0.049	<0.098	<0.098	120
SP-1	02/21/19	34	In Situ	<4.6	<9.8	<49	<49	< 0.023	<0.046	<0.046	< 0.093	< 0.093	<60
SP-1 / HA-1	02/23/21	0-1	Excavated	<50.0	1,010	175	1,190	<0.00202	< 0.00202	<0.00202	<0.00202	<0.00202	1,530
	03/10/21	1	In Situ	<50.0	<50.0	<50.0	<50.0						5,020
	03/10/21	2	In Situ	<50.0	<50.0	<50.0	<50.0						2,360
	03/10/21	3	In Situ	<49.9	<49.9	<49.9	<49.9	-			-		2,060
	03/10/21	4	In Situ	<49.9	<49.9	<49.9	<49.9						4,050
SP-1 / HA-1	10/27/21	0-6"	Excavated			-	-						2,190
	10/27/21	1	In Situ										284
	10/27/21	2	In Situ					-			-		80.4
	10/27/21	3	In Situ					-			-		37
	10/27/21	4	Back	hoe refusal	at 3' below	ground sui	tace						
SP-2	02/21/29	34	In Situ	<4.7	<9.4	<47	<47	< 0.024	<0.047	< 0.047	< 0.094	<0.094	61
SP-2 / HA-2	02/23/21	0-1	Excavated	<50.0	330	87	417	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	3,150
	03/10/21	1	In Situ	<50.0	<50.0	<50.0	<50.0	-					7,320
	03/10/21	2	In Situ	<49.9	<49.9	<49.9	<49.9	-					7,060
	03/10/21	3	In Situ	<49.8	<49.8	<49.8	<49.8						8,090
	03/10/21	4	In Situ	<50.0	<50.0	<50.0	<50.0				-		4,990
SP-2 / HA-2	10/27/21	0-1	Excavated										173
	10/27/21	1	In Situ					-			-		148
	10/27/21	2	In Situ					1			1		72.7
	10/27/21	3	In Situ					-			-		83.8
	10/27/21	4	In Situ										125

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# TABLE 1 SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS SOUTHWEST ROYALTIES, LLC FLYING M SA #2 PRODUCED WATER RELEASE NMOCD TRACKING NO.: 1RP-5214

Sample	·ID	Sample Date	Sample Depth (feet	Soil Status	TPH (GRO)	TPH (DRO)	TPH (MRO)	Total TPH	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	Chloride
		Date	bgs)	Status					milligrams	s per kilograr	n (mg/kg)			
	NMOCD Closure Criteria					-	-	100	10	-	-	-	50	600
SP-3		02/21/19	39	In Situ	<4.6	<9.8	<49	<49	< 0.023	< 0.046	<0.046	< 0.093	< 0.093	130
SP-3/H	A-3	02/23/21	0-1	Excavated	<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	3,140
		03/10/21	1	Excavated										5,040
		03/10/21	2	Excavated										17,300
		03/10/21	3	Excavated										21,600
		03/10/21	4	In Situ										21,300
SP-3/H	A-3	10/27/21	0-6"	Excavated										2,010
		10/27/21	1	Excavated										149
		10/27/21	2	Excavated										6,570
		10/27/21	3	Excavated										3,420
		10/27/21	4	In Situ										243
SP-4		02/21/29	19	In Situ	<4.6	<9.8	<49	<49	<0.023	<0.046	<0.046	< 0.093	< 0.093	120
SP-4/H	A-4	02/23/21	0-1	Excavated	<49.8	181	<49.8	181	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	2,190
		03/10/21	1	Excavated	<49.8	<49.8	<49.8	<49.8	1			-		11,200
		03/10/21	2	Excavated	<49.9	<49.9	<49.9	<49.9	1			-		13,000
		03/10/21	3	Excavated	<50.0	<50.0	<50.0	<50.0	1			-		11,000
		03/10/21	4	Excavated	<49.9	<49.9	<49.9	<49.9	1			-		10,700
SP-4/H	A-4	10/27/21	0-6"	Excavated			-	-						380
		10/27/21	1	Excavated	-									4,180
		10/27/21	2	Excavated	-									6,080
		10/27/21	3	Excavated	-				1			-		2,950
		10/27/21	4	Back	hoe refusal	at 3' below	ground sur	face	1			-		-
		11/18/21	4	Excavated				-						17,600
		12/01/21	6	Excavated	-				-					12,000
		01/06/22	10	In Situ										7,000
S Wai	II .	01/06/22	4	In Situ										7,240
BH-3	}	03/24/22	4.5	In Situ										2,720
W Wa	ll .	01/06/22	4	In Situ										4,730
BH-1		03/24/22	4.5	In Situ										10,800
BH-1		03/24/22	10	In Situ										11,200
BH-1		03/24/22	20	In Situ										9,990
BH-1		03/24/22	30	In Situ										2,070
BH-1		03/24/22	40	In Situ										325
BH-1		03/24/22	50	In Situ								-		158
E Wai		01/06/22	4	In Situ				l						8,830 F1
BH-2		03/24/22	4.5	In Situ										1,920

#### Notes

- 1. GRO: Gasoline Range Organics
- 2. DRO: Diesel Range Organics
- 3. MRO: Motor Oil Range Organics
- 4. Bold and highlighting indicates the COC was detected above the NMOCD Closure Criteria.
- 5. < indicates the COC was below the appropriate laboratory method/sample detection limit
- 6. Yellow highlighting indicates the COC concentration exceeds the NMOCD Closure Criteria
- 7. Green highlighting and italic font indicates soil was excavated and disposed.
- 8. --: Analysis not conducted.
- 9. F1: MS and/or MSD recovery exceeds control limits.

# TABLE 2 SUMMARY OF GROUNDWATER ELEVATION DATA SOUTHWEST ROYALTIES, LLC FLYING M SA #2 PRODUCED WATER RELEASE NMOCD TRACKING NO.: 1RP-5214

Well ID	Date Measured	Top of Casing Elevation	Screen Interval	Measured Total Depth	Depth to Water	Groundwater Elevation
		(ft AMSL)	(ft bgs)	(ft BTOC)	(ft BTOC)	(ft AMSL)
BH-1	3/29/2022		-1	57.00	42.37	
BH-1	5/19/2022	4360.10	37-57	57.00	45.67	4314.43
MW-1	6/14/2022	4360.10	37-57	57.00	46.13	4313.97
MW-2	5/19/2022	4360.44	33-53	53.00	46.30	4314.14
MW-2	6/14/2022	4360.44	33-53	53.00	49.58	4310.86
MW-3	5/19/2022	4362.52	37-57	57.00	48.33	4314.19
MW-3	6/14/2022	4362.52	37-57	57.00	48.40	4314.12

bgs - Below ground surface.

---: Depth to groundwater measured prior to borehole survey.

BTOC - Below top of casing.

ft - Feet.

ID - Identification.

AMSL - Above mean sea level.

# TABLE 3 SUMMARY OF GROUNDWATER ANALYTICAL RESULTS SOUTHWEST ROYALTIES, LLC FLYING M SA #2 PRODUCED WATER RELEASE NMOCD TRACKING NO.: 1RP-5214

Sample ID	Date	TPH	TPH	TPH	Total	Benzene	Toluene	Ethylbenzene	Xylenes	Total	Chloride
		C6 - C10 (mg/L)	C10 - C28 (mg/L)	C28-C36 (mg/L)	TPH (mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	BTEX (mg/L)	(mg/L)
NMOCD Gui	ideline					0.01	0.75	0.75	0.62		250
BH-1/MW-1	03/29/22	< 0.885	< 0.885	< 0.854	< 0.885	< 0.000408	< 0.000367	< 0.000657	< 0.000642	< 0.000657	1,220
BH-1/MW-1	06/14/22	< 0.901	< 0.901	< 0.869	< 0.901	< 0.000408	< 0.000367	< 0.000657	< 0.000642	< 0.000657	1,400
BH-2/MW-2	05/19/22	< 0.898	< 0.898	< 0.867	< 0.898	< 0.000408	< 0.000367	< 0.000657	< 0.000642	< 0.000657	908
BH-2/MW-2	06/14/22	< 0.901	< 0.901	< 0.869	< 0.901	< 0.000408	< 0.000367	< 0.000657	< 0.000642	< 0.000657	1,440
BH-3/MW-3	05/19/22	< 0.901	< 0.901	< 0.869	< 0.901	<0.000408	< 0.000367	< 0.000657	< 0.000642	< 0.000657	490
BH-3/MW-3	06/14/22	< 0.898	< 0.898	< 0.867	< 0.898	<0.00408	< 0.00367	< 0.00657	< 0.00642	< 0.00657	469

mg/L = milligram per Liter

TPH = Total Petroleum Hydrocarbons by EPA Method 8015 M (Modified)

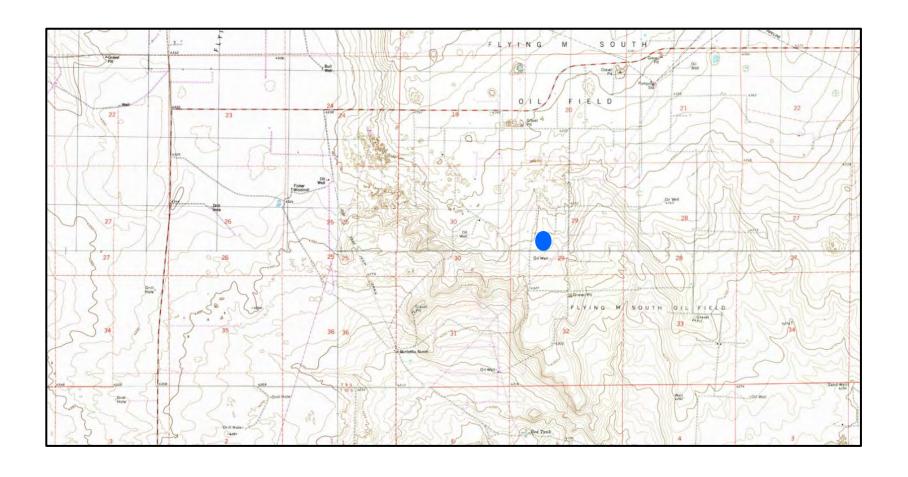
Inorganic Anions (Chlorides) by EPA Method 300

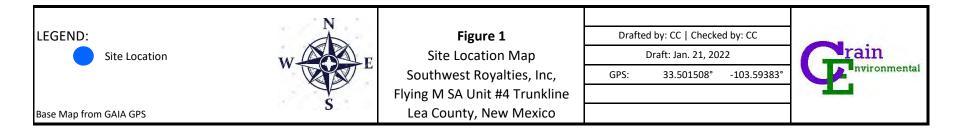
BTEX by EPA Method 8021B

**Highlighted Result Exceeds** the Target Concentration

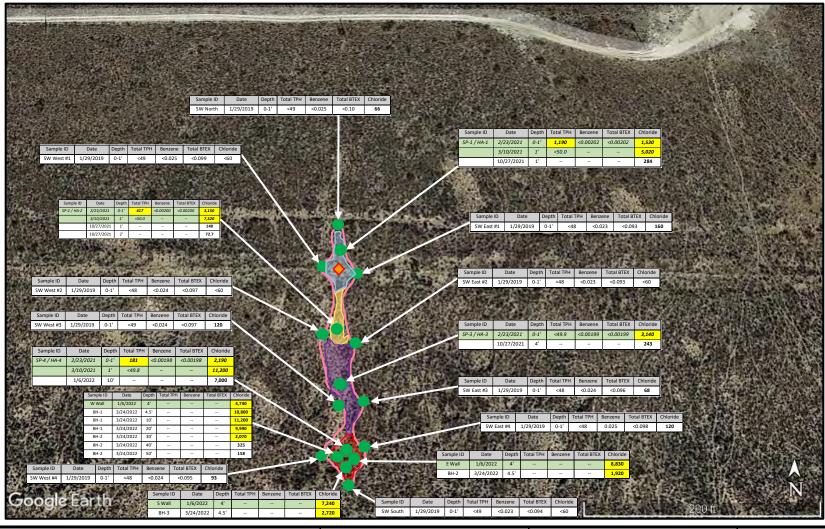
D. J. .... J. 4. T. .... 0/17/2022 1.12.14 DM

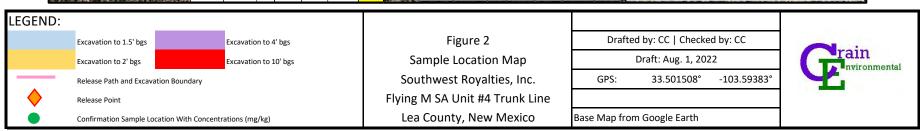
**FIGURES** 





D.1. .... 14. T....... 0/17/2022 1.12.14 DM





D.J. ... J. J. T. ... 0/17/2022 1.12.14 DI

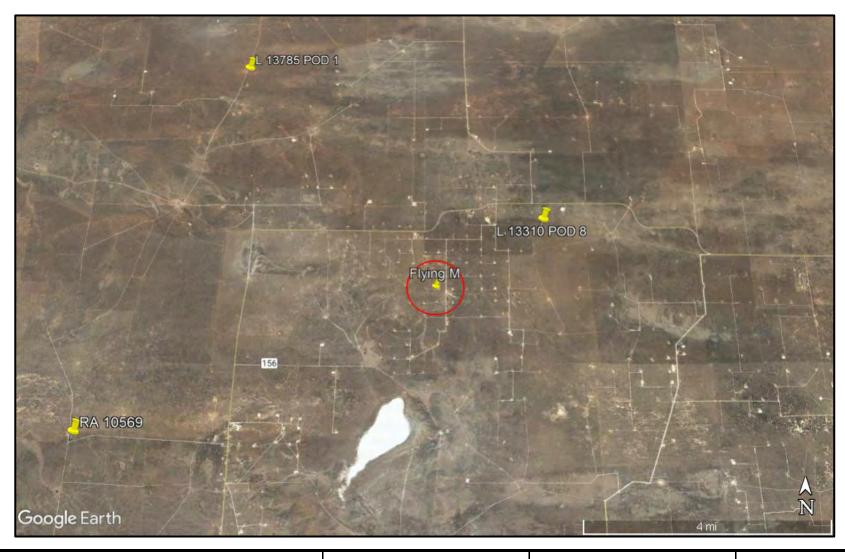




Figure 3
Wellhead Protection Area Map
Southwest Royalties, Inc.
Flying M SA Unit #4 Trunk Line
Lea County, New Mexico

Drafted by: CC | Checked by: CC

Draft: Jan. 21, 2022

GPS: 33.501508° -103.59383°









Site Location

Base Map from Google Earth and FEMA StayDry

#### Figure 4

FEMA Floodplain Map Southwest Royalties, Inc. Flying M SA Unit #4 Trunk Line Lea County, New Mexico Drafted by: CC | Checked by: CC

Draft: Jan. 21, 2022

GPS: 33.501508° -103.59383°

rain nvironmental









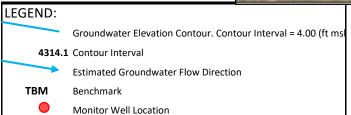


Figure 6
Groundwater Gradient Map
June 14, 2022
Southwest Royalties, Inc,
Flying M SA Unit #4 Trunkline
Lea County, New Mexico

Drafted by: CC | Checked by: CC

Draft: Aug. 1, 2022

GPS: 33.501508° -103.59383°

Base Map from Google Earth

-103.59383°

Appendix A: Release Notification and Corrective Action Form (NMOCD Form C-141)

District 1
2625 N. French Dr., Hobbs, NM 88240
District II
31 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	NOY1827137381
District RP	1RP-5214
Facility ID	fOY1827136767
Application ID	pOY1827139495

# **HOBBS OCD**

SEP 27 2018

## **Release Notification**

## **RECEIVED**

Responsible Party: Southwest Royalties, Inc

### **Responsible Party**

OGRID: 21355

Contact Name: Lindsa	Contact Telephone	: 432-207-	3054				
Contact email: llivesay	@swrpermian.com	ı		Incident # (assigned	by OCD)	NOY18	27137381
Contact mailing address: P.O. Box 53570; Midland, TX 79710			9710				
		Locatio	n of R	elease Source			
atitude: <u>33.50139</u>		(NAD 83 in		Longitude: -103.5 grees to 5 decimal places)			
Site Name: Flying M S	A Unit #2_ #4 Tru	ınk Line		Site Type: 4" Trunk	Line fron	Battery	to Injection Well
Date Release Discovere	ed: 9/25/2018			API# (if applicable)	30-025-	24692	
Unit Letter   Section	Township	Range		County		<b>-</b>	!!-
K 29	<b>%</b> 9S	33E	Lea			Fee	minerals
urface Owner: Star		Nature a	nd Vol	ume of Releas			)
urface Owner: Star		Nature a	nd Vol			umes provid	ed below)
urface Owner: Star	rial(s) Released (Select Volume Releas	Nature an all that apply and attaced (bbls) 5 bbl	nd Vol ach calculati	ume of Releas	on for the vol	ed (bbls)	5bbl 4bbl
urface Owner: Star	rial(s) Released (Select Volume Releas Volume Releas	Nature an all that apply and atta sed (bbls) 5 bbl sed (bbls) 75 bl	nd Vol ach calculati l	ume of Releas	e Recover	ed (bbls)	5bbl 4bbl
urface Owner: Star	rial(s) Released (Select Volume Releas Volume Releas Is the concentration	Nature an all that apply and attaced (bbls) 5 bbl action of dissolved	nd Vol ach calculati l	ume of Releas	on for the vol	ed (bbls)	5bbl 4bbl
urface Owner: Star	rial(s) Released (Select Volume Releas Volume Releas Is the concentration	Nature an all that apply and attaced (bbls) 5 bbl ation of dissolved r >10,000 mg/l?	nd Vol ach calculati l	ume of Releas  ions or specific justification  Volum  Volum  in the Yes	e Recover	ed (bbls) ed (bbls)	5bbl 4bbl
urface Owner: State  Mate  Crude Oil  Produced Water	rial(s) Released (Select Volume Releas Volume Releas Is the concentration produced water	Nature an all that apply and attaced (bbls) 5 bbl atton of dissolved (bbls) 75 bl atton of dissolved (bbls) atton (bbls)	nd Vol ach calculati l	ume of Releas  ions or specific justification  Volum  Volum  in the Yes	n for the volue Recover s No	ed (bbls) ed (bbls) ed (bbls)	5bbl 4bbl
urface Owner: ☐ State  Mate  Crude Oil  Produced Water  Condensate	Volume Released (Select Volume Released Volume Released Is the concentrate produced water Volume Released	Nature an all that apply and attaced (bbls) 5 bbl atton of dissolved (bbls) 75 bl atton of dissolved (bbls) atton (bbls)	nd Vol ach calculati l bl d chloride	ume of Releas  ions or specific justification  Volum  Volum  in the Yes  Volum  Volum  Volum  Volum	on for the volue Recover s No e Recover e Recover	ed (bbls) ed (bbls) ed (bbls) ed (bbls)	5bbl 4bbl
urface Owner: ☐ State  Mate  Crude Oil  Produced Water  Condensate  Natural Gas	Volume Released (Select Volume Released Volume Released Is the concentrate produced water Volume Released	Nature an all that apply and attaced (bbls) 5 bbl action of dissolved (bbls) 75 bl action of dissolved (bbls) and (bbls) act (bbls) act (bbls) act (Bbls) act (Bbls) act (Bbls) at Released (prov	nd Vol ach calculati l bl d chloride	ume of Releas  ions or specific justification  Volum  Volum  in the Yes  Volum  Volum  Volum  Volum	on for the volue Recover s No e Recover e Recover	ed (bbls) ed (bbls) ed (bbls) ed (bbls)	5bbl 4 bbl 75-bbl 56 bb



# State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Released to Imaging: 8/17/2022 1:13:14 PM

Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible party consider this a major release?  Leak of a volume greater than 25 bbl.
Yes □ No	
If YES, was immediate n	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Yes; by Merch Merch	hant (VP of Southwest Royalties, Inc) to Maxey Brown via phone call.
	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 rele	ease has been stopped.
☐ The impacted area ha	is been secured to protect human health and the environment.
Released materials ha	ave been contained via the use of berms or dikes, absorbent pads, or other containment devices.
All free liquids and r	ecoverable materials have been removed and managed appropriately.
If all the actions describe	d above have <u>not</u> been undertaken, explain why:
D 1015200D (4) NB	
has begun, please attach	AC the responsible party may commence remediation immediately after discovery of a release. If remediation a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred int area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
regulations all operators are public health or the environ failed to adequately investig	remation given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and required to report and/or file certain release notifications and perform corrective actions for releases which may endanger ment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have gate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws
Printed Name:	NER CULP Title: PETROLEUM ENGINEER
Signature: <u>Janu</u>	Date: 9/26/18
email: <u>fannerce</u>	10@ surpermian.com Telephone: (432)207-3055
OCD Only	
RECEI	Date
Received by: By Olivi	a Yu at 10:23 am, Sep 28, 2018

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Incident ID NOY1827137381 District RP 1RP-5214 fOY1827136767 Facility ID Application ID pOY1827139495

## **Site Assessment/Characterization**

This information must be provided to the appropriate district office no tales man 20 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release?	48 (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 X 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 X No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes X 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 X No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes X No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes X No
Are the lateral extents of the release within 300 feet of a wetland?	Yes X No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes X 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 X No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	☐ Yes X No
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and ver contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.	tical extents of soil

Characterization Report Checklist: Each of the following items must be included in the report.							
natacter Batton Report Checking. But of the fourth guents must be included in the report.							
X Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring	g wells.						
X 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							
X Boring or excavation logs							
▼ Photographs including date and GIS information							

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.

Topographic/Aerial maps

X Laboratory data including chain of custody

Page	26	ni	F 2 1	5
I ugc	20	$v_{j}$	-01	9

Incident ID	NOY1827137381
District RP	1RP-5214
Facility ID	fOY1827136767
Application ID	pOY1827139495

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. Title: Agent for Southwest Royalties, Inc. Cynthia K. Crain Printed Name: Date: Signature: Telephone: (575) 441-7244 email: cindy.crain@gmail.com **OCD Only** Date: 08/04/2022 Jocelyn Harimon Received by:

e of New Mexico

Incident ID	NOY1827137381
District RP	1RP-5214
Facility ID	fOY1827136767
Application ID	pOY1827139495

# **Remediation Plan**

Remediation Plan Checklist: Each of the following items must be	e included in the plan.
Detailed description of proposed remediation technique  Scaled sitemap with GPS coordinates showing delineation point  Estimated volume of material to be remediated  Closure criteria is to Table 1 specifications subject to 19.15.29.1  Proposed schedule for remediation (note if remediation plan times)	12(C)(4) NMAC
Deferral Requests Only: Each of the following items must be con	firmed as part of any request for deferral of remediation.
Contamination must be in areas immediately under or around predeconstruction.	roduction equipment where remediation could cause a major facility
X Extents of contamination must be fully delineated.	
X Contamination does not cause an imminent risk to human health	n, the environment, or groundwater.
rules and regulations all operators are required to report and/or file of which may endanger public health or the environment. The accepta liability should their operations have failed to adequately investigate surface water, human health or the environment. In addition, OCD responsibility for compliance with any other federal, state, or local limits and the surface water.	e and remediate contamination that pose a threat to groundwater, acceptance of a C-141 report does not relieve the operator of aws and/or regulations.
Printed Name: Cynthia K. Crain	Title: Agent for Southwest Royalties, Inc.
Signature: Cynthia K. Clain	Date:8/4/22
email:cindy.crain@gmail.com	Telephone: (575) 441-7244
OCD Only	
Received by:Jocelyn Harimon	Date:08/04/2022
☐ Approved ☑ Approved with Attached Conditions of	Approval
Signature: Jennifer Nobiui	Date: 08/17/2022

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Incident ID	NOY1827137381
District RP	1RP-5214
Facility ID	fOY1827136767
Application ID	pOY1827139495

## Soil Closure

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

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.

✓ A scaled site and sampling diagram as described in 19.15.29.1	1 NMAC
Photographs of the remediated site prior to backfill or photos of must be notified 2 days prior to liner inspection)	f the liner integrity if applicable (Note: appropriate OCD District office
☐ Laboratory analyses of final sampling (Note: appropriate ODC	District office must be notified 2 days prior to final sampling)
Description of remediation activities	
and regulations all operators are required to report and/or file certain may endanger public health or the environment. The acceptance of	nediate contamination that pose a threat to groundwater, surface water, a C-141 report does not relieve the operator of responsibility for tions. The responsible party acknowledges they must substantially neditions that existed prior to the release or their final land use in
Printed Name: Cynthia K. Crain	Title: Agent for Southwest Royalties, Inc.
Signature: Cyprophia K. Crain	Date: 8/4/22
email:cindy.crain@gmail.com	Telephone: (575) 441-7244
OCD Only	
Received by:	Date:
	of liability should their operations have failed to adequately investigate and vater, human health, or the environment nor does not relieve the responsible or regulations.
Closure Approved by:	Date:
Printed Name:	Title:

				Production :	Summary Repo	rt								
				API: 30	-025-29488							Cody on Location	9/24/18 4:00 PM	
FLYING M SA UNIT #342											Leak Found	9/25/18 7:00 AM		
	Printed On: Monday, February 21 2022								Total Hrs					
				Producti	on			In	jection					
Year	Pool	Month	Oil(BBLS)	Gas(MCF)	Water(BBLS)	Days P/I	Water(BBLS)	Co2(MCF)	Gas(MCF)	Other	Pressure	BFPD	ВГРН	Estimated Volume
2018	[24620] FLYING M;SAN ANDRES	Jan	C	0	(	) (	4900	C	C	) C	0	158	7	
2018	[24620] FLYING M;SAN ANDRES	Feb	C	0	) (	) (	6060	(	C	) C	0	216	9	
2018	[24620] FLYING M;SAN ANDRES	Mar	C	0	) (	) (	6225	C	C	) C	0	201	8	
2018	[24620] FLYING M;SAN ANDRES	Apr	C	0	) (	30	16947	C	C	) C	0	565	24	
2018	[24620] FLYING M;SAN ANDRES	May	C	0	) (	31	3855	C	C	) C	0	124	5	
2018	[24620] FLYING M;SAN ANDRES	Jun	C	0	) (	30	2710	(	C	) C	0	90	4	
2018	[24620] FLYING M;SAN ANDRES	Jul	0	0	) (	32	3965	(	0	) C	0	128	5	
2018	[24620] FLYING M;SAN ANDRES	Aug	C	0	(	31	3456	(	0	) C	0	111	5	
2018	[24620] FLYING M;SAN ANDRES	Sep	(	0	(	30	3180	(	C	) C	0	106	4	75
2018	[24620] FLYING M;SAN ANDRES	Oct	C	0	(	) (	0	(	0	) C	0	-		
2018	[24620] FLYING M;SAN ANDRES	Nov	C	0	) (	) (	0	(	0	) C	0	-		
2018	[34630] ELVING M-SAN ANDRES	Dec		) 0		) (	1	(	1	) (	0			

D. J. .... J. 4. T. ... ... 0/17/2022 1.12.14 D34

# Kenemore Welding & Oilfield Services, Inc.

P.O. Box 177

Office (575) 396-2332

Lovington, N.M. 88260

George (575) 390-6951

FIELD TICKET NO.128588 DATE 9-26-18
9-12-18
Company Name Southwest royalises inc
Lease Name Flying M SA Unit 241
Sec T R
Tank Serial Number
Employee Name Les Ar Rig # 207
Time In 3'100 / Time Out 8:30 / Total 5/2.
Job Description Dec Truck To 60 To Loviyton
Pick up EnTrA Holos, Go To Location &
Stact Pick up Spill (Flow Line)
GOT 30 BBL & WAS TOLD TO go BACK
Tonorrow, 8pt To Yord,
9-27-18 60 To Loration + Fix's
Pick up Another 30 BBL of Gloved.
Tout To Gardy Malley Empty 60 884
Woter + Mud 9-hrs = 90
1-40-5-6-7-0
11/10 0 00
Hours 14/2 @ 90 Subtotal 1305, 500 Proposal + Wash out Truck Tank We proposed Charged To SWR Materials
The state out from lank to the
Chained to SWK Materials
Disposal
Discount
Tax
Total 1003333008 1326.28
The state of the s
Fuel Mileage
WORK AUTHORITIES DAY

The Tunganings \$41242002 I: 13Phinted in full due troop receive at the con-

From: Yu, Olivia, EMNRD

To: "llivesay@swrpermian.com"

Cc: <u>Hernandez, Christina, EMNRD</u>; <u>Griswold, Jim, EMNRD</u>

 Subject:
 Release at Flying M SA Unit #2

 Date:
 Friday, September 28, 2018 11:11:00 AM

 Attachments:
 1RP5214\_initialC141\_3002524692\_pipeline.pdf

Ms. Livesay:

#### Notes:

- The site name given Flying M SA Unit #2 is not in the vicinity of the release location. Also, please verify that the 4-inch truck line from the battery is going to Flying M SA Unit #2 (30-025-34234), which is not an injection well as written. The nearest well to the release location is Flying M SA Unit #241 (30-025-24692), which is an injection well and will be used for documentation.
- Recovery volume is rarely 100% even for releases in lined containments.

#### Please be advised that

- The initial portion of the C-141 form does not include the calculations to determine the release volume. Visual estimation is not sufficient nor adequate. Please submit measurements in volume estimation; including dimensions, soil parameters (porosity, texture, bulk density, etc). Without this information for verification, NMOCD will consider the release as having an unknown volume.
- 2. Dated, geo-referenced photo documentation for verification that the initial response activities have been employed to contain the release is requested.
- 3. Per 19.15.29.10 NMAC, a major release necessitates immediate notification to NMOCD Environmental Bureau chief (cc'd), in addition to the appropriate District office. Please direct release notifications- verbal via voicemail or email- to Environmental Specialists in the District offices.

#### The 1RP for this incident is

				Flying M SA Unit 4" trunk	30-025-		
5214	9/28/2018	Α	Southwest Royalties	line	24692	9S-33E-29K	9/25/2018

Please remember to include this 1RP identifier to all communications. Revised NMAC 19.15.29 was effective on August 14, 2018. Delineate and remediate per regulation. Mind the timelines for submittal of requisite information.

Please be advised that NMOCD recommends a completed site characterization/delineation report be reviewed or approved by NMOCD BEFORE any significant remediation work towards closure.

Thanks,

Olivia Yu Environmental Specialist NMOCD, District I Olivia.yu@state.nm.us 575-393-6161 x113

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

**Appendix B: NMOCD Correspondence** 



Cindy Crain <cindy.crain@gmail.com>

# Application ID: 74945 - Request for Extension - Southwest Royalties, Inc., Flying M SA Unit 4" Trunkline, Incident ID (n#) nOY1827137381

10 messages

Cindy Crain <cindy.crain@gmail.com>

Mon, Apr 4, 2022 at 10:53 AM

To: jennifer.nobui@state.nm.us

Cc: Tim Culp <tculp@swrpermian.com>, Mickey Cunningham <mcunningham@swrpermian.com>, mymerch@penrocoil.com, "Bratcher, Mike, EMNRD" <mike.bratcher@state.nm.us>, Bradford.Billings@state.nm.us

Jennifer,

Thank you for speaking with me this morning regarding an extension request for the revised Closure Report at the Southwest Royalties, Inc. (SWR), Flying M SA Unit 4" Trunkline, Incident ID (n#) nOY1827137381, Application ID: 74945.

As we discussed, a soil boring (BH-1) was drilled to a depth of 57 feet below ground surface (bgs) on March 24, 2022. On March 28, 2022, groundwater was measured at a depth of 42.56' bgs. A groundwater sample was collected and submitted to Eurofins/Xenco Laboratory for analysis of TPH, BTEX, and chlorides. Soil samples from the boring were also collected and submitted to the lab so that vertical delineation of chloride impacts can be determined. Lab results are pending.

As groundwater was encountered at a depth less than 50' bgs and we are waiting on lab results, a revised Closure Report will not be completed by the requested date of April 11, 2022. SWR respectfully requests a 60-day extension to submit a revised Closure Report or Remediation Workplan (until June 10, 2022). The revised date will allow SWR to receive and analyze data, and conduct additional remediation and/or investigation as necessary to achieve site closure.

Please let me know if you have any questions or if the extension request is approved.

Thank you, Cindy Crain

--

Crain Environmental 2925 East 17th Street Odessa, TX 79761 (575) 441-7244 Nobui, Jennifer, EMNRD < Jennifer. Nobui@state.nm.us>

Mon, Apr 4, 2022 at 1:59

To: Cindy Crain <cindy.crain@gmail.com>

Cc: Tim Culp <tculp@swrpermian.com>, Mickey Cunningham <mcunningham@swrpermian.com>, "mymerch@penrocoil.com" <mymerch@penrocoil.com>, "Bratcher, Mike, EMNRD" <mike.bratcher@state.nm.us>, "Billings, Bradford, EMNRD" <Bratford.Billings@state.nm.us>

Hello Cindy

Your 60-day extension to submit a revised Closure Report has been approved by the OCD. Please resubmit the revised Closure Report by June 6, 2022.

NOTE: The OCD requires a copy of all correspondence relative to remedial projects be included in all proposal and/or final closure reports. Correspondence required to be included in reports may include, but not necessarily limited to, extension requests, liner inspection notifications, sample event notifications, spill/release/fire notifications, and variance requests. This will allow for notifications and requests to become a documented part of the incident file.

Please let me know if you have any questions.

Thanks,

Jennifer Nobui

Merch Merchant <mymerch@penrocoil.com>

Mon, Apr 4, 2022 at 4:03 PM

To: "Nobui, Jennifer, EMNRD" < Jennifer.Nobui@state.nm.us>

Cc: Cindy Crain <cindy.crain@gmail.com>, Tim Culp <tculp@swrpermian.com>, Mickey Cunningham <mcunningham@swrpermian.com>, "Bratcher, Mike, EMNRD" <mike.bratcher@state.nm.us>, "Billings, Bradford, EMNRD" <Bradford.Billings@state.nm.us>

Thanks all.

Sent from my iPhone

On Apr 4, 2022, at 12:59 PM, Nobui, Jennifer, EMNRD < Jennifer.Nobui@state.nm.us> wrote:

[Quoted text hidden]

Cindy Crain <cindy.crain@gmail.com>

Mon, Apr 4, 2022 at 9:51 PM

To: "Nobui, Jennifer, EMNRD" < Jennifer. Nobui@state.nm.us>

Cc: Tim Culp <tculp@swrpermian.com>, Mickey Cunningham <mcunningham@swrpermian.com>, "mymerch@penrocoil.com" <mymerch@penrocoil.com>, "Bratcher, Mike, EMNRD" <mike.bratcher@state.nm.us>, "Billings, Bradford, EMNRD" <Bratford.Billings@state.nm.us>

Jennifer,

Thank you for the extension approval and for your quick response. SWR will be submitting either a revised Closure Report or a Remediation Workplan by June 6, 2022.

I will provide you with an update once the laboratory results of the soil and groundwater samples are received.

I appreciate your assistance!

Cindy Crain

[Quoted text hidden]

Cindy Crain <cindy.crain@gmail.com>

Thu, Jun 2, 2022 at 12:42 PM

To: "Nobui, Jennifer, EMNRD" < Jennifer. Nobui@state.nm.us>

Cc: Tim Culp <tculp@swrpermian.com>, Mickey Cunningham <mcunningham@swrpermian.com>, "mymerch@penrocoil.com" <mymerch@penrocoil.com>, "Bratcher, Mike, EMNRD" <mike.bratcher@state.nm.us>, "Billings, Bradford, EMNRD" <Bradford.Billings@state.nm.us>

Jennifer.

Thank you for speaking with me earlier today about delays encountered on the Flying M SA Unit 4" Trunkline project (Flying M) Incident ID (n#) nOY1827137381. As I mentioned on the call, laboratory results of groundwater samples collected on 5/19/22 were just received a few minutes ago, and survey information was just received within the last few days.

Southwest Royalties (SWR) would like to conduct an additional round of groundwater monitoring of all three temporary monitor wells (MW-1, MW-2, and MW-3) prior to submitting a Closure Report or Remediation Workplan. Groundwater monitoring would include gauging, proper purging, and sample collection from each well.

As the approved due date for report submittal is June 6, 2022, SWR respectfully requests an additional 60-day extension to be able to collect additional groundwater samples, analyze all data, and prepare a Remediation Workplan or Closure Report. The Workplan or Report will be submitted to you as soon as possible, however, the 60 day request is being made to allow for any possible future delays.

Please let me know if you have any questions and/or if you approve the extension.

Thank you, Cindy Crain [Quoted text hidden] Nobui, Jennifer, EMNRD < Jennifer. Nobui@state.nm.us>

Thu, Jun 2, 2022 at 1:47

РМ

To: Cindy Crain <cindy.crain@gmail.com>

Cc: "Bratcher, Mike, EMNRD" <mike.bratcher@state.nm.us>, "Hamlet, Robert, EMNRD" <Robert.Hamlet@state.nm.us>, "Harimon, Jocelyn, EMNRD" <Jocelyn.Harimon@state.nm.us>

Hello Cindy

A 60-day extension to submit a Remediation Plan or Closure Report based on outlining circumstances has been approved to August 5, 2022. Please include this e-mail correspondence in the remediation and/or closure report.

[Quoted text hidden]

Cindy Crain <cindy.crain@gmail.com>

Thu, Jun 2, 2022 at 2:28 PM

To: "Nobui, Jennifer, EMNRD" <Jennifer.Nobui@state.nm.us>
Cc: "Bratcher, Mike, EMNRD" <mike.bratcher@state.nm.us>, "Hamlet, Robert, EMNRD"
<Robert.Hamlet@state.nm.us>, "Harimon, Jocelyn, EMNRD" <Jocelyn.Harimon@state.nm.us>

Thank you, Jennifer!

Cindy Crain, P.G. (575) 441-7244 cindy.crain@gmail.com [Quoted text hidden] **Appendix C: Laboratory Analytical Reports** 



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

February 08, 2019

Mike Burton CM Services PO Box 3470 Hobbs, NM 88241

TEL: (575) 499-5306

FAX

RE: Flying M OrderNo.: 1902061

#### Dear Mike Burton:

Hall Environmental Analysis Laboratory received 11 sample(s) on 2/2/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 2/8/2019

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: CM Services Client Sample ID: Background

 Project:
 Flying M
 Collection Date: 1/29/2019 9:00:00 AM

 Lab ID:
 1902061-001
 Matrix: SOIL
 Received Date: 2/2/2019 10:55:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	60	mg/Kg	20	2/5/2019 3:59:32 PM	42969
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: CLP
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	2/5/2019 12:25:19 PM	42960
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	2/5/2019 12:25:19 PM	42960
Surr: DNOP	121	50.6-138	%Rec	1	2/5/2019 12:25:19 PM	42960
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	2/5/2019 6:20:54 PM	42948
Surr: BFB	97.3	73.8-119	%Rec	1	2/5/2019 6:20:54 PM	42948
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	2/5/2019 6:20:54 PM	42948
Toluene	ND	0.047	mg/Kg	1	2/5/2019 6:20:54 PM	42948
Ethylbenzene	ND	0.047	mg/Kg	1	2/5/2019 6:20:54 PM	42948
Xylenes, Total	ND	0.094	mg/Kg	1	2/5/2019 6:20:54 PM	42948
Surr: 4-Bromofluorobenzene	92.0	80-120	%Rec	1	2/5/2019 6:20:54 PM	42948

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 18
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 2/8/2019

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: CM Services Client Sample ID: SW South

 Project:
 Flying M
 Collection Date: 1/29/2019 9:20:00 AM

 Lab ID:
 1902061-002
 Matrix: SOIL
 Received Date: 2/2/2019 10:55:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: MRA
Chloride	ND	60	mg/Kg	20	2/5/2019 4:36:46 PM	42969
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst	:: CLP
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	2/5/2019 2:13:09 PM	42960
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	2/5/2019 2:13:09 PM	42960
Surr: DNOP	117	50.6-138	%Rec	1	2/5/2019 2:13:09 PM	42960
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	2/5/2019 6:43:43 PM	42948
Surr: BFB	101	73.8-119	%Rec	1	2/5/2019 6:43:43 PM	42948
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.023	mg/Kg	1	2/5/2019 6:43:43 PM	42948
Toluene	ND	0.047	mg/Kg	1	2/5/2019 6:43:43 PM	42948
Ethylbenzene	ND	0.047	mg/Kg	1	2/5/2019 6:43:43 PM	42948
Xylenes, Total	ND	0.094	mg/Kg	1	2/5/2019 6:43:43 PM	42948
Surr: 4-Bromofluorobenzene	95.0	80-120	%Rec	1	2/5/2019 6:43:43 PM	42948

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 18
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 2/8/2019

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: CM Services Client Sample ID: SW North

 Project:
 Flying M
 Collection Date: 1/29/2019 9:40:00 AM

 Lab ID:
 1902061-003
 Matrix: SOIL
 Received Date: 2/2/2019 10:55:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: MRA
Chloride	66	60	mg/Kg	20	2/5/2019 4:49:10 PM	42969
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	:: CLP
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	2/5/2019 2:37:25 PM	42960
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	2/5/2019 2:37:25 PM	42960
Surr: DNOP	121	50.6-138	%Rec	1	2/5/2019 2:37:25 PM	42960
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	2/5/2019 7:06:28 PM	42948
Surr: BFB	104	73.8-119	%Rec	1	2/5/2019 7:06:28 PM	42948
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	2/5/2019 7:06:28 PM	42948
Toluene	ND	0.050	mg/Kg	1	2/5/2019 7:06:28 PM	42948
Ethylbenzene	ND	0.050	mg/Kg	1	2/5/2019 7:06:28 PM	42948
Xylenes, Total	ND	0.10	mg/Kg	1	2/5/2019 7:06:28 PM	42948
Surr: 4-Bromofluorobenzene	96.8	80-120	%Rec	1	2/5/2019 7:06:28 PM	42948

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 18
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 2/8/2019

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: CM Services Client Sample ID: SW West #1

 Project:
 Flying M
 Collection Date: 1/29/2019 10:00:00 AM

 Lab ID:
 1902061-004
 Matrix: SOIL
 Received Date: 2/2/2019 10:55:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: MRA
Chloride	ND	60	mg/Kg	20	2/5/2019 5:01:35 PM	42969
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	:: CLP
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	2/5/2019 3:01:42 PM	42960
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	2/5/2019 3:01:42 PM	42960
Surr: DNOP	120	50.6-138	%Rec	1	2/5/2019 3:01:42 PM	42960
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	2/5/2019 7:29:09 PM	42948
Surr: BFB	100	73.8-119	%Rec	1	2/5/2019 7:29:09 PM	42948
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	2/5/2019 7:29:09 PM	42948
Toluene	ND	0.050	mg/Kg	1	2/5/2019 7:29:09 PM	42948
Ethylbenzene	ND	0.050	mg/Kg	1	2/5/2019 7:29:09 PM	42948
Xylenes, Total	ND	0.099	mg/Kg	1	2/5/2019 7:29:09 PM	42948
Surr: 4-Bromofluorobenzene	93.4	80-120	%Rec	1	2/5/2019 7:29:09 PM	42948

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 18
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 2/8/2019

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: CM Services Client Sample ID: SW West #2

 Project:
 Flying M
 Collection Date: 1/29/2019 10:20:00 AM

 Lab ID:
 1902061-005
 Matrix: SOIL
 Received Date: 2/2/2019 10:55:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	ND	60	mg/Kg	20	2/6/2019 4:31:26 PM	43006
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: CLP
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	2/5/2019 3:25:57 PM	42960
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	2/5/2019 3:25:57 PM	42960
Surr: DNOP	121	50.6-138	%Rec	1	2/5/2019 3:25:57 PM	42960
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	2/5/2019 7:52:02 PM	42948
Surr: BFB	96.8	73.8-119	%Rec	1	2/5/2019 7:52:02 PM	42948
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	2/5/2019 7:52:02 PM	42948
Toluene	ND	0.048	mg/Kg	1	2/5/2019 7:52:02 PM	42948
Ethylbenzene	ND	0.048	mg/Kg	1	2/5/2019 7:52:02 PM	42948
Xylenes, Total	ND	0.097	mg/Kg	1	2/5/2019 7:52:02 PM	42948
Surr: 4-Bromofluorobenzene	90.0	80-120	%Rec	1	2/5/2019 7:52:02 PM	42948

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 5 of 18
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 2/8/2019

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: CM Services Client Sample ID: SW West #3

 Project:
 Flying M
 Collection Date: 1/29/2019 10:40:00 AM

 Lab ID:
 1902061-006
 Matrix: SOIL
 Received Date: 2/2/2019 10:55:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	120	60	mg/Kg	20	2/6/2019 5:33:28 PM	43006
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: CLP
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	2/5/2019 3:50:12 PM	42960
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	2/5/2019 3:50:12 PM	42960
Surr: DNOP	120	50.6-138	%Rec	1	2/5/2019 3:50:12 PM	42960
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	2/5/2019 8:14:54 PM	42948
Surr: BFB	99.0	73.8-119	%Rec	1	2/5/2019 8:14:54 PM	42948
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	2/5/2019 8:14:54 PM	42948
Toluene	ND	0.048	mg/Kg	1	2/5/2019 8:14:54 PM	42948
Ethylbenzene	ND	0.048	mg/Kg	1	2/5/2019 8:14:54 PM	42948
Xylenes, Total	ND	0.097	mg/Kg	1	2/5/2019 8:14:54 PM	42948
Surr: 4-Bromofluorobenzene	91.2	80-120	%Rec	1	2/5/2019 8:14:54 PM	42948

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 6 of 18
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 2/8/2019

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: CM Services Client Sample ID: SW West #4

 Project:
 Flying M
 Collection Date: 1/29/2019 11:00:00 AM

 Lab ID:
 1902061-007
 Matrix: SOIL
 Received Date: 2/2/2019 10:55:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	: smb
Chloride	93	60	mg/Kg	20	2/6/2019 5:45:53 PM	43006
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analys	t: CLP
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	2/5/2019 4:14:29 PM	42960
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	2/5/2019 4:14:29 PM	42960
Surr: DNOP	120	50.6-138	%Rec	1	2/5/2019 4:14:29 PM	42960
EPA METHOD 8015D: GASOLINE RANGE					Analys	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	2/5/2019 8:37:36 PM	42948
Surr: BFB	100	73.8-119	%Rec	1	2/5/2019 8:37:36 PM	42948
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.024	mg/Kg	1	2/5/2019 8:37:36 PM	42948
Toluene	ND	0.047	mg/Kg	1	2/5/2019 8:37:36 PM	42948
Ethylbenzene	ND	0.047	mg/Kg	1	2/5/2019 8:37:36 PM	42948
Xylenes, Total	ND	0.095	mg/Kg	1	2/5/2019 8:37:36 PM	42948
Surr: 4-Bromofluorobenzene	92.9	80-120	%Rec	1	2/5/2019 8:37:36 PM	42948

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 7 of 18
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 2/8/2019

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: CM Services Client Sample ID: SW East #1

 Project:
 Flying M
 Collection Date: 1/29/2019 11:20:00 AM

 Lab ID:
 1902061-008
 Matrix: SOIL
 Received Date: 2/2/2019 10:55:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	160	60	mg/Kg	20	2/6/2019 5:58:17 PM	43006
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: CLP
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	2/5/2019 4:38:49 PM	42960
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	2/5/2019 4:38:49 PM	42960
Surr: DNOP	125	50.6-138	%Rec	1	2/5/2019 4:38:49 PM	42960
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	2/5/2019 9:00:27 PM	42948
Surr: BFB	95.0	73.8-119	%Rec	1	2/5/2019 9:00:27 PM	42948
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.023	mg/Kg	1	2/5/2019 9:00:27 PM	42948
Toluene	ND	0.046	mg/Kg	1	2/5/2019 9:00:27 PM	42948
Ethylbenzene	ND	0.046	mg/Kg	1	2/5/2019 9:00:27 PM	42948
Xylenes, Total	ND	0.093	mg/Kg	1	2/5/2019 9:00:27 PM	42948
Surr: 4-Bromofluorobenzene	87.4	80-120	%Rec	1	2/5/2019 9:00:27 PM	42948

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 8 of 18
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 2/8/2019

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: CM Services Client Sample ID: SW East #2

 Project:
 Flying M
 Collection Date: 1/29/2019 11:40:00 AM

 Lab ID:
 1902061-009
 Matrix: SOIL
 Received Date: 2/2/2019 10:55:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	:: smb
Chloride	ND	60	mg/Kg	20	2/6/2019 6:10:42 PM	43006
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst	: CLP
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	2/5/2019 5:03:05 PM	42960
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	2/5/2019 5:03:05 PM	42960
Surr: DNOP	127	50.6-138	%Rec	1	2/5/2019 5:03:05 PM	42960
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	2/5/2019 9:23:18 PM	42948
Surr: BFB	97.3	73.8-119	%Rec	1	2/5/2019 9:23:18 PM	42948
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.023	mg/Kg	1	2/5/2019 9:23:18 PM	42948
Toluene	ND	0.047	mg/Kg	1	2/5/2019 9:23:18 PM	42948
Ethylbenzene	ND	0.047	mg/Kg	1	2/5/2019 9:23:18 PM	42948
Xylenes, Total	ND	0.093	mg/Kg	1	2/5/2019 9:23:18 PM	42948
Surr: 4-Bromofluorobenzene	89.5	80-120	%Rec	1	2/5/2019 9:23:18 PM	42948

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 9 of 18
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 2/8/2019

#### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** CM Services Client Sample ID: SW East #3

**Project:** Flying M Collection Date: 1/29/2019 12:00:00 PM Lab ID: 1902061-010 Matrix: SOIL Received Date: 2/2/2019 10:55:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	68	60	mg/Kg	20	2/6/2019 6:23:07 PM	43006
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: CLP
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	2/5/2019 5:27:17 PM	42960
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	2/5/2019 5:27:17 PM	42960
Surr: DNOP	128	50.6-138	%Rec	1	2/5/2019 5:27:17 PM	42960
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	2/5/2019 11:38:39 AM	42949
Surr: BFB	95.1	73.8-119	%Rec	1	2/5/2019 11:38:39 AM	42949
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	2/5/2019 11:38:39 AM	42949
Toluene	ND	0.048	mg/Kg	1	2/5/2019 11:38:39 AM	42949
Ethylbenzene	ND	0.048	mg/Kg	1	2/5/2019 11:38:39 AM	42949
Xylenes, Total	ND	0.096	mg/Kg	1	2/5/2019 11:38:39 AM	42949
Surr: 4-Bromofluorobenzene	91.1	80-120	%Rec	1	2/5/2019 11:38:39 AM	42949

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 10 of 18 J
- P Sample pH Not In Range
- RLReporting Detection Limit
- Sample container temperature is out of limit as specified

Date Reported: 2/8/2019

#### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** CM Services Client Sample ID: SW East #4

**Project:** Flying M Collection Date: 1/29/2019 12:20:00 PM Lab ID: 1902061-011 Matrix: SOIL Received Date: 2/2/2019 10:55:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	120	60	mg/Kg	20	2/7/2019 1:18:49 PM	43030
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: CLP
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	2/5/2019 5:51:24 PM	42960
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	2/5/2019 5:51:24 PM	42960
Surr: DNOP	126	50.6-138	%Rec	1	2/5/2019 5:51:24 PM	42960
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	2/5/2019 12:48:50 PM	42949
Surr: BFB	96.3	73.8-119	%Rec	1	2/5/2019 12:48:50 PM	42949
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	2/5/2019 12:48:50 PM	42949
Toluene	ND	0.049	mg/Kg	1	2/5/2019 12:48:50 PM	42949
Ethylbenzene	ND	0.049	mg/Kg	1	2/5/2019 12:48:50 PM	42949
Xylenes, Total	ND	0.098	mg/Kg	1	2/5/2019 12:48:50 PM	42949
Surr: 4-Bromofluorobenzene	92.5	80-120	%Rec	1	2/5/2019 12:48:50 PM	42949

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 11 of 18 J
- P Sample pH Not In Range
- RLReporting Detection Limit
- Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1902061** 

08-Feb-19

Client: CM Services
Project: Flying M

Sample ID MB-42969 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 42969 RunNo: 57478

Prep Date: 2/5/2019 Analysis Date: 2/5/2019 SeqNo: 1923236 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID LCS-42969 SampType: LCS TestCode: EPA Method 300.0: Anions
Client ID: LCSS Batch ID: 42969 RunNo: 57478

D. D. Carriero

Prep Date: 2/5/2019 Analysis Date: 2/5/2019 SeqNo: 1923237 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 95.1 90 110

Sample ID MB-43006 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 43006 RunNo: 57524

Prep Date: 2/6/2019 Analysis Date: 2/6/2019 SeqNo: 1924517 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID LCS-43006 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 43006 RunNo: 57524

Prep Date: 2/6/2019 Analysis Date: 2/6/2019 SeqNo: 1924518 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chlorida 44 45 4500 0 00 440

Chloride 14 1.5 15.00 0 93.0 90 110

Sample ID MB-43030 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 43030 RunNo: 57565

Prep Date: 2/7/2019 Analysis Date: 2/7/2019 SeqNo: 1925536 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID LCS-43030 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 43030 RunNo: 57565

Prep Date: 2/7/2019 Analysis Date: 2/7/2019 SeqNo: 1925537 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 94.1 90 110

#### Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **1902061** 

08-Feb-19

Client:	CM Services
Project:	Flying M

Project:	Flying M	· ·									
Sample ID	MB-42960	SampTy	pe: ME	BLK	Tes	tCode: <b>E</b>	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	PBS	Batch I	D: <b>42</b>	960	F	RunNo: 5	7474				
Prep Date:	2/4/2019	Analysis Da	te: <b>2/</b>	5/2019	9	SeqNo: 1	923456	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
_	Organics (DRO)	ND	10								
Motor Oil Rang Surr: DNOP	ge Organics (MRO)	ND 12	50	10.00		116	50.6	138			
Sull: DNOP		12		10.00		116	50.6	130			
Sample ID	LCS-42960	SampTy	pe: LC	s	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	LCSS	Batch I	D: <b>42</b>	960	F	RunNo: 5	7474				
Prep Date:	2/4/2019	Analysis Da	te: <b>2/</b>	/5/2019	5	SeqNo: 1	923457	Units: mg/F	<b>(</b> g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range	Organics (DRO)	48	10	50.00	0	96.9	63.9	124			
Surr: DNOP		6.2		5.000		125	50.6	138			
Sample ID	1902061-001AMS	SampTy	ре: М\$	5	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	Background	Batch I	D: <b>42</b>	960	F	RunNo: 5	7474				
Prep Date:	2/4/2019	Analysis Da	te: <b>2/</b>	/5/2019	8	SeqNo: 1	923460	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range	Organics (DRO)	47	9.9	49.31	0	95.3	53.5	126			
Surr: DNOP		6.3		4.931		127	50.6	138			
Sample ID	1902061-001AMS	<b>D</b> SampTy	ре: М\$	SD	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	Background	Batch I	D: <b>42</b>	960	F	RunNo: 5	7474				
Prep Date:	2/4/2019	Analysis Da	te: <b>2/</b>	/5/2019	5	SeqNo: 1	923461	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range	Organics (DRO)	46	9.7	48.64	0	93.7	53.5	126	3.02	21.7	
Surr: DNOP		6.1		4.864		125	50.6	138	0	0	
Sample ID	LCS-42990	SampTy	pe: <b>LC</b>	s	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	LCSS	Batch I	D: <b>42</b>	990	F	RunNo: 5	7496				
Prep Date:	2/5/2019	Analysis Da	te: <b>2/</b>	6/2019	5	SeqNo: 1	923937	Units: %Re	С		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		4.3		5.000		85.6	50.6	138			
Sample ID	MB-42990	SampTy	pe: ME	BLK	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	PBS	Batch I	D: <b>42</b>	990		RunNo: <b>5</b>				-	
Prep Date:	2/5/2019	Analysis Da	te: <b>2/</b>	6/2019	5	SeqNo: 1	923938	Units: %Re	С		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **1902061** 

08-Feb-19

Client: CM Services
Project: Flying M

Sample ID MB-42990 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 42990 RunNo: 57496

Prep Date: 2/5/2019 Analysis Date: 2/6/2019 SeqNo: 1923938 Units: %Rec

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Surr: DNOP 9.6 10.00 96.4 50.6 138

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Released to Imaging: 8/17/2022 1:13:14 PM

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1902061** 

08-Feb-19

Client:	CM Services
Project:	Flying M

Project:	Flying M										
Sample ID	MB-42949	SampTy	/pe: <b>ME</b>	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID:	PBS	Batch	ID: <b>42</b> 9	949	F	RunNo: 5	7468				
Prep Date:	2/4/2019	Analysis Da	ate: <b>2/</b>	5/2019	5	SeqNo: 1	922970	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang Surr: BFB	e Organics (GRO)	ND 960	5.0	1000		96.4	73.8	119			
Sample ID	LCS-42949	SampTy	/pe: <b>LC</b>	s	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID:	LCSS	Batch	ID: <b>42</b>	949	F	RunNo: 5	7468				
Prep Date:	2/4/2019	Analysis Da	ate: <b>2/</b>	5/2019	9	SeqNo: 19	922971	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
_	e Organics (GRO)	28	5.0	25.00	0	112	80.1	123			
Surr: BFB		1100		1000		112	73.8	119			
Sample ID	1902061-011AMS	SampTy	/pe: <b>M</b> \$	6	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID:	SW East #4	Batch	ID: <b>42</b>	949	F	RunNo: 5	7468				
Prep Date:	2/4/2019	Analysis Da	ate: <b>2/</b>	5/2019	5	SeqNo: 19	922974	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
-	e Organics (GRO)	28	5.0	24.83	0	111	69.1	142			
Surr: BFB		1100		993.0		108	73.8	119			
Sample ID	1902061-011AMSI	<b>D</b> SampTy	/pe: <b>MS</b>	SD	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID:	SW East #4	Batch	ID: <b>42</b> 9	949	F	RunNo: 5	7468				
Prep Date:	2/4/2019	A I !- D							,		
Analyte		Analysis Da	ate: <b>2/</b>	5/2019	5	SeqNo: 19	922975	Units: mg/K	.g		
		Result	ate: <b>2/</b> PQL		SPK Ref Val	SeqNo: 19	922975 LowLimit	Units: mg/K HighLimit	.g %RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	Result 28		SPK value 24.70		%REC 114	LowLimit 69.1	HighLimit 142	%RPD 2.59	20	Qual
	e Organics (GRO)	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD		Qual
Gasoline Rang		Result 28	PQL 4.9	SPK value 24.70 988.1	SPK Ref Val	%REC 114 113	LowLimit 69.1 73.8	HighLimit 142	%RPD 2.59 0	20	Qual
Gasoline Rang Surr: BFB	MB-42948	Result 28 1100 SampTy	PQL 4.9	SPK value 24.70 988.1	SPK Ref Val 0	%REC 114 113	LowLimit 69.1 73.8 PA Method	HighLimit 142 119	%RPD 2.59 0	20	Qual
Gasoline Rang Surr: BFB	MB-42948 PBS	Result 28 1100 SampTy	PQL 4.9 /pe: <b>ME</b> ID: <b>42</b> 9	SPK value 24.70 988.1 BLK 948	SPK Ref Val 0 Tes	%REC 114 113 tCode: <b>El</b>	69.1 73.8 PA Method	HighLimit 142 119	%RPD 2.59 0	20	Qual
Gasoline Rang Surr: BFB  Sample ID Client ID:	MB-42948 PBS	Result 28 1100 SampTy Batch	PQL 4.9 /pe: <b>ME</b> ID: <b>42</b> 9	SPK value 24.70 988.1 BLK 948 5/2019	SPK Ref Val 0 Tes	%REC 114 113 tCode: <b>EF</b> RunNo: <b>5</b>	69.1 73.8 PA Method	HighLimit 142 119 <b>8015D: Gaso</b>	%RPD 2.59 0	20	Qual
Gasoline Rang Surr: BFB  Sample ID Client ID: Prep Date: Analyte	MB-42948 PBS	Result 28 1100 SampTy Batch Analysis Da	PQL 4.9 /pe: <b>ME</b> ID: <b>42</b> 9 ate: <b>2</b> /	SPK value 24.70 988.1 BLK 948 5/2019	SPK Ref Val 0 Tes	%REC 114 113 stCode: EI RunNo: 5	LowLimit 69.1 73.8 PA Method 7469 923017	HighLimit 142 119  8015D: Gaso Units: mg/K	%RPD 2.59 0	20 0	
Gasoline Rang Surr: BFB  Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB	MB-42948 PBS 2/4/2019	Result 28 1100  SampTy Batch Analysis Da Result ND	PQL 4.9 /pe: ME ID: 42: ate: 2/ PQL 5.0	SPK value 24.70 988.1 3LK 948 '5/2019 SPK value	SPK Ref Val 0 Tes F SPK Ref Val	%REC 114 113 ttCode: El RunNo: 5 SeqNo: 19 %REC 93.8	LowLimit 69.1 73.8  PA Method 7469 923017 LowLimit 73.8	HighLimit 142 119 8015D: Gaso Units: mg/K HighLimit	%RPD 2.59 0  cline Rang g %RPD	20 0 <b>e</b> RPDLimit	
Gasoline Rang Surr: BFB  Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB	MB-42948 PBS 2/4/2019  de Organics (GRO)  LCS-42948	Result 28 1100  SampTy Batch Analysis Da Result ND 940  SampTy	PQL 4.9 /pe: ME ID: 42: ate: 2/ PQL 5.0	SPK value 24.70 988.1 3LK 948 5/2019 SPK value 1000	SPK Ref Val 0 Tes SPK Ref Val	%REC 114 113 ttCode: El RunNo: 5 SeqNo: 19 %REC 93.8	LowLimit 69.1 73.8  PA Method 7469 923017 LowLimit 73.8  PA Method	HighLimit 142 119  8015D: Gaso Units: mg/K HighLimit 119	%RPD 2.59 0  cline Rang g %RPD	20 0 <b>e</b> RPDLimit	

#### Qualifiers:

Analyte

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded

Result

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank

LowLimit

HighLimit

**RPDLimit** 

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Qual

%RPD

- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range

SPK value SPK Ref Val %REC

- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

1100

WO#: **1902061** 

08-Feb-19

Client: CM Services
Project: Flying M

Surr: BFB

Sample ID LCS-42948 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 42948 RunNo: 57469

Prep Date: 2/4/2019 Analysis Date: 2/5/2019 SeqNo: 1923018 Units: mg/Kg

1000

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 27 5.0 25.00 0 108 80.1 123

109

73.8

119

Qualifiers:

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

Page 16 of 18

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1902061

08-Feb-19

**Client:** CM Services **Project:** Flying M

Surr: 4-Bromofluorobenzene

Sample ID MB-42949 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: **PBS** Batch ID: 42949 RunNo: 57468

SeqNo: 1922996 Analysis Date: 2/5/2019 Prep Date: 2/4/2019 Units: mg/Kg

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Benzene

ND 0.025 Toluene ND 0.050 Ethylbenzene ND 0.050 Xylenes, Total ND 0.10

Surr: 4-Bromofluorobenzene 0.92 1.000 91.9 80 120

Sample ID LCS-42949 SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: **LCSS** Batch ID: 42949 RunNo: 57468 Units: mg/Kg Prep Date: 2/4/2019 Analysis Date: 2/5/2019 SeqNo: 1922997 **PQL** SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Analyte Result LowLimit Qual 0.025 1.000 0 89.2 120 Benzene 0.89 80 Toluene 0.93 0.050 1.000 0 92.6 80 120 Ethylbenzene 0.94 0.050 0 93.5 80 120 1.000 Xylenes, Total 2.8 0.10 3.000 0 94.5 80 120

95.6

80

120

Sample ID 1902061-010AMS SampType: MS TestCode: EPA Method 8021B: Volatiles

1.000

Client ID: SW East #3 Batch ID: 42949 RunNo: 57468

0.96

Prep Date: 2/4/2019 Analysis Date: 2/5/2019 SeqNo: 1922999 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 0.85 0.024 0.9551 88.6 63.9 127 Benzene 0 Toluene 0.89 0.048 0.9551 0 93.1 69.9 131 0.9551 0 95.0 71 Ethylbenzene 0.91 0.048 132 Xylenes, Total 2.8 0.096 2.865 0 96.0 71.8 131 Surr: 4-Bromofluorobenzene 0.90 0.9551 94.7 80 120

SampType: MSD TestCode: EPA Method 8021B: Volatiles Sample ID 1902061-010AMSD

Client ID: Batch ID: 42949 SW East #3 RunNo: 57468

OHORRID. OW LUST WO	Dato		J-10	•		1 400				
Prep Date: 2/4/2019	Analysis D	oate: 2/	5/2019	S	SeqNo: 1	923000	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	0.9823	0	90.5	63.9	127	5.03	20	
Toluene	0.94	0.049	0.9823	0	95.6	69.9	131	5.52	20	
Ethylbenzene	0.96	0.049	0.9823	0	97.8	71	132	5.72	20	
Xylenes, Total	2.9	0.098	2.947	0	99.3	71.8	131	6.15	20	
Surr: 4-Bromofluorobenzene	0.91		0.9823		93.1	80	120	0	0	

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- POL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- Reporting Detection Limit RL
- Sample container temperature is out of limit as specified

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **1902061** 

08-Feb-19

Client: CM Services
Project: Flying M

Sample ID MB-42948	Samp	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batc	h ID: <b>42</b>	948	F	RunNo: 5	7469				
Prep Date: 2/4/2019	Analysis [	Date: 2/	5/2019	8	SeqNo: 1	923041	Units: mg/K	ίg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.91		1.000		91.2	80	120			

Sample ID LCS-42948	SampT	Type: <b>LC</b>	s	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Batcl	h ID: <b>42</b>	948	F	RunNo: 5	7469				
Prep Date: 2/4/2019	Analysis D	Date: 2/	5/2019	S	SeqNo: 1	923042	Units: mg/k	<b>(</b> g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene 0.82 0.025 1.00		1.000	0	82.4	80	120				
Toluene	0.92	0.050	1.000	0	92.4	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.1	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.4	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory 4901 Hawkins NE Altriquergue, NM 87109 TKL: 505-345-3975 FAX: 505-345-4107 Website, www.hallenvironmental.com

## Sample Log-In Check List

Client Name: CM SERVICES	Work Order Num	ber: 1902061		RcptNo: 1	
Received By: Victoria Zellar	2/2/2019 10:55:00	AM	Vataria Gel	las	
Completed By: Isalah Ortiz	2/4/2019 8:44:35 A	M	T-0		
Reviewed By: VVZ 2/4/19				7.	
LB DAD 2/4/19					
Chain of Custody					
Is Chain of Custody complete?		Yes 🗸	No 🗆	Not Present	
2 How was the sample delivered?		Courier			
		Specific			
Log In			W. =	us ET	
<ol><li>Was an attempt made to cool the s</li></ol>	samples /	Yes 🗸	No _	NA 🗆	
4. Were all samples received at a terr	perature of >0° C to 6.0°C	Yes 🗸	No 🗀	NA 🗆	
5. Sample(s) in proper container(s)?		Yes 🗸	No 🗆		
6, Sufficient sample volume for indica	ted test(s)?	Yos V	No.		
7 Are samples (except VOA and ONC	3) properly preserved?	Yes 🗸	No 🗌		
8. Was preservative added to bottles?		Yes	No V	NA.	
9. VOA vials have zero headspace?		Yes	No 🗌	No VOA Vrais	
Were any sample containers received.	ved broken?	Yes	No M	# of preserved	
Does paperwork match bottle labels (Note discrepancies on chain of cus		Yes 🗸	No 🗆	bottles checked for pH: (<2 or ≥12	unless note
2. Are matrices correctly identified on		Yes V	No _	Adjusted?	
3. Is it clear what analyses were reque	isled?	Yes 🗸	No 🗆	/	
4 Were all holding times able to be m (If no, notify customer for authorizal		Yos 🗸	No 🗔	Checked by DAT	1/4/19
pecial Handling (if applicable	21				
15. Was client notified of all discrepand	cies with this order?	Yes	No 🗆	NA 🗹	
Person Notified:	Date				
By Wnom:	Via:	eMail F	hone Fax	In Person	
Regarding:			7.00		
Client Instructions:	<del></del>				
16. Additional remarks:					
7 Cooler Information					
Cooler No Temp *C Condi	tion Seal Intact Seal No	Seal Date	Signed By		

Page 1 of 1

Mailing Address:			-			350		1			i				ENVIKONMENIAL
illing Addres		Services		□ Standard	□ Rush	- Same		F	4	IAN	YSI	S	AB	ORA	ANALYSIS LABORATORY
Mailing Address: Po 30k				Project Name	in the				3	ww.ha	www.hallenvironmental.com	nment	tal.cor		
il this	5: Po 30	0245 40	170	Enthy	lad.			4901 Hawkins NE -	awkins	및	Albuq	neudn	e, NN	Albuquerque, NM 87109	
2 230	N &	14288		Project #:				Tel. 50	505-345-3975	3975	Fax	505	505-345-4107	107	
Phone #: 575	49	-5306	10							٩	Analysis Request	s Req	uest		
email or Fax#:,	Mariat	Sutar	@ Comail	Project Manager.	der						(,C	_			
QA/QC Package ☐ Standard		□ Level 4	□ Level 4 (Full Validation)	11/16 13	reton		(802)			(SWIS	08,09	C. S. C.			
Accreditation	Other			Sampler.	Burton	SN E			000		"ON."	P. C. A. A. C. S.	-	(1	
□ EDD (Type)				Sample Temperature	J	イドハコンの			_					/OΛ·	
Date Time	Matrix	Samp	Sample Request ID	Container Type and #	Š	HEAL NO.	-	BTEX + MTI 8015B	ortieM) H9T	EDB (Metho	9M 8 ARDR SA) enoinA	8081 Pestici	∆OV) 80928	-ime2) 0728	
1-29-19 0900	1:05	Back	Background	Jus	ICE	100-	X	X			×				
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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

March 01, 2019

Christopher Cortez
Atkins Engineering Associates
2904 West Second Street
Roswell, NM 88201

TEL: (575) 624-2420 FAX: (575) 624-2421

RE: Flaying M2 OrderNo.: 1902A69

#### Dear Christopher Cortez:

Hall Environmental Analysis Laboratory received 4 sample(s) on 2/26/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

andel

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 3/1/2019

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Atkins Engineering Associates Client Sample ID: SP1-34

 Project:
 Flaying M2
 Collection Date: 2/21/2019 7:30:00 AM

 Lab ID:
 1902A69-001
 Matrix: SOIL
 Received Date: 2/26/2019 8:50:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	ND	60	mg/Kg	20	3/1/2019 12:22:34 AM	43420
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst:	Irm
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	2/27/2019 2:48:09 PM	43351
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	2/27/2019 2:48:09 PM	43351
Surr: DNOP	118	70-130	%Rec	1	2/27/2019 2:48:09 PM	43351
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	2/27/2019 1:19:39 PM	43340
Surr: BFB	95.6	73.8-119	%Rec	1	2/27/2019 1:19:39 PM	43340
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Methyl tert-butyl ether (MTBE)	ND	0.093	mg/Kg	1	2/27/2019 1:19:39 PM	43340
Benzene	ND	0.023	mg/Kg	1	2/27/2019 1:19:39 PM	43340
Toluene	ND	0.046	mg/Kg	1	2/27/2019 1:19:39 PM	43340
Ethylbenzene	ND	0.046	mg/Kg	1	2/27/2019 1:19:39 PM	43340
Xylenes, Total	ND	0.093	mg/Kg	1	2/27/2019 1:19:39 PM	43340
Surr: 4-Bromofluorobenzene	92.0	80-120	%Rec	1	2/27/2019 1:19:39 PM	43340

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 8
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/1/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates Client Sample ID: SP2-34

 Project:
 Flaying M2
 Collection Date: 2/21/2019 4:30:00 PM

 Lab ID:
 1902A69-002
 Matrix: SOIL
 Received Date: 2/26/2019 8:50:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	61	60	mg/Kg	20	3/1/2019 12:59:47 AM	43420
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	Irm
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	2/27/2019 3:10:20 PM	43351
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	2/27/2019 3:10:20 PM	43351
Surr: DNOP	99.5	70-130	%Rec	1	2/27/2019 3:10:20 PM	43351
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	2/27/2019 1:43:13 PM	43340
Surr: BFB	94.4	73.8-119	%Rec	1	2/27/2019 1:43:13 PM	43340
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Methyl tert-butyl ether (MTBE)	ND	0.094	mg/Kg	1	2/27/2019 1:43:13 PM	43340
Benzene	ND	0.024	mg/Kg	1	2/27/2019 1:43:13 PM	43340
Toluene	ND	0.047	mg/Kg	1	2/27/2019 1:43:13 PM	43340
Ethylbenzene	ND	0.047	mg/Kg	1	2/27/2019 1:43:13 PM	43340
Xylenes, Total	ND	0.094	mg/Kg	1	2/27/2019 1:43:13 PM	43340
Surr: 4-Bromofluorobenzene	90.0	80-120	%Rec	1	2/27/2019 1:43:13 PM	43340

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 8
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/1/2019

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates Client Sample ID: SP3-39

 Project:
 Flaying M2
 Collection Date: 2/21/2019 12:30:00 PM

 Lab ID:
 1902A69-003
 Matrix: SOIL
 Received Date: 2/26/2019 8:50:00 AM

Analyses	Result	RL (	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	130	60	mg/Kg	20	3/1/2019 1:37:00 AM	43420
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	2/27/2019 3:32:34 PM	43351
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	2/27/2019 3:32:34 PM	43351
Surr: DNOP	112	70-130	%Rec	1	2/27/2019 3:32:34 PM	43351
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	2/27/2019 4:26:50 PM	43340
Surr: BFB	97.8	73.8-119	%Rec	1	2/27/2019 4:26:50 PM	43340
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Methyl tert-butyl ether (MTBE)	ND	0.093	mg/Kg	1	2/27/2019 4:26:50 PM	43340
Benzene	ND	0.023	mg/Kg	1	2/27/2019 4:26:50 PM	43340
Toluene	ND	0.046	mg/Kg	1	2/27/2019 4:26:50 PM	43340
Ethylbenzene	ND	0.046	mg/Kg	1	2/27/2019 4:26:50 PM	43340
Xylenes, Total	ND	0.093	mg/Kg	1	2/27/2019 4:26:50 PM	43340
Surr: 4-Bromofluorobenzene	92.8	80-120	%Rec	1	2/27/2019 4:26:50 PM	43340

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 8
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/1/2019

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates Client Sample ID: SP4-19

 Project:
 Flaying M2
 Collection Date: 2/21/2019 10:00:00 AM

 Lab ID:
 1902A69-004
 Matrix: SOIL
 Received Date: 2/26/2019 8:50:00 AM

Analyses	Result	RL (	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	120	59	mg/Kg	20	3/1/2019 1:49:24 AM	43420
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	2/27/2019 3:54:53 PM	43351
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	2/27/2019 3:54:53 PM	43351
Surr: DNOP	117	70-130	%Rec	1	2/27/2019 3:54:53 PM	43351
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	2/27/2019 4:50:10 PM	43340
Surr: BFB	95.2	73.8-119	%Rec	1	2/27/2019 4:50:10 PM	43340
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Methyl tert-butyl ether (MTBE)	ND	0.093	mg/Kg	1	2/27/2019 4:50:10 PM	43340
Benzene	ND	0.023	mg/Kg	1	2/27/2019 4:50:10 PM	43340
Toluene	ND	0.046	mg/Kg	1	2/27/2019 4:50:10 PM	43340
Ethylbenzene	ND	0.046	mg/Kg	1	2/27/2019 4:50:10 PM	43340
Xylenes, Total	ND	0.093	mg/Kg	1	2/27/2019 4:50:10 PM	43340
Surr: 4-Bromofluorobenzene	90.4	80-120	%Rec	1	2/27/2019 4:50:10 PM	43340

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 8
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1902A69** 

Page 5 of 8

01-Mar-19

**Client:** Atkins Engineering Associates

**Project:** Flaying M2

Sample ID: MB-43420 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 43420 RunNo: 58032

Prep Date: 2/28/2019 Analysis Date: 2/28/2019 SeqNo: 1944811 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-43420 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 43420 RunNo: 58032

Prep Date: 2/28/2019 Analysis Date: 2/28/2019 SeqNo: 1944812 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 94.4 90 110

#### Qualifiers:

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1902A69

01-Mar-19

**Client:** Atkins Engineering Associates

**Project:** Flaying M2

Sample ID: LCS-43351 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 43351 RunNo: 57971

Prep Date: 2/26/2019 Analysis Date: 2/27/2019 SeqNo: 1941438 Units: mg/Kg

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 10 60 50.00 0 119 63.9 124

Surr: DNOP 5.6 5.000 112 70 130

Sample ID: MB-43351 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 43351 RunNo: 57971

Prep Date: 2/26/2019 Analysis Date: 2/27/2019 SeqNo: 1941439 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual

Diesel Range Organics (DRO) ND 10 ND 50 Motor Oil Range Organics (MRO)

Surr: DNOP 10 10.00 101 70 130

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- POL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL
- Sample container temperature is out of limit as specified

Reporting Detection Limit

Page 6 of 8

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1902A69** 

Page 7 of 8

01-Mar-19

**Client:** Atkins Engineering Associates

**Project:** Flaying M2

Surr: BFB

Sample ID: MB-43340 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: **PBS** Batch ID: **43340** RunNo: **57966** 

Prep Date: 2/26/2019 Analysis Date: 2/27/2019 SeqNo: 1941922 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 930 1000 93.5 73.8 119

Sample ID: LCS-43340 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

1000

Client ID: LCSS Batch ID: 43340 RunNo: 57966

1100

Prep Date: 2/26/2019 Analysis Date: 2/27/2019 SeqNo: 1941923 Units: mg/Kg

LowLimit Analyte Result PQL SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 26 5.0 25.00 105 80.1 123

73.8

119

109

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

W Sample container temperature is out of mint as specif

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1902A69** 

01-Mar-19

**Client:** Atkins Engineering Associates

**Project:** Flaying M2

Sample ID: MB-43340 SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: 43340 RunNo: 57966 Prep Date: 2/26/2019 Analysis Date: 2/27/2019 SeqNo: 1941943 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Methyl tert-butyl ether (MTBE) ND 0.10 ND 0.025 Benzene Toluene ND 0.050 Ethylbenzene ND 0.050 Xylenes, Total ND 0.10 89.6 Surr: 4-Bromofluorobenzene 0.90 1.000 80 120

Sample ID: LCS-43340 SampType: LCS				TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS Batch ID: 43340			340	RunNo: <b>57966</b>							
Prep Date: 2/26/2019	Analysis D	Date: <b>2/</b>	27/2019	SeqNo: 1941944			Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Methyl tert-butyl ether (MTBE)	0.87	0.10	1.000	0	87.1	80	120				
Benzene	0.90	0.025	1.000	0	90.3	80	120				
Toluene	0.94	0.050	1.000	0	94.3	80	120				
Ethylbenzene	0.95	0.050	1.000	0	94.6	80	120				
Xylenes, Total	2.9	0.10	3.000	0	96.2	80	120				
Surr: 4-Bromofluorobenzene	0.91		1.000		91.3	80	120				

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

ntitation limits Page 8 of 8



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name:	ATK		Work Order Number:	190	2A69			RcptNo	: 1	
Received By:	Leah Bad	<b>:a</b>	2/26/2019 8:50:00 AM			l ala	Bae	۹.		
Completed By:	Isaiah Or	tiz	2/26/2019 9:20:50 AM			7	)Bae - C	24		
Reviewed By:	DAD Z	126/19					4			
	WM 2-2	•								
Chain of Cus		-614								
1. Is Chain of C		olete?		Yes		No		Not Present		
2. How was the	sample deli	vered?		Cou	rier					
<u>Log In</u>										
3. Was an atten	npt made to	cool the samples?		Yes	✓	No		NA 🗆		
4. Were all sam	ples receive	d at a temperature o	of >0° C to 6.0°C	Yes	✓	No		na 🗆		
5. Sample(s) in	proper conta	ainer(s)?		Yes	<b>Y</b>	No				
6. Sufficient san	nple volume	for indicated test(s)	?	Yes	<b>V</b>	No				
7. Are samples	(except VOA	and ONG) properly	preserved?	Yes	<b>V</b>	No				
8. Was preserva	ative added t	o bottles?		Yes		No	$\checkmark$	NA 🗀		
9. VOA vials hav	ve zero head	space?		Yes		No		No VOA Vials		
10. Were any sar	mple contain	ers received broker	1?	Yes		No	<b>~</b>	# of preserved		TW
11.Does paperwe		ottle labels? ain of custody)		Yes	<b>✓</b>	No		bottles checked for pH: (<2 o	r>42 unless noted)	2-26
12. Are matrices	correctly ide	ntified on Chain of C	Custody?	Yes	<b>~</b>	No		Adjusted?	·	
13, Is it clear wha	at analyses w	rere requested?		Yes	✓	No				
<ol> <li>Were all holdi</li> <li>(If no, notify c</li> </ol>	-	e to be met? authorization.)		Yes		No		Checked by:		
Special Hand	ling (if ap	plicable)								
15. Was client no	otified of all o	liscrepancies with the	nis order?	Yes		No		NA 🗹		
By Who			Date: Via:	] eM	lail	] Phone [	] Fax	in Person		
16. Additional re	emarks:									
17. <u>Cooler Info</u> Cooler No	The late to the state of the st	Condition Se		Seal C	)ale	Signed	By			
Page 1 or	 f 1	· · · · · · · · · · · · · · · · · · ·						- 200 100 100	<del></del> -	

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HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107 Analysis Request	BTEX / MTBE / TMB's (8021)  TPH:8015D(GRO / DRO / MRO)  8081 Pesticides/8082 PCB's  PAHs by 8310 or 8270SIMS  RCRA 8 Metals  RCRA 8 Metals  € Br, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> 8260 (VOA)  S270 (Semi-VOA)  Total Coliform (Present/Absent)		× × ×	Via: Pate Time Remarks:  Via: $ASII + Ia$ Via: $Clot + Date Time$ $Clot + Date Time$ $Clot + Date Time$ $Clot + Date Time$ Also in the analytical report.
Turn-Around Time:   ☑ Standard □ Rush  Project Name:	Project Manager:  ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (	2007	-003	
	email or Fax#: Sampling & 4+Kitys P.14, Con QA/QC Package:  Standard	11 7:30 sal SPI-100	61 00 - h d 5 0 0001 m	Date: Time: Relinquished by:  Date: Time: Relinquished by:  Date: Time: Relinquished by:  Receive(b)  Receive(b)



































Project Manager: Company Name:

Covironmental おない

> Company Name Bill to: (if different

Southwest Koyalties -casa Freeman

53570

City, State ZIP: Address:

Dolessa 2925

7976

City, State ZIP:

Midland, P.O. Box

7x 79710 - 3570

Reporting:Level II Level III PST/UST TRRP Level IV

Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐

**Work Order Comments** 

Page

State of Project: NM

## Chain of Custody

Work Order No: 489 1910

X II Z Q O

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334

Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701 Midland,TX (432) 704-5440 EL Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Craslbad, NM (432) 704-5440

Relinquished by: (Signature)  Received by: (Signature)  Received by: (Signature)  Date/Time  Relinquished by: (Signature)  And Jon 16322	Total 200.7 / 6010 200.8 / 6020:  8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni  Circle Method(s) and Metal(s) to be analyzed  TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U  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 losses are due to circumstances beyond the control of Xenco Assigns and the control of Standard terms and conditions of Standard terms and some affect of the control of Standard terms and control of Xenco Assigns are due to circumstances beyond the control of Xenco Assigns and the control of Xenco Assigns are due to circumstances beyond the control of Xenco Assigns are due to circumstances beyond the control of Xenco Assigns and the control of Xenco Assigns are due to circumstances beyond the control of Xenco Assigns are due to circumstances beyond the control of Xenco Assigns are due to circumstances beyond the control of Xenco Assigns are due to circumstances beyond the control of Xenco Assigns are due to circumstances beyond the control of Xenco Assigns are due to circumstances beyond the control of Xenco Assigns are due to circumstances are			5P-2 5 2/23/21 1240 5P-2 5 2/23/21 1225	×	act: Yes No MA	ote #:	H 5A # 2 Ro
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р) Received by: (Signature) Date/Time	Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn Se Ag Tl U 1631 / 245.1 / 7470 / 7471 : Hg lard terms and conditions stances beyond the control				Sample Comments	NaOH: Na  Zn Acetate+ NaOH: Zn  TAT starts the day received by the lab, received by 4:00pm	None: NO HNO3: HN H2S04: H2	Preservative Codes  MeOH: Me





















































Chain of Custody

Work Order No: 691498

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334 idiand,TX (432) 704-5440 EL Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Crasibad, NM (432) 704

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Revised Date 022619 Rev. 2019 1

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Revised Date 022619 Rev 2019 1



# **Environment Testing America**

## **ANALYTICAL REPORT**

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

Laboratory Job ID: 880-7766-1

Laboratory Sample Delivery Group: Lea Co, NM

Client Project/Site: Flying M SA #2

For:

Crain Environmental 2925 E. 17th St. Odessa, Texas 79761

Attn: Cindy Crain

SKRAMER

Authorized for release by: 11/9/2021 5:47:51 PM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

LINKS .....

Review your project results through

TOTAL RECESSION

Have a Question?



Visit us at:

www.eurofinsus.com/Env

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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19

Client: Crain Environmental
Project/Site: Flying M SA #2
Laboratory Job ID: 880-7766-1
SDG: Lea Co, NM

# **Table of Contents**

Cover Page	1
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Definitions/Glossary	3
Case Narrative	4
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QC Sample Results	8
QC Association Summary	10
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Method Summary	16
Sample Summary	17
Chain of Custody	18
Receint Checklists	20

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#### **Definitions/Glossary**

Client: Crain Environmental
Project/Site: Flying M SA #2

Job ID: 880-7766-1
SDG: Lea Co, NM

#### **Qualifiers**

.C/

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not
	applicable.
E	Result exceeded calibration range.
U	Indicates the analyte was analyzed for but not detected.

#### Glossary

Glossary	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)

MQL NC

MPN

C Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent
POS Positive / Present
PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

Most Probable Number

Method Quantitation Limit

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

#### **Case Narrative**

Client: Crain Environmental Job ID: 880-7766-1
Project/Site: Flying M SA #2 SDG: Lea Co, NM

Job ID: 880-7766-1

Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative 880-7766-1

#### Receipt

The samples were received on 10/29/2021~3:16~PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was  $5.3^{\circ}C$ 

#### HPLC/IC

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

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Client: Crain Environmental Project/Site: Flying M SA #2

Client Sample ID: HA-1 (0-6")
Date Collected: 10/27/21 11:10

Lab Sample ID: 880-7766-1

Matrix: Solid

Date Received: 10/29/21 15:16 Sample Depth: 0 - 6"

Method: 300.0 - Anions, Ion Chron	natography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2190		24.8	4.25	mg/Kg			11/09/21 14:29	5

Client Sample ID: HA-1 (1')

Lab Sample ID: 880-7766-2

Matrix: Solid

Date Collected: 10/27/21 11:20 Date Received: 10/29/21 15:16

Sample Depth: 1'

Method: 300.0 - Anions, Ion Chroma	atography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	284		5.04	0.865	mg/Kg			11/08/21 02:12	1

Client Sample ID: HA-1 (2')

Lab Sample ID: 880-7766-3

Date Collected: 10/27/21 11:22 Matrix: Solid

Date Received: 10/29/21 15:16

Sample Depth: 2'

Method: 300.0 - Anions, Ion Chroma	atography - S	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	80.4		5.01	0.860	mg/Kg			11/08/21 02:20	1

Client Sample ID: HA-1 (3')

Date Collected: 10/27/21 11:30

Lab Sample ID: 880-7766-4

Matrix: Solid

Date Received: 10/29/21 15:16

Sample Depth: 3'

Method: 300.0 - Anions, Ion Chrom	atography - S	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	37.0		5.00	0.858	mg/Kg			11/08/21 02:43	1

Client Sample ID: HA-2 (0-6")

Lab Sample ID: 880-7766-5

Date Collected: 10/27/21 11:40 Date Received: 10/29/21 15:16

Sample Depth: 0 - 6"

Method: 300.0 - Anions, Ion Chrom	natography - S	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	173		5.02	0.862	mg/Kg			11/08/21 02:50	1

Client Sample ID: HA-2 (1')

Lab Sample ID: 880-7766-6

Date Collected: 10/27/21 11:45 Date Received: 10/29/21 15:16

Sample Depth: 1'

Method: 300.0 - Anions, Ion Chromatography - Soluble										
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	148		4.98	0.855	mg/Kg	<del>_</del>		11/08/21 02:58	1

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**Matrix: Solid** 

Matrix: Solid

Matrix: Solid

Matrix: Solid

**Matrix: Solid** 

**Matrix: Solid** 

**Matrix: Solid** 

Lab Sample ID: 880-7766-7

Lab Sample ID: 880-7766-10

Lab Sample ID: 880-7766-11

#### **Client Sample Results**

Client: Crain Environmental
Project/Site: Flying M SA #2
Job ID: 880-7766-1
SDG: Lea Co, NM

Client Sample ID: HA-2 (2')

Date Collected: 10/27/21 11:49 Date Received: 10/29/21 15:16

Sample Depth: 2'

Method: 300.0 - Anions, Ion Chromatography - Soluble										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	72.7		4.97	0.853	mg/Kg			11/08/21 03:06	1	

Client Sample ID: HA-2 (3')

Lab Sample ID: 880-7766-8

Date Collected: 10/27/21 11:53 Date Received: 10/29/21 15:16

Sample Depth: 3'

Method: 300.0 - Anions, Ion Chromatography - Soluble										
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	83.8		4.95	0.850	mg/Kg			11/08/21 03:13	1

Client Sample ID: HA-2 (4')

Date Collected: 10/27/21 11:58

Lab Sample ID: 880-7766-9

Matrix: Solid

Date Collected: 10/27/21 11:58 Date Received: 10/29/21 15:16

Sample Depth: 4'

Method: 300.0 - Anions, Ion Chromatography - Soluble										
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	125		4.95	0.850	mg/Kg			11/08/21 03:21	1

Client Sample ID: HA-3 (0-6")
Date Collected: 10/27/21 12:05

Date Received: 10/29/21 15:16

Sample Depth: 0 - 6"

Method: 300.0 - Anions, Ion Chromatography - Soluble										
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	2010		25.0	4.29	mg/Kg			11/08/21 03:29	5

Client Sample ID: HA-3 (1')

Date Collected: 10/27/21 12:08

Date Received: 10/29/21 15:16

Sample Depth: 1'

Method: 300.0 - Anions, Ion Chron	natography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	149		5.00	0.858	mg/Kg			11/08/21 23:43	1

Client Sample ID: HA-3 (2')

Lab Sample ID: 880-7766-12

Date Collected: 10/27/21 12:12 Date Received: 10/29/21 15:16

Sample Depth: 2'

Method: 300.0 - Anions, Ion Chromatography - SolubleAnalyteResultQualifierRLMDLUnitDPreparedAnalyzedDil FacChloride657025.04.28mg/Kg11/09/21 00:065

Client: Crain Environmental Project/Site: Flying M SA #2 Job ID: 880-7766-1 SDG: Lea Co, NM

Client Sample ID: HA-3 (3')

Lab Sample ID: 880-7766-13

Date Collected: 10/27/21 12:16 Date Received: 10/29/21 15:16 Matrix: Solid

Sample Depth: 3'

Method: 300.0 - Anions, Ion Chromatography - Soluble									
	Analyte	Result Qu	ualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	3420	24.9	4.27	mg/Kg			11/09/21 00:14	5

Client Sample ID: HA-3 (4') Lab Sample ID: 880-7766-14

Matrix: Solid

Date Collected: 10/27/21 12:23 Date Received: 10/29/21 15:16

Sample Depth: 4'

Method: 300.0 - Anions, Ion Chromatography - Soluble										
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	243		4.95	0.850	mg/Kg			11/09/21 00:21	1

Client Sample ID: HA-4 (0-6") Lab Sample ID: 880-7766-15

Matrix: Solid

Date Collected: 10/27/21 12:30 Date Received: 10/29/21 15:16

Sample Depth: 0 - 6"

Method: 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	380		4.99	0.857	mg/Kg			11/09/21 00:29	1

Client Sample ID: HA-4 (1') Lab Sample ID: 880-7766-16 Date Collected: 10/27/21 12:33 **Matrix: Solid** 

Date Received: 10/29/21 15:16

Sample Depth: 1'

Method: 300.0 - Anions, Ion Chromatography - Soluble										
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	4180		25.2	4.33	mg/Kg			11/09/21 00:52	5

Client Sample ID: HA-4 (2') Lab Sample ID: 880-7766-17 Date Collected: 10/27/21 12:37 **Matrix: Solid** 

Date Received: 10/29/21 15:16

Sample Depth: 2'

Method: 300.0 - Anions, Ion Chrom	atography - Soluble						
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6080	25.0	4.29 mg/Kg			11/09/21 00:59	5

Client Sample ID: HA-4 (3') Lab Sample ID: 880-7766-18

Date Collected: 10/27/21 12:41 Date Received: 10/29/21 15:16

**Matrix: Solid** 

Sample Depth: 3'

Method: 300.0 - Anions, Ion Chromatography - Soluble										
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	2950		24.8	4.25	mg/Kg			11/09/21 01:07	5

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

**Prep Type: Soluble** 

Client Sample ID: HA-1 (0-6")

Client Sample ID: HA-1 (0-6")

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

#### **QC Sample Results**

Client: Crain Environmental Job ID: 880-7766-1
Project/Site: Flying M SA #2 SDG: Lea Co, NM

**Method: 300.0 - Anions, Ion Chromatography** 

Lab Sample ID: MB 880-11150/1-A

Matrix: Solid

**Analysis Batch: 11217** 

MB MB

 Analyte
 Result
 Qualifier
 RL
 MDL
 Unit
 D
 Prepared
 Analyzed
 Dil Fac

 Chloride
 <0.858</td>
 U
 5.00
 0.858
 mg/Kg
 11/07/21 23:39
 1

Lab Sample ID: LCS 880-11150/2-A

Matrix: Solid

**Analysis Batch: 11217** 

Spike LCS LCS %Rec. Added Analyte Result Qualifier Unit D %Rec Limits Chloride 250 234.1 mg/Kg 90 - 110

Lab Sample ID: LCSD 880-11150/3-A

Matrix: Solid

**Analysis Batch: 11217** 

LCSD LCSD RPD Spike %Rec. Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit Chloride 236.3 250 mg/Kg 90 - 110 20

Lab Sample ID: 880-7766-1 MS

Matrix: Solid

**Analysis Batch: 11217** 

Sample Sample MS MS Spike %Rec. Result Qualifier Added Result Qualifier %Rec Analyte Unit D Limits Chloride 1970 250 2114 E 4 90 - 110 mg/Kg

Lab Sample ID: 880-7766-1 MSD

Matrix: Solid

**Analysis Batch: 11217** 

Sample Sample Spike MSD MSD %Rec. RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 1970 E 250 2148 E 4 mg/Kg 90 - 110

Lab Sample ID: MB 880-11181/1-A

Matrix: Solid

**Analysis Batch: 11359** 

MB MB

 Analyte
 Result Chloride
 Qualifier
 RL St.
 MDL Unit Description
 D Prepared Prepared
 Analyzed Dil Factorial

 Chloride
 <0.858 U</td>
 5.00
 0.858 mg/kg
 11/08/21 23:20
 1

Lab Sample ID: LCS 880-11181/2-A

Matrix: Solid

**Analysis Batch: 11359** 

 Spike
 LCS
 LCS
 %Rec.

 Analyte
 Added
 Result
 Qualifier
 Unit
 D
 %Rec
 Limits

 Chloride
 250
 252.4
 mg/Kg
 101
 90 - 110

Lab Sample ID: LCSD 880-11181/3-A

Released to Imaging: 8/17/2022 1:13:14 PM

Matrix: Solid

**Analysis Batch: 11359** 

Spike LCSD LCSD %Rec. RPD Analyte Added Result Qualifier Unit %Rec Limits **RPD** Limit Chloride 250 257.4 mg/Kg 103 90 - 110 20

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Client: Crain Environmental Project/Site: Flying M SA #2 Job ID: 880-7766-1 SDG: Lea Co, NM

**Client Sample ID: Lab Control Sample** 

Client Sample ID: Lab Control Sample Dup

Client Sample ID: Matrix Spike Duplicate

**Prep Type: Soluble** 

**Prep Type: Soluble** 

**Prep Type: Soluble** 

**Prep Type: Soluble** 

Client Sample ID: Matrix Spike

#### Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-7766-11 MS

**Matrix: Solid** 

Analysis Batch: 11359

Client Sample ID: HA-3 (1') **Prep Type: Soluble** 

Sample Sample Spike MS MS %Rec. Qualifier Analyte Result Added Result Qualifier Unit D %Rec Limits Chloride 149 250 417.8 mg/Kg 107 90 - 110

Lab Sample ID: 880-7766-11 MSD Client Sample ID: HA-3 (1') **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 11359** 

Sample Sample Spike MSD MSD %Rec. RPD Qualifier Added Limit Analyte Result Result Qualifier Unit D %Rec Limits RPD Chloride 149 250 414.5 mg/Kg 106 90 - 110

Lab Sample ID: MB 880-11234/1-A Client Sample ID: Method Blank **Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 11450

мв мв Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac Chloride <0.858 U 5.00 11/08/21 22:12 0.858 mg/Kg

Lab Sample ID: LCS 880-11234/2-A

**Matrix: Solid** 

**Analysis Batch: 11450** 

Spike LCS LCS %Rec. Added Analyte Result Qualifier Unit %Rec Limits Chloride 250 274.0 110 90 - 110 mg/Kg

Lab Sample ID: LCSD 880-11234/3-A

**Matrix: Solid** 

**Analysis Batch: 11450** 

LCSD LCSD Spike %Rec. RPD Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 274.0 mg/Kg 110 90 - 110 20

Lab Sample ID: 880-7809-A-6-E MS

Matrix: Solid

**Analysis Batch: 11450** 

Sample Sample Spike MS MS %Rec. Result Qualifier Added Analyte Result Qualifier Unit D %Rec Limits Chloride 36.9 250 308.7 mg/Kg 109 90 - 110

Lab Sample ID: 880-7809-A-6-F MSD

**Matrix: Solid** 

**Analysis Batch: 11450** 

MSD MSD %Rec. RPD Sample Sample Spike Result Qualifier Added Analyte Result Qualifier Limits RPD Limit Unit %Rec Chloride 36.9 250 306.1 mg/Kg 108 90 - 110 20

### **QC Association Summary**

Client: Crain Environmental Job ID: 880-7766-1
Project/Site: Flying M SA #2 SDG: Lea Co, NM

#### HPLC/IC

#### Leach Batch: 11150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-7766-2	HA-1 (1')	Soluble	Solid	DI Leach	
880-7766-3	HA-1 (2')	Soluble	Solid	DI Leach	
880-7766-4	HA-1 (3')	Soluble	Solid	DI Leach	
880-7766-5	HA-2 (0-6")	Soluble	Solid	DI Leach	
880-7766-6	HA-2 (1')	Soluble	Solid	DI Leach	
880-7766-7	HA-2 (2')	Soluble	Solid	DI Leach	
880-7766-8	HA-2 (3')	Soluble	Solid	DI Leach	
880-7766-9	HA-2 (4')	Soluble	Solid	DI Leach	
880-7766-10	HA-3 (0-6")	Soluble	Solid	DI Leach	
MB 880-11150/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-11150/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11150/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-7766-1 MS	HA-1 (0-6")	Soluble	Solid	DI Leach	
880-7766-1 MSD	HA-1 (0-6")	Soluble	Solid	DI Leach	

#### Leach Batch: 11181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-7766-11	HA-3 (1')	Soluble	Solid	DI Leach	_
880-7766-12	HA-3 (2')	Soluble	Solid	DI Leach	
880-7766-13	HA-3 (3')	Soluble	Solid	DI Leach	
880-7766-14	HA-3 (4')	Soluble	Solid	DI Leach	
880-7766-15	HA-4 (0-6")	Soluble	Solid	DI Leach	
880-7766-16	HA-4 (1')	Soluble	Solid	DI Leach	
880-7766-17	HA-4 (2')	Soluble	Solid	DI Leach	
880-7766-18	HA-4 (3')	Soluble	Solid	DI Leach	
MB 880-11181/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-11181/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11181/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-7766-11 MS	HA-3 (1')	Soluble	Solid	DI Leach	
880-7766-11 MSD	HA-3 (1')	Soluble	Solid	DI Leach	

#### **Analysis Batch: 11217**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-7766-2	HA-1 (1')	Soluble	Solid	300.0	11150
880-7766-3	HA-1 (2')	Soluble	Solid	300.0	11150
880-7766-4	HA-1 (3')	Soluble	Solid	300.0	11150
880-7766-5	HA-2 (0-6")	Soluble	Solid	300.0	11150
880-7766-6	HA-2 (1')	Soluble	Solid	300.0	11150
880-7766-7	HA-2 (2')	Soluble	Solid	300.0	11150
880-7766-8	HA-2 (3')	Soluble	Solid	300.0	11150
880-7766-9	HA-2 (4')	Soluble	Solid	300.0	11150
880-7766-10	HA-3 (0-6")	Soluble	Solid	300.0	11150
MB 880-11150/1-A	Method Blank	Soluble	Solid	300.0	11150
LCS 880-11150/2-A	Lab Control Sample	Soluble	Solid	300.0	11150
LCSD 880-11150/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11150
880-7766-1 MS	HA-1 (0-6")	Soluble	Solid	300.0	11150
880-7766-1 MSD	HA-1 (0-6")	Soluble	Solid	300.0	11150

Leach Batch: 11234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-7766-1	HA-1 (0-6")	Soluble	Solid	DI Leach	

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#### **QC Association Summary**

Client: Crain Environmental Job ID: 880-7766-1
Project/Site: Flying M SA #2 SDG: Lea Co, NM

#### **HPLC/IC** (Continued)

#### Leach Batch: 11234 (Continued)

Lab Sample ID  MB 880-11234/1-A	Client Sample ID  Method Blank	Prep Type Soluble	Matrix Solid	Method DI Leach	Prep Batch
LCS 880-11234/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11234/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-7809-A-6-E MS	Matrix Spike	Soluble	Solid	DI Leach	
880-7809-A-6-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 11359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-7766-11	HA-3 (1')	Soluble	Solid	300.0	11181
880-7766-12	HA-3 (2')	Soluble	Solid	300.0	11181
880-7766-13	HA-3 (3')	Soluble	Solid	300.0	11181
880-7766-14	HA-3 (4')	Soluble	Solid	300.0	11181
880-7766-15	HA-4 (0-6")	Soluble	Solid	300.0	11181
880-7766-16	HA-4 (1')	Soluble	Solid	300.0	11181
880-7766-17	HA-4 (2')	Soluble	Solid	300.0	11181
880-7766-18	HA-4 (3')	Soluble	Solid	300.0	11181
MB 880-11181/1-A	Method Blank	Soluble	Solid	300.0	11181
LCS 880-11181/2-A	Lab Control Sample	Soluble	Solid	300.0	11181
LCSD 880-11181/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11181
880-7766-11 MS	HA-3 (1')	Soluble	Solid	300.0	11181
880-7766-11 MSD	HA-3 (1')	Soluble	Solid	300.0	11181

#### Analysis Batch: 11450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-7766-1	HA-1 (0-6")	Soluble	Solid	300.0	11234
MB 880-11234/1-A	Method Blank	Soluble	Solid	300.0	11234
LCS 880-11234/2-A	Lab Control Sample	Soluble	Solid	300.0	11234
LCSD 880-11234/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11234
880-7809-A-6-E MS	Matrix Spike	Soluble	Solid	300.0	11234
880-7809-A-6-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	11234

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Job ID: 880-7766-1

SDG: Lea Co, NM

Client Sample ID: HA-1 (0-6")

Lab Sample ID: 880-7766-1

Matrix: Solid

Date Collected: 10/27/21 11:10 Date Received: 10/29/21 15:16

Client: Crain Environmental

Project/Site: Flying M SA #2

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.05 g	50 mL	11234	11/02/21 12:06	CH	XEN MID
Soluble	Analysis	300.0		5			11450	11/09/21 14:29	CH	XEN MID

Client Sample ID: HA-1 (1') Lab Sample ID: 880-7766-2

Matrix: Solid

Date Collected: 10/27/21 11:20 Date Received: 10/29/21 15:16

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.96 g	50 mL	11150	11/01/21 13:45	CA	XEN MID
Soluble	Analysis	300.0		1			11217	11/08/21 02:12	CH	XEN MID

Lab Sample ID: 880-7766-3 Client Sample ID: HA-1 (2')

Date Collected: 10/27/21 11:22 Matrix: Solid

Date Received: 10/29/21 15:16

Datab Batch ь:: Initial Einal Datab Droparod

	Datcii	Daten		ווט	IIIIIIai	FIIIdi	Daten	Frepareu		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.99 g	50 mL	11150	11/01/21 13:45	CA	XEN MID
Soluble	Analysis	300.0		1			11217	11/08/21 02:20	CH	XEN MID

Client Sample ID: HA-1 (3') Lab Sample ID: 880-7766-4

Date Collected: 10/27/21 11:30 **Matrix: Solid** Date Received: 10/29/21 15:16

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5 g	50 mL	11150	11/01/21 13:45	CA	XEN MID
Soluble	Analysis	300.0		1			11217	11/08/21 02:43	CH	XEN MID

Client Sample ID: HA-2 (0-6") Lab Sample ID: 880-7766-5 Date Collected: 10/27/21 11:40 **Matrix: Solid** 

Date Received: 10/29/21 15:16

Batch Batch Dil Initial Final Batch Prepared Method **Prep Type** Туре Run Factor Amount Amount Number or Analyzed Analyst Lab Soluble Leach DI Leach 4.98 g 50 mL 11150 11/01/21 13:45 CA XEN MID Soluble Analysis 300.0 11217 11/08/21 02:50 СН XEN MID 1

Client Sample ID: HA-2 (1') Lab Sample ID: 880-7766-6

Date Collected: 10/27/21 11:45 **Matrix: Solid** Date Received: 10/29/21 15:16

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.02 g	50 mL	11150	11/01/21 13:45	CA	XEN MID
Soluble	Analysis	300.0		1			11217	11/08/21 02:58	CH	XEN MID

Job ID: 880-7766-1

SDG: Lea Co, NM

Client Sample ID: HA-2 (2')

Client: Crain Environmental

Project/Site: Flying M SA #2

Date Collected: 10/27/21 11:49 Date Received: 10/29/21 15:16 Lab Sample ID: 880-7766-7

Matrix: Solid

**Matrix: Solid** 

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.03 g	50 mL	11150	11/01/21 13:45	CA	XEN MID
Soluble	Analysis	300.0		1			11217	11/08/21 03:06	CH	XEN MID

Client Sample ID: HA-2 (3') Lab Sample ID: 880-7766-8 **Matrix: Solid** 

Date Collected: 10/27/21 11:53 Date Received: 10/29/21 15:16

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.05 g	50 mL	11150	11/01/21 13:45	CA	XEN MID
Soluble	Analysis	300.0		1			11217	11/08/21 03:13	CH	XEN MID

Client Sample ID: HA-2 (4') Lab Sample ID: 880-7766-9

Date Collected: 10/27/21 11:58

Date Received: 10/29/21 15:16

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.05 g	50 mL	11150	11/01/21 13:45	CA	XEN MID
Soluble	Analysis	300.0		1			11217	11/08/21 03:21	CH	XEN MID

Client Sample ID: HA-3 (0-6") Lab Sample ID: 880-7766-10 **Matrix: Solid** 

Date Collected: 10/27/21 12:05 Date Received: 10/29/21 15:16

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5 g	50 mL	11150	11/01/21 13:45	CA	XEN MID
Soluble	Analysis	300.0		5			11217	11/08/21 03:29	CH	XEN MID

Client Sample ID: HA-3 (1') Lab Sample ID: 880-7766-11 **Matrix: Solid** 

Date Collected: 10/27/21 12:08 Date Received: 10/29/21 15:16

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5 g	50 mL	11181	11/01/21 18:12	CA	XEN MID
Soluble	Analysis	300.0		1			11359	11/08/21 23:43	CH	XEN MID

Client Sample ID: HA-3 (2') Lab Sample ID: 880-7766-12 Date Collected: 10/27/21 12:12 **Matrix: Solid** 

Date Received: 10/29/21 15:16

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	11181	11/01/21 18:12	CA	XEN MID
Soluble	Analysis	300.0		5			11359	11/09/21 00:06	CH	XEN MID

Client: Crain Environmental Job ID: 880-7766-1
Project/Site: Flying M SA #2 SDG: Lea Co, NM

Client Sample ID: HA-3 (3')

Lab Sample ID: 880-7766-13

Date Collected: 10/27/21 12:16

Date Received: 10/29/21 15:16

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.02 g	50 mL	11181	11/01/21 18:12	CA	XEN MID
Soluble	Analysis	300.0		5			11359	11/09/21 00:14	CH	XEN MID

Client Sample ID: HA-3 (4')

Lab Sample ID: 880-7766-14

Date Collected: 10/27/21 12:23 Matrix: Solid

Date Received: 10/29/21 15:16

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.05 g	50 mL	11181	11/01/21 18:12	CA	XEN MID
Soluble	Analysis	300.0		1			11359	11/09/21 00:21	CH	XEN MID

Client Sample ID: HA-4 (0-6")

Lab Sample ID: 880-7766-15

Date Collected: 10/27/21 12:30 Matrix: Solid

Date Received: 10/29/21 15:16

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	11181	11/01/21 18:12	CA	XEN MID
Soluble	Analysis	300.0		1			11359	11/09/21 00:29	CH	XEN MID

Client Sample ID: HA-4 (1')

Lab Sample ID: 880-7766-16

Date Collected: 10/27/21 12:33 Date Received: 10/29/21 15:16

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.96 g	50 mL	11181	11/01/21 18:12	CA	XEN MID
Soluble	Analysis	300.0		5			11359	11/09/21 00:52	CH	XEN MID

Client Sample ID: HA-4 (2')

Lab Sample ID: 880-7766-17

Date Collected: 10/27/21 12:37 Date Received: 10/29/21 15:16

Г	D-4-b	Detek		D:I	11411	F:1	D-4-b	D		
	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5 g	50 mL	11181	11/01/21 18:12	CA	XEN MID
Soluble	Analysis	300.0		5			11359	11/09/21 00:59	CH	XEN MID

Client Sample ID: HA-4 (3')

Lab Sample ID: 880-7766-18

Date Collected: 10/27/21 12:41 Date Received: 10/29/21 15:16

		Batch	Batch		Dil	Initial	Final	Batch	Prepared		
1	Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
3	Soluble	Leach	DI Leach			5.05 g	50 mL	11181	11/01/21 18:12	CA	XEN MID
9	Soluble	Analysis	300.0		5			11359	11/09/21 01:07	CH	XEN MID

**Laboratory References:** 

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

Eurofins Xenco, Midland

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**Matrix: Solid** 

**Matrix: Solid** 

**Matrix: Solid** 

dland

#### **Accreditation/Certification Summary**

Client: Crain Environmental Job ID: 880-7766-1
Project/Site: Flying M SA #2 SDG: Lea Co, NM

#### **Laboratory: Eurofins Xenco, Midland**

The accreditations/certifications listed below are applicable to this report.

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

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#### **Method Summary**

Client: Crain Environmental Job ID: 880-7766-1 Project/Site: Flying M SA #2

SDG: Lea Co, NM

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

#### **Protocol References:**

ASTM = ASTM International

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

#### Laboratory References:

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

#### **Sample Summary**

Client: Crain Environmental Project/Site: Flying M SA #2 Job ID: 880-7766-1

SDG: Lea Co, NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-7766-1	HA-1 (0-6")	Solid	10/27/21 11:10	10/29/21 15:16	0 - 6"
880-7766-2	HA-1 (1')	Solid	10/27/21 11:20	10/29/21 15:16	1'
880-7766-3	HA-1 (2')	Solid	10/27/21 11:22	10/29/21 15:16	2'
880-7766-4	HA-1 (3')	Solid	10/27/21 11:30	10/29/21 15:16	3'
880-7766-5	HA-2 (0-6")	Solid	10/27/21 11:40	10/29/21 15:16	0 - 6"
880-7766-6	HA-2 (1')	Solid	10/27/21 11:45	10/29/21 15:16	1'
880-7766-7	HA-2 (2')	Solid	10/27/21 11:49	10/29/21 15:16	2'
880-7766-8	HA-2 (3')	Solid	10/27/21 11:53	10/29/21 15:16	3'
880-7766-9	HA-2 (4')	Solid	10/27/21 11:58	10/29/21 15:16	4'
880-7766-10	HA-3 (0-6")	Solid	10/27/21 12:05	10/29/21 15:16	0 - 6"
880-7766-11	HA-3 (1')	Solid	10/27/21 12:08	10/29/21 15:16	1'
880-7766-12	HA-3 (2')	Solid	10/27/21 12:12	10/29/21 15:16	2'
880-7766-13	HA-3 (3')	Solid	10/27/21 12:16	10/29/21 15:16	3'
880-7766-14	HA-3 (4')	Solid	10/27/21 12:23	10/29/21 15:16	4'
880-7766-15	HA-4 (0-6")	Solid	10/27/21 12:30	10/29/21 15:16	0 - 6"
880-7766-16	HA-4 (1')	Solid	10/27/21 12:33	10/29/21 15:16	1'
880-7766-17	HA-4 (2')	Solid	10/27/21 12:37	10/29/21 15:16	2'
880-7766-18	HA-4 (3')	Solid	10/27/21 12:41	10/29/21 15:16	3'

# **eurofins** Xenco Environment Testing

Address. City, State ZIP-

2020

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Bill to (if different) Company Name

Southwest P.O. Box

570

Program: UST/PST PRP Brownfields State of Project: NM

RRC

Superfund [

www.xenco.com

Work Order Comments

Company Name Project Manager

# Chain of Custody

Midland, TX (432) 704-5440, San Antonio, TX (210) EL Paso, TX (915) 585-3443 Lubbock, TX (806) 79 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199 Houston, TX (281) 240-4200, Dallas TX (214) 90

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880-7766 Chain of Custody	880-7766 C	509-3334
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	ously negotiated.	alyzed. These terms will be enforced unless previo	d to Eurofins Xenco, but not and	of Eurofins Xenco. A minimum charge of \$85.00 will be applied to path project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	co. A minimum charge of \$85.00 will be applied to	f Eurofins Xenc
	conditions	d subcontractors. It assigns standard terms and o	Eurofins Xenco, its affiliates and	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins 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 losses of the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses or the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses or expenses incurred by the client if such losses or expenses incurred by the client is such as a s	ire of this document and relinquishment of samples of only for the cost of samples only for the cost of samples	lotice: Signatur of service. Euroi
/7471	Hg 1631/2451/7470	8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se A	A Sb As Ba Be Cd	ed TCLP/SPLP 6010 8RCF	cilcie metriod(s) and metal(s) to be analyzed	CILCIE ME
U V Zn	Na Sr Tl Sn	Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO <sub>2</sub>	Sb As Ba Be B Co	8RCRA 13PPM Texas	Total 200.7 / 6010 200.8 / 6020:	Total 20
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Sample Comments	Sai		Cont Ch	Grab/ Comp	<del>  ^</del>	San
NaOH+Ascorbic Acid SAPC	NaOH+A		10.	Corrected Temperature		
Zn Acetate+NaOH Zn	Zn Aceta		ria	reinbelatule Reduilig	100	Total Containers
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> NaSO <sub>3</sub>	Na <sub>2</sub> S <sub>2</sub> O ;			+	Yes No N/A	iample Cus
4. NABIS	NaHSO 4. NABIS			orrection Eactor	Yes No (N/A)	Cooler Custody Seals.
- T	3 FC 4. IT		ame	nometer ID:		amples Re
T <sub>2</sub> NAOH NA	12004 112		ters	Yes No Wet Ice. Yes No	RECEIPT Temp Blank.	SAMPLE RECEIPT
	HCL.HC			the lab, if received by 4.30pm	1, 2)	P:O #
9	Cool Cool			TAT starts the day received by		Sampler's Name
	NO.			Due Date	ation Lea Co. NM	Project Location
	None NO		Pres.	ARoutine		Project Number
Preservative Codes	Pre	ANALYSIS REOUEST		2 Turn Around	TIVING M SA #	Project Name
Other:	Deliverables. EDD ADaPT		crain@amail.com	144 Email Cirply.	(5/5) 441-7244	Phone
Level V	Reporting Level II Level III PSI/USI L IRRP L	WGC-01/12/	MINIMA, /X	/ / W   City State Zir	\ \ \	
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Environment Testing

Company Name roject Manager

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Bill to' (if different) Company Name

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Program:

UST/PST []

RRC □

Superfund [

www.xenco.com

Work Order Comments PRP Brownfields

# Chain of Custody

Midland, TX (432) 704-5440 San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296 Hobbs NM (575) 392-7550 Carlsbad, NM (575) 988-3199 Houston, TX (281) 240-4200, Dallas TX (214) 902-0300

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Vork Order No:_	

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Date/Time	Received by (Signature)	Relinquished by: (Ṣıgnature)	Date/Time	Received by: (Signature)	Relinquished by (Signature) Received by
	tions trol negotiated.	subcontractors. It assigns standard terms and condit such losses are due to circumstances beyond the con yzed. These terms will be enforced unless previously	ns Xenco, its affiliates and as incurred by the client if rofins Xenco, but not anal	Id purchase order from client company to Eurofi sume any responsibility for any losses or expens a charge of \$5 for each sample submitted to Eu	worce: Signature or this document and relinquishment of samples constitutes a viald purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins 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 losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.
7471	U Hg 1631/2451/7470/7471	8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U	o As Ba Be Cd (	ICLP/SPLP 6010 8RCRA SI	circie Metriod(s) and Metal(s) to be analyzed
I V Zn	lı K Se	Ca Cr Co Cu Fe Pb Mg Mn Mo	Al Sb As Ba Be B Cd	0,1	
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- Promotive and a second secon			X	3-	HA-4 (3°)
			X	1237 2'	HA-4 (2)
			X	1233 1'	HA-4 (1')
			<u>X</u>	1230 0.6"	HA-4 (0-6")
***************************************	The state of the s		X	1223 4	HA-3 (4)
			X	1216 3'	HA-3 (3·)
			X	1212 21	HA-2 (2)
***************************************			X	1208 11 6 1	HA-3 (1') 5 10/27/21
Sample Comments	San		Ch.	Time Depth Grab/ # of Comp Cont	Sample Identification Matrix Date Sampled
NaOH+Ascorbic Acid SAPC	NaOH+A:		Jor	nperature <sup>.</sup>	Total Containers Corrected Temperature
Zn Acetate+NaOH Zn	Zn Aceta		ria	Reading	Sample Custody Seals Yes No N/A Temperature Reading
NaSO 3	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> NaSO 3		le:		Cooler Custody Seals. Yes No N/A Correction Factor
. NABIS	NaHSO 4. NABIS		5		Samples Received Intact: Yes No Thermometer ID:
•	H <sub>3</sub> PO <sub>4</sub> HP			Wet Ice Yes No eters	SAMPLE RECEIPT Temp Blank. Yes No
	H <sub>2</sub> S0 <sub>4</sub> H <sub>2</sub>			the lab, if received by 4.30pm	PO#
	HCL HC			TAT starts the day received by	Sampler's Name: (indy (rain)
	Cool Cool			Due Date	Lea Con NM
O DI Water: H <sub>2</sub> O	None NO			ARoutine □Rush Pres. Code	Project Number:
Preservative Codes	Pre	ANALYSIS REQUEST	d	Turn Around	Project Name Flying M SA #2
Other-	ables. EDD ADaPT	1. com	crain@ Amai	Email Ciraly. Col	Phone (575)441-7244
TRRP Level IV	<b>7/0</b> Reporting Level III □ Level III □ PST/UST □ TRRP □ Level IV □	0-35	Midland.	City, State ZIP	City, State ZIP UNCSSA TR 1976
	State of Project: N JV	ひひひ/O State o	たの, ひ裂	Address	Address. Q. Q. C. II.

#### **Login Sample Receipt Checklist**

Client: Crain Environmental Job Number: 880-7766-1

SDG Number: Lea Co, NM

List Source: Eurofins Xenco, Midland

Login Number: 7766 List Number: 1 Creator: Teel, Brianna

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

# **Environment Testing America**

## **ANALYTICAL REPORT**

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

Laboratory Job ID: 880-8515-1

Laboratory Sample Delivery Group: Lea Co., NM

Client Project/Site: Flying M SA #2

For:

Crain Environmental 2925 E. 17th St. Odessa, Texas 79761

Attn: Cindy Crain

SKRAMER

Authorized for release by: 11/19/2021 4:37:26 PM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

LINKS .....

Review your project results through

IOIOIACCESS

Have a Question?



Visit us at:

www.eurofinsus.com/Env

Released to Imaging: 8/17/2022 1:13:14 PM

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: Crain Environmental
Project/Site: Flying M SA #2
Laboratory Job ID: 880-8515-1
SDG: Lea Co., NM

# **Table of Contents**

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#### **Definitions/Glossary**

Client: Crain Environmental

Project/Site: Flying M SA #2

Job ID: 880-8515-1

SDG: Lea Co., NM

**Qualifiers** 

**HPLC/IC** 

 Qualifier
 Qualifier Description

 F1
 MS and/or MSD recovery exceeds control limits.

 U
 Indicates the analyte was analyzed for but not detected.

**Glossary** 

 Abbreviation
 These commonly used abbreviations may or may not be present in this report.

 ¤
 Listed under the "D" column to designate that the result is reported on a dry weight basis

 %R
 Percent Recovery

CFL Contains Free Liquid
CFU Colony Forming Unit
CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

#### **Case Narrative**

Client: Crain Environmental Job ID: 880-8515-1
Project/Site: Flying M SA #2 SDG: Lea Co., NM

Job ID: 880-8515-1

Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative 880-8515-1

#### Receipt

The sample was received on 11/19/2021~2:00~PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was  $3.4^{\circ}C$ 

#### HPLC/IC

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-12782 and analytical batch 880-12785 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

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#### **Client Sample Results**

Client: Crain Environmental Job ID: 880-8515-1
Project/Site: Flying M SA #2 SDG: Lea Co., NM

Client Sample ID: SP-4 (4')

Lab Sample ID: 880-8515-1

Date Collected: 11/18/21 11:45

Matrix: Solid

Date Received: 11/19/21 14:00

Sample Depth: 4'

Method: 300.0 - Anions, Ion Chrom	atography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17600		100	17.2	mg/Kg			11/19/21 16:50	20

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#### QC Sample Results

Client: Crain Environmental Job ID: 880-8515-1 Project/Site: Flying M SA #2 SDG: Lea Co., NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-12782/1-A

**Matrix: Solid** 

Analysis Batch: 12785

Client Sample ID: Method Blank **Prep Type: Soluble** 

мв мв MDL Unit Analyte Result Qualifier RL D Prepared Analyzed Dil Fac Chloride <0.858 U 5.00 0.858 mg/Kg 11/19/21 15:15

Lab Sample ID: LCS 880-12782/2-A Client Sample ID: Lab Control Sample **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 12785** 

Spike LCS LCS %Rec. Added Analyte Result Qualifier Unit D %Rec Limits Chloride 250 255.3 mg/Kg 102 90 - 110

Lab Sample ID: LCSD 880-12782/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 12785

LCSD LCSD %Rec. RPD Spike Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 255.9 20 mg/Kg 102 90 - 110

Lab Sample ID: 880-8277-A-1-D MS Client Sample ID: Matrix Spike **Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 12785** 

MS MS Sample Sample Spike %Rec. Analyte Result Qualifier Added Result Qualifier %Rec Unit Limits 12500 38620 F1 Chloride 28000 85 90 - 110 mg/Kg

Lab Sample ID: 880-8277-A-1-E MSD

**Matrix: Solid** 

Analysis Batch: 12785

Sample Sample Spike MSD MSD %Rec. RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit 28000 F1 12500 38570 F1 Chloride mg/Kg 84 90 - 110 0 20

Eurofins Xenco, Midland

Client Sample ID: Matrix Spike Duplicate

**Prep Type: Soluble** 

### **QC Association Summary**

Client: Crain Environmental Job ID: 880-8515-1
Project/Site: Flying M SA #2 SDG: Lea Co., NM

#### HPLC/IC

#### Leach Batch: 12782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-8515-1	SP-4 (4')	Soluble	Solid	DI Leach	
MB 880-12782/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-12782/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-12782/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-8277-A-1-D MS	Matrix Spike	Soluble	Solid	DI Leach	
880-8277-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 12785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-8515-1	SP-4 (4')	Soluble	Solid	300.0	12782
MB 880-12782/1-A	Method Blank	Soluble	Solid	300.0	12782
LCS 880-12782/2-A	Lab Control Sample	Soluble	Solid	300.0	12782
LCSD 880-12782/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	12782
880-8277-A-1-D MS	Matrix Spike	Soluble	Solid	300.0	12782
880-8277-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	12782

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Date Received: 11/19/21 14:00

#### **Lab Chronicle**

Client: Crain Environmental Job ID: 880-8515-1 Project/Site: Flying M SA #2 SDG: Lea Co., NM

Client Sample ID: SP-4 (4')

Lab Sample ID: 880-8515-1 Date Collected: 11/18/21 11:45

Matrix: Solid

Prepared Batch Batch Dil Initial Final Batch Method Prep Type Туре Run Factor Amount Amount Number or Analyzed Analyst Lab DI Leach 12782 11/19/21 14:09 SC XEN MID Soluble Leach 5 g 50 mL 300.0 XEN MID Soluble Analysis 20 12785 11/19/21 16:50 CH

**Laboratory References:** 

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

### **Accreditation/Certification Summary**

Client: Crain Environmental Job ID: 880-8515-1
Project/Site: Flying M SA #2 SDG: Lea Co., NM

### **Laboratory: Eurofins Xenco, Midland**

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	<b>Expiration Date</b>		
Texas	NELAP	T104704400-21-22	06-30-22		

Eurofins Xenco, Midland

### **Method Summary**

Client: Crain Environmental Project/Site: Flying M SA #2

Job ID: 880-8515-1 SDG: Lea Co., NM

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

### Protocol References:

ASTM = ASTM International

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

### Laboratory References:

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

Eurofins Xenco, Midland

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### **Sample Summary**

Client: Crain Environmental Project/Site: Flying M SA #2 Job ID: 880-8515-1

SDG: Lea Co., NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-8515-1	SP-4 (4')	Solid	11/18/21 11:45	11/19/21 14:00	4'

City State ZIP

dessa.

7x 79761

City State ZIP

79710

State of Project: NM

Program.

UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐

Superfund []

Work Order Comments

Reporting Level II Level III PST/UST TRRP

Level IV

Address ompany Name

2925 E. 17 Y. C.

rain Chvironmental

Bill to: (if different)

Leasa Hale

Company Name

Southwest Koyalties P.O. Box 53570 Midland, TX

Project Manager

Environment Testing

# Chain of Custody

Midland, TX (432) 704-5440, San Antonio TX (210) 509-3334 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550 Carlsbad NM (575) 988-3199 Houston, TX (281) 240-4200, Dallas TX (214) 902-0300

880-8515 Chain of Custody			

	5 6 4	1 (10/2) 14:00 <sup>2</sup>	Received by (Signature)   Date/Time   Relinquished by (Signature)   Received by (Signature)   Re	of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions	Luir Cie Mieniodis/ alia Metalis/ to be analyzed TCLP/SPLP 6010 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg 1631/245	8RCRA 13PPM Texas						SP-4 (4') 5 11/18/21 1145 4· C 1 X	eldentification Matrix Sampled Sampled Depth Comp Cont	Concerce temperature	Corrected Temperature (%)	Temperature Reading		ometer ID Romanne	SAMPLE RECEIPT Temp Blank Yes (0) Wet Ice (Yes) No \$\frac{1}{2}\$	TAT starts the da	Project Location Lea Co NH Due Date 24 hr	Routine Arush Pres.	Project Name Flying M SA # 2 Turn Around ANALYSIS REQUEST	
Revised Date: 08/25/2020 Rev. 2020.2			iture) Date/Time			Hg 1631/2451/7470/7471	Sr Tl Sn U V Zn							Sample Comments	NaOH+Ascorbic Acid SAPC	Zn Acetate+NaOH Zn	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> NaSO <sub>3</sub>	No. 10 A NO. 10	Nation Nation	LI BO LIB			None NO DI Water	Preservative Codes	Care Care

### **Login Sample Receipt Checklist**

Client: Crain Environmental

Job Number: 880-8515-1

SDG Number: Lea Co., NM

List Source: Eurofins Xenco, Midland

Login Number: 8515 List Number: 1

Creator: Rodriguez, Leticia

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

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# **Environment Testing America**

## **ANALYTICAL REPORT**

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

Laboratory Job ID: 880-8906-1

Laboratory Sample Delivery Group: Lea Co., NM

Client Project/Site: Flying M SA #2

For:

Crain Environmental 2925 E. 17th St. Odessa, Texas 79761

Attn: Cindy Crain

MEAMER

Authorized for release by: 12/3/2021 5:42:21 PM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

LINKS

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www.eurofinsus.com/Env

Released to Imaging: 8/17/2022 1:13:14 PM

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: Crain Environmental

Project/Site: Flying M SA #2

Laboratory Job ID: 880-8906-1

SDG: Lea Co., NM

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### **Definitions/Glossary**

Client: Crain Environmental Job ID: 880-8906-1 SDG: Lea Co., NM Project/Site: Flying M SA #2

### **Qualifiers**

### HPLC/IC

Qualifier **Qualifier Description** 

U Indicates the analyte was analyzed for but not detected.

Method Quantitation Limit

Practical Quantitation Limit

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points

Not Detected at the reporting limit (or MDL or EDL if shown)

Not Calculated

Negative / Absent

Positive / Present

Presumptive

**Quality Control** 

MQL

NC

ND

NEG

POS

PQL

QC

RER

RL RPD

TEF

TEQ

**TNTC** 

**PRES** 

Glossary	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number

Eurofins Xenco, Midland

### **Case Narrative**

Client: Crain Environmental Job ID: 880-8906-1
Project/Site: Flying M SA #2 SDG: Lea Co., NM

Job ID: 880-8906-1

Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative 880-8906-1

### Receipt

The sample was received on 12/2/2021 1:44 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 7.9°C

### HPLC/IC

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

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### **Client Sample Results**

Client: Crain Environmental

Project/Site: Flying M SA #2

Job ID: 880-8906-1

SDG: Lea Co., NM

Client Sample ID: SP-4 (6')

Lab Sample ID: 880-8906-1

Date Collected: 12/01/21 16:30 Matrix: Solid

Date Received: 12/02/21 13:44 Sample Depth: 6'

Method: 300.0 - Anions, Ion Chromatography - SolubleAnalyteResultQualifierRLMDLUnitDPreparedAnalyzedDil FacChloride1200099.617.1mg/Kg12/03/21 15:5920

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Job ID: 880-8906-1

SDG: Lea Co., NM

**Prep Type: Soluble** 

Client Sample ID: Matrix Spike

Client Sample ID: Matrix Spike Duplicate

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-13767/1-A

**Matrix: Solid** 

Analysis Batch: 13806

Client: Crain Environmental

Project/Site: Flying M SA #2

MB MB

Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac Chloride <0.858 U 5.00 0.858 mg/Kg 12/03/21 09:27

Lab Sample ID: LCS 880-13767/2-A

**Matrix: Solid** 

**Analysis Batch: 13806** 

Spike LCS LCS %Rec. Added Analyte Result Qualifier Unit D %Rec Limits Chloride 250 245.7 mg/Kg 98 90 - 110

Lab Sample ID: LCSD 880-13767/3-A

**Matrix: Solid** 

Analysis Batch: 13806

LCSD LCSD %Rec. RPD Spike Analyte Added Result Qualifier Unit %Rec Limits **RPD** Limit Chloride 250 20 244.8 mg/Kg 90 - 110

Lab Sample ID: 880-8902-A-11-D MS

**Matrix: Solid** 

Analysis Batch: 13806

MS MS Sample Sample Spike %Rec. Analyte Result Qualifier Added Qualifier Result Unit %Rec Limits Chloride 749 248 973.7 90 - 110 mg/Kg

Lab Sample ID: 880-8902-A-11-E MSD

**Matrix: Solid** 

Analysis Batch: 13806

Sample Sample Spike MSD MSD %Rec. RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit 248 Chloride 749 971.1 mg/Kg 90 90 - 110 0 20

Eurofins Xenco, Midland

### **QC Association Summary**

Client: Crain Environmental Job ID: 880-8906-1
Project/Site: Flying M SA #2 SDG: Lea Co., NM

### HPLC/IC

### Leach Batch: 13767

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-8906-1	SP-4 (6')	Soluble	Solid	DI Leach	
MB 880-13767/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-13767/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-13767/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-8902-A-11-D MS	Matrix Spike	Soluble	Solid	DI Leach	
880-8902-A-11-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

### Analysis Batch: 13806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-8906-1	SP-4 (6')	Soluble	Solid	300.0	13767
MB 880-13767/1-A	Method Blank	Soluble	Solid	300.0	13767
LCS 880-13767/2-A	Lab Control Sample	Soluble	Solid	300.0	13767
LCSD 880-13767/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	13767
880-8902-A-11-D MS	Matrix Spike	Soluble	Solid	300.0	13767
880-8902-A-11-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	13767

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### Lab Chronicle

Client: Crain Environmental Job ID: 880-8906-1
Project/Site: Flying M SA #2 SDG: Lea Co., NM

Client Sample ID: SP-4 (6')

Lab Sample ID: 880-8906-1

Date Collected: 12/01/21 16:30 Matrix: Solid
Date Received: 12/02/21 13:44

Batch Batch Dil Initial Final Batch Prepared Method Prep Type Туре Run Factor Amount Amount Number or Analyzed Analyst Lab DI Leach 13767 XEN MID Soluble Leach 5.02 g 50 mL 12/02/21 15:34 CA 300.0 XEN MID Soluble Analysis 20 13806 12/03/21 15:59 SC

### **Laboratory References:**

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

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Eurofins Xenco, Midland

### **Accreditation/Certification Summary**

Client: Crain Environmental
Project/Site: Flying M SA #2
Job ID: 880-8906-1
SDG: Lea Co., NM

### **Laboratory: Eurofins Xenco, Midland**

The accreditations/certifications listed below are applicable to this report.

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

010

Eurofins Xenco, Midland

### **Method Summary**

Client: Crain Environmental Project/Site: Flying M SA #2 Job ID: 880-8906-1 SDG: Lea Co., NM

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Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

### Protocol References:

ASTM = ASTM International

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

### Laboratory References:

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

Eurofins Xenco, Midland

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### **Sample Summary**

Client: Crain Environmental Project/Site: Flying M SA #2

Job ID: 880-8906-1 SDG: Lea Co., NM

 Lab Sample ID
 Client Sample ID
 Matrix
 Collected
 Received
 Depth

 880-8906-1
 SP-4 (6')
 Solid
 12/01/21 16:30
 12/02/21 13:44
 6'

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12/2/21

13:44

# eurofins \* Xenco Environment Testing

# Chain of Custody

Midland, TX (432) 704-5440 San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199 Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

880-8906 Chain of Custody

ordice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, Its affiliates and subcontractors. It assigns standard terms and conditions fearofice. Eurofins 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 losses are due to circumstances beyond the control feurofins Xenco. Aminimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.  Received by: (Signature)  Received by: (Signature)  Received by: (Signature)	lı K Se Ag SıO <sub>2</sub> Hg 1631		SP-4 (6) 5 m//31 /630 6 C X	Identification Matrix Date Time Depth Comp Cont	Sample Custody Seals. Yes No MA Jemperature Reading 7.5	SAMPLE RECEIP!  Temp Blank  Yes (No')   Wet ker (Yes No tell)  Samples Received Intact:  Ves No (VA)   Thermometer ID   Tell)  Cooler Custody Seals.  Yes No (VA)   Correction Factor   A	Lea io MM Due Date: 24 hr.  TAT starts the day received by the lab, if received by 4:30 pm	Routine XRush Pres.	Project Name: Flying M SA # 2 Turn Around ANALYSIS REQUEST	41-7244 Email Cirply, Crain @ Amail. Con	Address.  Addres	Name Control Company Name Suthwest Kounties Program: UST/PST PRP
· (Signature) Date/Time	O <sub>2</sub> Na Sr Tl Sn U V Zn 31/2451/7470/7471			Sample Comments	Zn Acetate+NaOH Zn NaOH+Ascorbic Acid SAPC	H <sub>3</sub> PO <sub>4</sub> . HP  NaHSO <sub>4</sub> NABIS  Na S O NASO	Cool Cool MeOH Me HCL.HC HNO <sub>3</sub> HN H <sub>2</sub> SO <sub>4</sub> H <sub>2</sub> NaOH Na	None NO DI Water H <sub>2</sub> O	Preservative Codes	_		PRP☐ Brownfields☐ RRC☐ Superfund☐

Phone

Revised Date: 08/25/2020 Rev 2020.2

### **Login Sample Receipt Checklist**

Client: Crain Environmental

Job Number: 880-8906-1

SDG Number: Lea Co., NM

List Source: Eurofins Xenco, Midland

List Number: 1

Login Number: 8906

Creator: Rodriguez, Leticia

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

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Eurofins Xenco, Midland

<6mm (1/4").

# **Environment Testing America**

## **ANALYTICAL REPORT**

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

Laboratory Job ID: 880-9973-1

Laboratory Sample Delivery Group: Lea Co., NM

Client Project/Site: Flying M SA #2

For:

Crain Environmental 2925 E. 17th St. Odessa, Texas 79761

Attn: Cindy Crain

MRAMER

Authorized for release by: 1/14/2022 1:17:28 PM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

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www.eurofinsus.com/Env

Released to Imaging: 8/17/2022 1:13:14 PM

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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IC

Client: Crain Environmental

Project/Site: Flying M SA #2

Laboratory Job ID: 880-9973-1

SDG: Lea Co., NM

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1/14/2022

### **Definitions/Glossary**

Client: Crain Environmental Job ID: 880-9973-1 Project/Site: Flying M SA #2 SDG: Lea Co., NM

**Qualifiers** 

**HPLC/IC** 

Qualifier **Qualifier Description** F1 MS and/or MSD recovery exceeds control limits.

U Indicates the analyte was analyzed for but not detected.

**Glossary** 

Abbreviation These commonly used abbreviations may or may not be present in this report. Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery CFL Contains Free Liquid CFU Colony Forming Unit **CNF** Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

Detection Limit (DoD/DOE) DL

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

Decision Level Concentration (Radiochemistry) DLC

EDL Estimated Detection Limit (Dioxin) Limit of Detection (DoD/DOE) LOD LOQ Limit of Quantitation (DoD/DOE)

EPA recommended "Maximum Contaminant Level" MCI MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit Minimum Level (Dioxin) ML MPN Most Probable Number MQL Method Quantitation Limit

NC Not Calculated

Not Detected at the reporting limit (or MDL or EDL if shown) ND

NEG Negative / Absent POS Positive / Present

Practical Quantitation Limit PQL

**PRES** Presumptive QC **Quality Control** 

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin) Toxicity Equivalent Quotient (Dioxin) **TEQ** 

**TNTC** Too Numerous To Count

**Eurofins Midland** 

### **Case Narrative**

Client: Crain Environmental Job ID: 880-9973-1
Project/Site: Flying M SA #2 SDG: Lea Co., NM

Job ID: 880-9973-1

**Laboratory: Eurofins Midland** 

Narrative

Job Narrative 880-9973-1

### Receipt

The samples were received on 1/7/2022 2:10 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.3°C

### HPLC/IC

Method 300\_ORGFM\_28D: The native sample, matrix spike, and matrix spike duplicate (MS/MSD) associated with preparation batch 880-16443 and analytical batch 880-16558 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of Chloride in the MS/MSD was above the instrument calibration range. The data have been reported and qualified.

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-16444 and analytical batch 880-16559 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

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Matrix: Solid

**Matrix: Solid** 

**Matrix: Solid** 

**Matrix: Solid** 

Lab Sample ID: 880-9973-1

Lab Sample ID: 880-9973-2

Lab Sample ID: 880-9973-3

Lab Sample ID: 880-9973-4

### **Client Sample Results**

Client: Crain Environmental Job ID: 880-9973-1
Project/Site: Flying M SA #2 SDG: Lea Co., NM

Client Sample ID: SP 4 (10')

Date Collected: 01/06/22 14:30 Date Received: 01/07/22 14:10

Sample Depth: 10'

h	Method: 300.0 - Anions, Ion Chromatography - Soluble											
1	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
	Chloride	7000		100	17.2	mg/Kg			01/13/22 16:54	20		

Client Sample ID: S Wall (4')

Date Collected: 01/06/22 14:35 Date Received: 01/07/22 14:10

Sample Depth: 4'

Method: 300.0 - Anions, Ion Chromatography - Soluble										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	7240		50.0	8.58	mg/Kg			01/13/22 15:55	10	

Client Sample ID: W Wall (4')

Date Collected: 01/06/22 14:40 Date Received: 01/07/22 14:10

Date Received: 01/07/22 14

Sample Depth: 4'

Method: 300.0 - Anions, Ion Chroma	tography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4730		50.3	8.63	mg/Kg			01/13/22 16:07	10

Client Sample ID: E Wall (4')
Date Collected: 01/06/22 14:45

Date Received: 01/07/22 14:10

Sample Depth: 4'

Method: 300.0 - Anions, Ion Chromatography - Soluble										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	8830	F1	50.0	8.58	mg/Kg			01/13/22 20:28	10	

**Eurofins Midland** 

Job ID: 880-9973-1

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

**Prep Type: Soluble** 

Client Sample ID: E Wall (4')

Client Sample ID: E Wall (4')

Client: Crain Environmental Project/Site: Flying M SA #2 SDG: Lea Co., NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-16443/1-A

**Matrix: Solid** 

**Analysis Batch: 16558** 

MB MB

Analyte Result Qualifier RLMDL Unit D Prepared Analyzed Dil Fac Chloride <0.858 U 5.00 0.858 mg/Kg 01/13/22 08:45

Lab Sample ID: LCS 880-16443/2-A

**Matrix: Solid** 

**Analysis Batch: 16558** 

Spike LCS LCS %Rec. Added Analyte Result Qualifier Unit D %Rec Limits Chloride 250 243.0 mg/Kg 97 90 - 110

Lab Sample ID: LCSD 880-16443/3-A

**Matrix: Solid** 

Analysis Batch: 16558

Spike LCSD LCSD RPD %Rec. Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 246.7 mg/Kg 90 - 110

Lab Sample ID: MB 880-16444/1-A

**Matrix: Solid** 

**Analysis Batch: 16559** 

мв мв

Result Qualifier RL MDL Analyte Unit Prepared Analyzed Dil Fac 5.00 mg/Kg 01/13/22 19:52 Chloride <0.858 0.858

Lab Sample ID: LCS 880-16444/2-A

**Matrix: Solid** 

**Analysis Batch: 16559** 

LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit %Rec Limits Chloride 250 253.3 101 90 - 110 mg/Kg

Lab Sample ID: LCSD 880-16444/3-A

**Matrix: Solid** 

**Analysis Batch: 16559** 

Spike LCSD LCSD %Rec. RPD Added RPD Analyte Result Qualifier Unit D %Rec Limits Limit Chloride 250 254 1 mg/Kg 102 90 - 110

Lab Sample ID: 880-9973-4 MS

**Matrix: Solid** 

**Analysis Batch: 16559** 

MS MS Sample Sample Spike %Rec. Result Qualifier Added Result Qualifier Limits Analyte Unit D %Rec Chloride 8830 F1 2500 11930 F1 mg/Kg 124 90 - 110

Lab Sample ID: 880-9973-4 MSD

**Matrix: Solid** 

Analysis Batch: 16559											
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	8830	F1	2500	11170		mg/Kg		93	90 - 110	7	20

**Eurofins Midland** 

### **QC Association Summary**

Client: Crain Environmental Job ID: 880-9973-1
Project/Site: Flying M SA #2 SDG: Lea Co., NM

**HPLC/IC** 

### Leach Batch: 16443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9973-1	SP 4 (10')	Soluble	Solid	DI Leach	
880-9973-2	S Wall (4')	Soluble	Solid	DI Leach	
880-9973-3	W Wall (4')	Soluble	Solid	DI Leach	
MB 880-16443/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-16443/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-16443/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

### Leach Batch: 16444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9973-4	E Wall (4')	Soluble	Solid	DI Leach	
MB 880-16444/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-16444/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-16444/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-9973-4 MS	E Wall (4')	Soluble	Solid	DI Leach	
880-9973-4 MSD	E Wall (4')	Soluble	Solid	DI Leach	

### **Analysis Batch: 16558**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9973-1	SP 4 (10')	Soluble	Solid	300.0	16443
880-9973-2	S Wall (4')	Soluble	Solid	300.0	16443
880-9973-3	W Wall (4')	Soluble	Solid	300.0	16443
MB 880-16443/1-A	Method Blank	Soluble	Solid	300.0	16443
LCS 880-16443/2-A	Lab Control Sample	Soluble	Solid	300.0	16443
LCSD 880-16443/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	16443

### Analysis Batch: 16559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9973-4	E Wall (4')	Soluble	Solid	300.0	16444
MB 880-16444/1-A	Method Blank	Soluble	Solid	300.0	16444
LCS 880-16444/2-A	Lab Control Sample	Soluble	Solid	300.0	16444
LCSD 880-16444/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	16444
880-9973-4 MS	E Wall (4')	Soluble	Solid	300.0	16444
880-9973-4 MSD	E Wall (4')	Soluble	Solid	300.0	16444

**Eurofins Midland** 

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Client: Crain Environmental Project/Site: Flying M SA #2 Job ID: 880-9973-1 SDG: Lea Co., NM

Lab Sample ID: 880-9973-1

Matrix: Solid

Client Sample ID: SP 4 (10') Date Collected: 01/06/22 14:30

Date Received: 01/07/22 14:10

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5 g	50 mL	16443	01/10/22 13:40	CH	XEN MID
Soluble	Analysis	300.0		20			16558	01/13/22 16:54	SC	XEN MID

Client Sample ID: S Wall (4') Lab Sample ID: 880-9973-2 **Matrix: Solid** 

Date Collected: 01/06/22 14:35 Date Received: 01/07/22 14:10

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5 g	50 mL	16443	01/10/22 13:40	CH	XEN MID
Soluble	Analysis	300.0		10			16558	01/13/22 15:55	SC	XEN MID

Client Sample ID: W Wall (4') Lab Sample ID: 880-9973-3

Date Collected: 01/06/22 14:40 **Matrix: Solid** 

Date Received: 01/07/22 14:10

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.97 g	50 mL	16443	01/10/22 13:40	CH	XEN MID
Soluble	Analysis	300.0		10			16558	01/13/22 16:07	SC	XEN MID

Client Sample ID: E Wall (4') Lab Sample ID: 880-9973-4

Date Collected: 01/06/22 14:45 **Matrix: Solid** 

Date Received: 01/07/22 14:10

Г	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
	Datcii	Datcii		Dii	IIIIIIai	Fillal	Datell	Frepareu		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5 g	50 mL	16444	01/10/22 13:43	СН	XEN MID
Soluble	Analysis	300.0		10			16559	01/13/22 20:28	CH	XEN MID

Laboratory References:

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

**Eurofins Midland** 

### **Accreditation/Certification Summary**

Client: Crain Environmental
Project/Site: Flying M SA #2
Job ID: 880-9973-1
SDG: Lea Co., NM

### **Laboratory: Eurofins Midland**

The accreditations/certifications listed below are applicable to this report.

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

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### **Method Summary**

Client: Crain Environmental Project/Site: Flying M SA #2

Job ID: 880-9973-1 SDG: Lea Co., NM

 Method
 Method Description
 Protocol
 Laboratory

 300.0
 Anions, Ion Chromatography
 MCAWW
 XEN MID

 DI Leach
 Deionized Water Leaching Procedure
 ASTM
 XEN MID

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### **Protocol References:**

ASTM = ASTM International

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

### **Laboratory References:**

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

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### **Sample Summary**

Client: Crain Environmental Project/Site: Flying M SA #2 Job ID: 880-9973-1

SDG: Lea Co., NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-9973-1	SP 4 (10')	Solid	01/06/22 14:30	01/07/22 14:10	10'
880-9973-2	S Wall (4')	Solid	01/06/22 14:35	01/07/22 14:10	4'
880-9973-3	W Wall (4')	Solid	01/06/22 14:40	01/07/22 14:10	4'
880-9973-4	E Wall (4')	Solid	01/06/22 14:45	01/07/22 14:10	4'

# Chain of Custody

Environment Testing Xenco	Houston, TX Midland TX (43 EL Paso TX (9 Hobbs, NM (5	Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso TX (915) 585-3443 Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550 Carlsbad, NM (575) 988-3199	880-9973 Chain of Custody
Project Manager (ind) (ind)	Bill to: (if different)	Leaso Hale	Work Order Comments
Company Name: ("Bin Christon mental	Company Name:	ハダス	Program: UST/PST PRP Brownfields RRC Superfund
Address. 2925 E. 17th St.	Address:	P.O Bex 53570	roject: NM
City, State ZIP: Oble 550, TX 79761	City, State ZIP-	Michael X 79710	Reporting Level II Level III PST/UST TRRP Level IV
Phone. (575) 441-7244   Email.	Cirpy.	sain le grail.com	Deliverables EDD ADaPT Other
Project Name: Flying M SA # 2 Tu	Turn Around	ANALYSIS REQUEST	JEST Preservative Codes
Project Number: XRoutine	Rush Code		None
Lea la	-in-00		Cool Cool MeOH Me
PO#:	the lab, if received by 4.30pm		
SAMPLE RECEIPT Temp Blank. Yes (No ) Wet Ice.	eters		H, DO, HP
ict: ('Yes) No. 1		5	NaHSO 4 NABIS
Cooler Custody Seals: Yes No NA Correction Factor	3 [C]		Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> NaSO <sub>3</sub>
	H	i lan	NaOH+Ascorbic Acid SAPC
Sample Identification Matrix Date Time Sampled Sampled	Depth Grab/ # of Comp Cont	0	Sample Comments
1	10' (2)		
Wall (4')	$-\Gamma$		
Nall (4.) 5 1/6/22	5 41 6 1		
Total 200.7 / 6010 200.8 / 6020: 8RCRA 13 Circle Method(s) and Metal(s) to be analyzed TCLP.	A 13PPM Texas 11 Al Sb As Ba Be B	11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se	y Mn Mo Ni K Se Ag SiO <sub>2</sub> Na Sr Tl Sn U V Zn Se Ag Tl U Hg 1631/2451/7470/7471
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins 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 losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitteed to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	order from client company to Eurol sponsibility for any losses or expensions for each sample submitted to Europe S5 for each sample submitted to Europe S6 for each su	ins Xenco, its affiliates and subcontractors, it assigns standard term es incurred by the client if such losses are due to circumstances be irofins Xenco, but not analyzed. These terms will be enforced unles	ms and conditions syond the control ss previously negotiated.
Relinquished by (Signature) Received by (Signature)	ure)	Date/Time Relinquished by (Signature)	ure) Received by (Signature) Date/Time
Conflan Otto		7-23 14.102	
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Revised Date: 08/25/2020 Rev 2020.2

### **Login Sample Receipt Checklist**

Client: Crain Environmental

Job Number: 880-9973-1

SDG Number: Lea Co., NM

List Source: Eurofins Midland

List Number: 1

Login Number: 9973

Creator: Rodriguez, Leticia

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

Palessed to Trustices 8/17/2022 1-12-14 PM Page 13 of 13 1/14/2022

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<6mm (1/4").

### **ANALYTICAL REPORT**

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

Laboratory Job ID: 880-13096-1

Laboratory Sample Delivery Group: Lea Co. NM

Client Project/Site: Flying M SA #2

For:

Crain Environmental 2925 E. 17th St. Odessa, Texas 79761

Attn: Cindy Crain

MRAMER

Authorized for release by: 4/6/2022 9:02:27 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

Review your project

.....LINKS .....

results through
Total Access

Have a Question?



Visit us at:

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Released to Imaging: 8/17/2022 1:13:14 PM

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: Crain Environmental

Project/Site: Flying M SA #2

Laboratory Job ID: 880-13096-1 SDG: Lea Co. NM

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### **Definitions/Glossary**

Client: Crain Environmental Job ID: 880-13096-1
Project/Site: Flying M SA #2 SDG: Lea Co. NM

**Qualifiers** 

**HPLC/IC** 

 Qualifier
 Qualifier Description

 F1
 MS and/or MSD recovery exceeds control limits.

 U
 Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

Percent Recovery

CFL Contains Free Liquid
CFU Colony Forming Unit
CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

**Eurofins Midland** 

### **Case Narrative**

Client: Crain Environmental Job ID: 880-13096-1
Project/Site: Flying M SA #2 SDG: Lea Co. NM

Job ID: 880-13096-1

**Laboratory: Eurofins Midland** 

Narrative

Job Narrative 880-13096-1

### Receipt

The samples were received on 3/30/2022 3:18 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.3°C

### HPLC/IC

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-23018 and analytical batch 880-23036 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

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Job ID: 880-13096-1

SDG: Lea Co. NM

Client Sample ID: BH-1 Lab Sample ID: 880-13096-1 Date Collected: 03/24/22 15:25

Matrix: Solid

Date Received: 03/30/22 15:18 Sample Depth: 4.5'

Client: Crain Environmental

Project/Site: Flying M SA #2

Method: 300.0 - Anions, Ion Chroma	atography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10800		100	17.2	mg/Kg			04/05/22 20:12	20

Client Sample ID: BH-1 Lab Sample ID: 880-13096-2

Date Collected: 03/24/22 15:33 **Matrix: Solid** 

Date Received: 03/30/22 15:18

Sample Depth: 10'

Method: 300.0 - Anions, Ion Chrom	atography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11200		99.0	17.0	mg/Kg			04/05/22 20:21	20

Client Sample ID: BH-1 Lab Sample ID: 880-13096-3 Matrix: Solid

Date Collected: 03/24/22 15:40 Date Received: 03/30/22 15:18

Sample Depth: 20'

Method: 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9990		101	17.3	mg/Kg			04/05/22 20:47	20

Client Sample ID: BH-1 Lab Sample ID: 880-13096-4 Date Collected: 03/24/22 15:46 **Matrix: Solid** 

Date Received: 03/30/22 15:18

Sample Depth: 30'

Method: 300.0 - Anions, Ion Chromatography - Soluble								
Analyte	Result Quali	lifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2070	25.3	4.33	mg/Kg			04/05/22 20:56	5

Client Sample ID: BH-1 Lab Sample ID: 880-13096-5

Date Collected: 03/24/22 15:52 Date Received: 03/30/22 15:18

Sample Depth: 40'

Method: 300.0 - Anions, Ion Chromatography - Soluble								
Analyte	Result Qualifier	RL	MDL U	nit D	Prepared	Analyzed	Dil Fac	
Chloride	325	4.97	0.853 m	g/Kg		04/05/22 21:05	1	

Client Sample ID: BH-1 Lab Sample ID: 880-13096-6

Date Collected: 03/24/22 16:00 Date Received: 03/30/22 15:18

Sample Depth: 50'

Method: 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	158		4.95	0.850	mg/Kg			04/05/22 21:14	1

**Eurofins Midland** 

**Matrix: Solid** 

Matrix: Solid

#### **Client Sample Results**

Client: Crain Environmental Job ID: 880-13096-1
Project/Site: Flying M SA #2 SDG: Lea Co. NM

Client Sample ID: BH-2 Lab Sample ID: 880-13096-7

Date Collected: 03/24/22 16:40
Date Received: 03/30/22 15:18
Matrix: Solid

Sample Depth: 4.5'

Method: 300.0 - Anions, Ion Chromatography - Soluble										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	1920		25.0	4.28	mg/Kg			04/05/22 21:23	5	

Client Sample ID: BH-3 Lab Sample ID: 880-13096-8

Date Collected: 03/24/22 16:05

Date Received: 03/30/22 15:18

Sample Depth: 4.5'

	Method: 300.0 - Anions, Ion Chromatography - Soluble									
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Į	Chloride	2720		24.9	4.27	mg/Kg			04/05/22 21:32	5

**Eurofins Midland** 

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Matrix: Solid

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Job ID: 880-13096-1

**Prep Type: Soluble** 

Client Sample ID: Matrix Spike

Client Sample ID: Matrix Spike

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

Client Sample ID: Matrix Spike Duplicate

Client Sample ID: Matrix Spike Duplicate

SDG: Lea Co. NM

Client: Crain Environmental Project/Site: Flying M SA #2

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-23018/1-A

**Matrix: Solid** 

Analysis Batch: 23036

MB MB

Analyte Result Qualifier RLMDL Unit D Prepared Analyzed Dil Fac Chloride <0.858 U 5.00 0.858 mg/Kg 04/05/22 17:15

Lab Sample ID: LCS 880-23018/2-A

**Matrix: Solid** 

**Analysis Batch: 23036** 

Spike LCS LCS %Rec Added Analyte Result Qualifier Unit D %Rec Limits Chloride 250 256.7 mg/Kg 103 90 - 110

Lab Sample ID: LCSD 880-23018/3-A

**Matrix: Solid** 

Analysis Batch: 23036

Spike LCSD LCSD RPD %Rec Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 254.7 mg/Kg 102 90 - 110 20

Lab Sample ID: 880-13200-A-2-E MS

**Matrix: Solid** 

**Analysis Batch: 23036** 

MS MS Sample Sample Spike %Rec Added Analyte Result Qualifier Result Qualifier Unit %Rec Limits Chloride 525 2500 3039 101 90 - 110 mg/Kg

Lab Sample ID: 880-13200-A-2-F MSD

**Matrix: Solid** 

Analysis Batch: 23036

Sample Sample Spike MSD MSD %Rec RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit 2500 Chloride 525 3042 mg/Kg 101 90 - 110

Lab Sample ID: 880-13332-A-1-H MS

**Matrix: Solid** 

Analysis Batch: 23036

Sample Sample Spike MS MS %Rec Result Qualifier Added Qualifier Analyte Result Unit D %Rec Limits Chloride 709 F1 250 928.7 F1 mg/Kg 88 90 - 110

Lab Sample ID: 880-13332-A-1-I MSD

**Matrix: Solid** 

**Analysis Batch: 23036** 

MSD MSD %Rec RPD Sample Sample Spike Result Qualifier Added Analyte Result Qualifier Limits RPD Limit Unit %Rec Chloride 709 F1 250 930.6 F1 mg/Kg 89 90 - 110 20

# **QC Association Summary**

Client: Crain Environmental Job ID: 880-13096-1
Project/Site: Flying M SA #2 SDG: Lea Co. NM

#### HPLC/IC

#### Leach Batch: 23018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13096-1	BH-1	Soluble	Solid	DI Leach	
880-13096-2	BH-1	Soluble	Solid	DI Leach	
880-13096-3	BH-1	Soluble	Solid	DI Leach	
880-13096-4	BH-1	Soluble	Solid	DI Leach	
880-13096-5	BH-1	Soluble	Solid	DI Leach	
880-13096-6	BH-1	Soluble	Solid	DI Leach	
880-13096-7	BH-2	Soluble	Solid	DI Leach	
880-13096-8	BH-3	Soluble	Solid	DI Leach	
MB 880-23018/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-23018/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-23018/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-13200-A-2-E MS	Matrix Spike	Soluble	Solid	DI Leach	
880-13200-A-2-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
880-13332-A-1-H MS	Matrix Spike	Soluble	Solid	DI Leach	
880-13332-A-1-I MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 23036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13096-1	BH-1	Soluble	Solid	300.0	23018
880-13096-2	BH-1	Soluble	Solid	300.0	23018
880-13096-3	BH-1	Soluble	Solid	300.0	23018
880-13096-4	BH-1	Soluble	Solid	300.0	23018
880-13096-5	BH-1	Soluble	Solid	300.0	23018
880-13096-6	BH-1	Soluble	Solid	300.0	23018
880-13096-7	BH-2	Soluble	Solid	300.0	23018
880-13096-8	BH-3	Soluble	Solid	300.0	23018
MB 880-23018/1-A	Method Blank	Soluble	Solid	300.0	23018
LCS 880-23018/2-A	Lab Control Sample	Soluble	Solid	300.0	23018
LCSD 880-23018/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	23018
880-13200-A-2-E MS	Matrix Spike	Soluble	Solid	300.0	23018
880-13200-A-2-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	23018
880-13332-A-1-H MS	Matrix Spike	Soluble	Solid	300.0	23018
880-13332-A-1-I MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	23018

**Eurofins Midland** 

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Client: Crain Environmental Project/Site: Flying M SA #2

Lab Sample ID: 880-13096-1

Client Sample ID: BH-1 Date Collected: 03/24/22 15:25

**Matrix: Solid** 

Date Received: 03/30/22 15:18

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5 g	50 mL	23018	04/05/22 10:49	CH	XEN MID
Soluble	Analysis	300.0		20			23036	04/05/22 20:12	SC	XEN MID

Lab Sample ID: 880-13096-2

Matrix: Solid

Client Sample ID: BH-1 Date Collected: 03/24/22 15:33 Date Received: 03/30/22 15:18

		Batch	Batch		Dil	Initial	Final	Batch	Prepared		
	Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
	Soluble	Leach	DI Leach			5.05 g	50 mL	23018	04/05/22 10:49	CH	XEN MID
L	Soluble	Analysis	300.0		20			23036	04/05/22 20:21	SC	XEN MID

Lab Sample ID: 880-13096-3 Client Sample ID: BH-1

Date Collected: 03/24/22 15:40 Matrix: Solid

Date Received: 03/30/22 15:18

Batch Batch Dil Initial Final Batch Prepared Prep Type Туре Method Amount Amount Number or Analyzed Run Factor Analyst Lab Soluble Leach DI Leach 4.96 g 50 mL 23018 04/05/22 10:49 СН XEN MID 04/05/22 20:47 SC Soluble 300.0 23036 XEN MID Analysis 20

Client Sample ID: BH-1 Lab Sample ID: 880-13096-4

**Matrix: Solid** 

Date Collected: 03/24/22 15:46 Date Received: 03/30/22 15:18

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.95 g	50 mL	23018	04/05/22 10:49	CH	XEN MID
Soluble	Analysis	300.0		5			23036	04/05/22 20:56	SC	XEN MID

Client Sample ID: BH-1 Lab Sample ID: 880-13096-5 Date Collected: 03/24/22 15:52 **Matrix: Solid** 

Date Received: 03/30/22 15:18

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.03 g	50 mL	23018	04/05/22 10:49	CH	XEN MID
Soluble	Analysis	300.0		1			23036	04/05/22 21:05	SC	XEN MID

Client Sample ID: BH-1 Lab Sample ID: 880-13096-6

Date Collected: 03/24/22 16:00 **Matrix: Solid** Date Received: 03/30/22 15:18

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.05 g	50 mL	23018	04/05/22 10:49	CH	XEN MID
Soluble	Analysis	300.0		1			23036	04/05/22 21:14	SC	XEN MID

#### Lab Chronicle

Client: Crain Environmental

Project/Site: Flying M SA #2

SDG: Lea Co. NM

Client Sample ID: BH-2 Lab Sample ID: 880-13096-7

Date Collected: 03/24/22 16:40
Date Received: 03/30/22 15:18
Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	23018	04/05/22 10:49	СН	XEN MID
Soluble	Analysis	300.0		5			23036	04/05/22 21:23	SC	XEN MID

Client Sample ID: BH-3 Lab Sample ID: 880-13096-8

Date Collected: 03/24/22 16:05 Matrix: Solid

Date Received: 03/30/22 15:18

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.03 g	50 mL	23018	04/05/22 10:49	СН	XEN MID
Soluble	Analysis	300.0		5			23036	04/05/22 21:32	SC	XEN MID

Laboratory References:

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

**Eurofins Midland** 

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# **Accreditation/Certification Summary**

Client: Crain Environmental Job ID: 880-13096-1
Project/Site: Flying M SA #2 SDG: Lea Co. NM

#### **Laboratory: Eurofins Midland**

The accreditations/certifications listed below are applicable to this report.

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

313

#### **Method Summary**

Client: Crain Environmental Project/Site: Flying M SA #2

Job ID: 880-13096-1

SDG: Lea Co. NM

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

#### Protocol References:

ASTM = ASTM International

Released to Imaging: 8/17/2022 1:13:14 PM

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

#### Laboratory References:

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

#### **Sample Summary**

Client: Crain Environmental Project/Site: Flying M SA #2 Job ID: 880-13096-1

SDG: Lea Co. NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-13096-1	BH-1	Solid	03/24/22 15:25	03/30/22 15:18	4.5'
880-13096-2	BH-1	Solid	03/24/22 15:33	03/30/22 15:18	10'
880-13096-3	BH-1	Solid	03/24/22 15:40	03/30/22 15:18	20'
880-13096-4	BH-1	Solid	03/24/22 15:46	03/30/22 15:18	30'
880-13096-5	BH-1	Solid	03/24/22 15:52	03/30/22 15:18	40'
880-13096-6	BH-1	Solid	03/24/22 16:00	03/30/22 15:18	50'
880-13096-7	BH-2	Solid	03/24/22 16:40	03/30/22 15:18	4.5'
880-13096-8	BH-3	Solid	03/24/22 16:05	03/30/22 15:18	4.5'

Revised Date: 08/25/2020 Rev. 2020.2

Circle Meth

eurofins e Xenco Environment Testing

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Project Location

Project Numb Project Name.

SAMPLE RE

Cooler Custod

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otal Containe ample Custor Phone:

City, State ZIP-

Address:

P.D. SWR

Box

53570

State of Project: Program:

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UST/PST PRP Brownfields

RRC □

Superfund [

**Work Order Comments** 

www.xenco.com

Page

Bill to: (if different)

CASA

Hale

Company Name:

Address: ompany Name:

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Project Manager

# Chain of Custody

Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550 Carlsbad, NM (575) 988-3199 Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

ity, State ZIP: Udessa	TX 7976	City, State ZIP	ZIP. Hidland.	TX 79710	Reporting Level II   Level III   PST/UST   TRRP	T TRRP Level IV
none: (575) 441-7244	1. 7244	Email	CSQIO	, oct		
ojectName. Flying M	Flying M SA # 2	Turn Around		ANALYSIS REQUEST		Preservative Codes
roject Number		X Routine □Rush	Pres.		None	NO DI Water: H.O
oject Location: Les Co.	Z	Due Date:   4/8/	22	77111.	Cool Cool	
er's Name: (Lindy (	rain	TAT starts the day received by	dby		HCL. HC	
0#		the lab, it received by 4:30pm	Ļ		H <sub>2</sub> S0 4 H <sub>2</sub>	
AMPLE RECEIPT Temp Blank:	lank: Yes No	) Wetice: Yes) N	ਰ eters		H, PO. HP	
amples Received Intact: (Yes )No	NoThermometer ID:	T	ame		Naus:	O NARIS
Yes		١	Par		Na.	Na S O NaSO
ample Custody Seals: Yes No	N/A Temperate	Temperature Reading:   S C	ide		Zn Ac	7n Aretate+NaOH Zn
otal Containers:	Corrected	Corrected Temperature:   S 3			NaOH	NaOH+Ascorbic Acid SAPC
Sample Identification	Matrix Date Sampled	Time Depth	Grab/ # of Comp Cont			Sample Comments
BH-1	SCH 2/24/22	2 1525 4.5	- \			3
BH-1		1533 10'	<u> </u>			
BH-)		1540 20'	X			***************************************
BH-1		1546 30'	X			1000000
のオー		1552 40'	X			
34-1			X			
51-2			X			
カル・3	*	4.5	¥ ¥			7,777
AND THE RESIDENCE OF THE PERSON OF THE PERSO				880-130	96 Chain of Custody	
Total 200.7 / 6010 200.8 / 6020: ircle Method(s) and Metal(s) to be analyzed		BRCRA 13PPM Texas TCLP / SPLP 6010	s 11 Al Sb As Ba Be B 8RCRA Sb As Ba Be C	8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag TCLP/SPLP 6010 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg	In Mo Ni K Se Ag SiO <sub>2</sub> Na Sr Tl Sn l Ag Tl U Hg 1631/2451/7470	1 U V Zn 0 / 7471
ice: Signature of this document and relinquishme	ent of samples constitutes	a valid purchase order from client	company to Eurofins Xenco, its affiliate	tice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions service. Eurofins Xenco will be liable only for the cost of samples and shall not service.		
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Work Order No: 1309 6

#### **Login Sample Receipt Checklist**

Client: Crain Environmental Job

Job Number: 880-13096-1 SDG Number: Lea Co. NM

Login Number: 13096 List Source: Eurofins Midland

List Number: 1

Creator: Rodriguez, Leticia

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

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# **Environment Testing America**

# **ANALYTICAL REPORT**

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

Laboratory Job ID: 880-13092-1

Laboratory Sample Delivery Group: Lea Co. NM

Client Project/Site: Flying M SA #2

Revision: 1

For:

Crain Environmental 2925 E. 17th St. Odessa, Texas 79761

Attn: Cindy Crain

J. KRAMER

Authorized for release by: 4/11/2022 8:15:56 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

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Released to Imaging: 8/17/2022 1:13:14 PM

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: Crain Environmental Project/Site: Flying M SA #2 Laboratory Job ID: 880-13092-1 SDG: Lea Co. NM

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#### **Definitions/Glossary**

Client: Crain Environmental

Project/Site: Flying M SA #2

Job ID: 880-13092-1

SDG: Lea Co. NM

**Qualifiers** 

GC VOA

Qualifier Description

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

GC Semi VOA

Qualifier Qualifier Description

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

**HPLC/IC** 

Qualifier Qualifier Description

U Indicates the analyte was analyzed for but not detected.

**General Chemistry** 

Qualifier Description

H Sample was prepped or analyzed beyond the specified holding time

HF Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

U Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

Eisted under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery
CFL Contains Free Liquid
CFU Colony Forming Unit
CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent
POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

#### **Case Narrative**

Client: Crain Environmental
Project/Site: Flying M SA #2
Job ID: 880-13092-1
SDG: Lea Co. NM

Job ID: 880-13092-1

**Laboratory: Eurofins Midland** 

Narrative

Job Narrative 880-13092-1

#### Receipt

The sample was received on 3/30/2022 3:18 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.3°C

#### **GC VOA**

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

#### GC Semi VOA

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

#### HPLC/IC

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

Job ID: 880-13092-2

**Laboratory: Eurofins Midland** 

**Narrative** 

Job Narrative 880-13092-2

#### Receipt

The sample was received on 3/30/2022 3:18 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.3°C

#### **General Chemistry**

Method 2540C\_Calcd: The following sample was analyzed outside of analytical holding time due to client adding additional test without sufficient time remaining>: BH-1 (880-13092-1).

Method SM4500\_H+: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: BH-1 (880-13092-1).

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

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Client: Crain Environmental Job ID: 880-13092-1 Project/Site: Flying M SA #2 SDG: Lea Co. NM

Client Sample ID: BH-1 Lab Sample ID: 880-13092-1 Date Collected: 03/29/22 11:10

**Matrix: Water** 

Date Received: 03/30/22 15:18

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.000408	U	0.00200	0.000408	mg/L			03/31/22 20:54	
Toluene	< 0.000367	U	0.00200	0.000367	mg/L			03/31/22 20:54	
Ethylbenzene	< 0.000657	U	0.00200	0.000657	mg/L			03/31/22 20:54	
m-Xylene & p-Xylene	<0.000629	U	0.00400	0.000629	mg/L			03/31/22 20:54	
o-Xylene	<0.000642	U	0.00200	0.000642	mg/L			03/31/22 20:54	
Xylenes, Total	<0.000642	U	0.00400	0.000642	mg/L			03/31/22 20:54	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	102		70 - 130					03/31/22 20:54	
1,4-Difluorobenzene (Surr)	94		70 - 130					03/31/22 20:54	
Method: Total BTEX - Total B1	TEX Calcula	tion							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.000657	U	0.00400	0.000657	mg/L			04/01/22 15:21	
Method: 8015 NM - Diesel Rar	nge Organic	s (DRO) (0	SC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
Total TPH	<0.885	U	4.48	0.885	mg/L			04/05/22 10:37	
Method: 8015B NM - Diesel Ra	ange Organ	ics (DRO)	(GC)						
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<0.885	U	4.48	0.885	mg/L		04/04/22 14:13	04/04/22 20:58	
Diesel Range Organics (Over C10-C28)	<0.885	U	4.48	0.885	mg/L		04/04/22 14:13	04/04/22 20:58	
Oll Range Organics (Over C28-C36)	<0.854	U	4.48	0.854	mg/L		04/04/22 14:13	04/04/22 20:58	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
1-Chlorooctane	106		70 - 130				04/04/22 14:13	04/04/22 20:58	
1-Chlorooctane	89		70 - 130				04/04/22 14:13	04/04/22 21:40	
o-Terphenyl	128		70 - 130				04/04/22 14:13	04/04/22 20:58	
o-Terphenyl	99		70 - 130				04/04/22 14:13	04/04/22 21:40	
Method: 300.0 - Anions, Ion C	hromatogra	iphy							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	1220		10.0	0.421	mg/L			04/01/22 21:54	2
General Chemistry									
		0	RL	MDI	Unit	D	Prepared	Analyzed	Dil Fa
_	Result	Qualifier	NL.	1110	•			,u., _ u.	
Analyte	Result 3820		200	200	mg/L			04/08/22 09:55	
Analyte Total Dissolved Solids pH	3820			200					

# **Surrogate Summary**

Client: Crain Environmental Job ID: 880-13092-1 Project/Site: Flying M SA #2 SDG: Lea Co. NM

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percei	nt Surrogate Recovery (Acceptance Limits)
	BFB1	DFBZ1	
Client Sample ID	(70-130)	(70-130)	
BH-1	102	94	
BH-1	105	102	
BH-1	99	89	
Matrix Spike	106	92	
Matrix Spike Duplicate	110	86	
Lab Control Sample	107	95	
Lab Control Sample	104	93	
Lab Control Sample Dup	108	90	
Lab Control Sample Dup	104	99	
Method Blank	72	88	
Method Blank	73	88	
enzene (Surr)			
	BH-1 BH-1 BH-1 Matrix Spike Matrix Spike Duplicate Lab Control Sample Lab Control Sample Lab Control Sample Dup Lab Control Sample Dup Method Blank Method Blank	Client Sample ID         (70-130)           BH-1         102           BH-1         105           BH-1         99           Matrix Spike         106           Matrix Spike Duplicate         110           Lab Control Sample         107           Lab Control Sample         104           Lab Control Sample Dup         108           Lab Control Sample Dup         104           Method Blank         72           Method Blank         73	Client Sample ID         (70-130)         (70-130)           BH-1         102         94           BH-1         105         102           BH-1         99         89           Matrix Spike         106         92           Matrix Spike Duplicate         110         86           Lab Control Sample         107         95           Lab Control Sample         104         93           Lab Control Sample Dup         108         90           Lab Control Sample Dup         104         99           Method Blank         72         88           Method Blank         73         88

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

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

4004			
1CO1	OTPH1		
D (70-130)	(70-130)		
106	128		
89	99		
87	94		
	D (70-130) 106 89	D     (70-130)     (70-130)       106     128       89     99	D     (70-130)     (70-130)       106     128       89     99

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

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

			Perce	ent Surrogate Recovery (Acceptance Limits)
		1CO2	OTPH2	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
LCS 880-22959/2-A	Lab Control Sample	100	117	
LCSD 880-22959/3-A	Lab Control Sample Dup	100	119	
MB 880-22959/1-A	Method Blank	103	124	
Surrogate Legend				
1CO = 1-Chlorooctane				
OTPH = o-Terphenyl				

OTPH = o-Terphenyl

#### QC Sample Results

Client: Crain Environmental Job ID: 880-13092-1 SDG: Lea Co. NM Project/Site: Flying M SA #2

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-22736/8

**Matrix: Water** 

**Analysis Batch: 22736** 

<b>Client Samp</b>	ole ID:	Meth	od Blank
	Prep	Type:	Total/NA

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000408	U	0.00200	0.000408	mg/L			03/31/22 20:28	1
Toluene	< 0.000367	U	0.00200	0.000367	mg/L			03/31/22 20:28	1
Ethylbenzene	< 0.000657	U	0.00200	0.000657	mg/L			03/31/22 20:28	1
m-Xylene & p-Xylene	< 0.000629	U	0.00400	0.000629	mg/L			03/31/22 20:28	1
o-Xylene	< 0.000642	U	0.00200	0.000642	mg/L			03/31/22 20:28	1
Xylenes, Total	< 0.000642	U	0.00400	0.000642	mg/L			03/31/22 20:28	1

MB MB Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 70 - 130 4-Bromofluorobenzene (Surr) 03/31/22 20:28 72 1,4-Difluorobenzene (Surr) 88 70 - 130 03/31/22 20:28

Lab Sample ID: LCS 880-22736/3

**Matrix: Water** 

**Analysis Batch: 22736** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1098		mg/L		110	70 - 130	
Toluene	0.100	0.1120		mg/L		112	70 - 130	
Ethylbenzene	0.100	0.1059		mg/L		106	70 - 130	
m-Xylene & p-Xylene	0.200	0.2127		mg/L		106	70 - 130	
o-Xylene	0.100	0.1072		mg/L		107	70 - 130	

LCS LCS Surrogate %Recovery Qualifier Limits 70 - 130 4-Bromofluorobenzene (Surr) 107 1,4-Difluorobenzene (Surr) 95 70 - 130

Lab Sample ID: LCSD 880-22736/4

**Matrix: Water** 

**Analysis Batch: 22736** 

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

115

70 - 130

Spike LCSD LCSD %Rec **RPD** Analyte Added Result Qualifier Unit %Rec Limits **RPD** Limit Benzene 0.100 0.1069 mg/L 107 70 - 130 20 Toluene 0.100 0.1074 mg/L 107 70 - 130 20 Ethylbenzene 0.100 0.09728 mg/L 97 70 - 130 8 20 m-Xylene & p-Xylene 0.200 0.1979 99 70 - 130 20 mg/L 0.100 0.1006 101 70 - 130 20 o-Xylene mg/L

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	90		70 - 130

<0.000367 U

Lab Sample ID: 880-13092-1 MS

**Matrix: Water** 

Toluene

Prep Type: Total/NA **Analysis Batch: 22736** MS MS %Rec Sample Sample Spike Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Benzene <0.000408 U 0.100 0.1236 124 70 - 130 mg/L

0.1152

mg/L

**Eurofins Midland** 

Client Sample ID: BH-1

0.100

4/11/2022 (Rev. 1)

#### QC Sample Results

Client: Crain Environmental Job ID: 880-13092-1 Project/Site: Flying M SA #2 SDG: Lea Co. NM

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

Lab Sample ID: 880-13092-1 MS

**Matrix: Water** 

**Analysis Batch: 22736** 

**Client Sample ID: BH-1** 

Prep Type: Total/NA

MS MS %Rec Sample Sample Spike Result Qualifier Added Result Qualifier Unit %Rec Limits Ethylbenzene <0.000657 U 0.100 0.1063 mg/L 106 70 - 130 m-Xylene & p-Xylene <0.000629 U 0.200 0.2143 mg/L 107 70 - 130 o-Xylene <0.000642 U 0.100 0.1084 108 70 - 130 mg/L

MS MS

Surrogate	%Recovery Q	ualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

**Client Sample ID: BH-1** 

**Matrix: Water** 

**Analysis Batch: 22736** 

Lab Sample ID: 880-13092-1 MSD

Prep Type: Total/NA

%Rec **RPD** Sample Sample Spike MSD MSD Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit 70 - 130 Benzene <0.000408 U 0.100 0.1112 mg/L 111 11 Toluene <0.000367 U 0.100 0.1118 112 70 - 130 mg/L 106 Ethylbenzene <0.000657 U 0.100 0.1058 mg/L 70 - 130 0 m-Xylene & p-Xylene <0.000629 U 0.200 0.2140 mg/L 107 70 - 130 25 <0.000642 U 0.100 0.1087 109 o-Xylene mg/L 70 - 130

25 25 25

MSD MSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	99	70 - 130
1.4-Difluorobenzene (Surr)	89	70 - 130

Lab Sample ID: MB 880-22760/8

**Matrix: Water** 

**Analysis Batch: 22760** 

Client Sample ID: Method Blank

Prep Type: Total/NA

MB MB

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000408	U	0.00200	0.000408	mg/L			04/01/22 11:49	1
Toluene	< 0.000367	U	0.00200	0.000367	mg/L			04/01/22 11:49	1
Ethylbenzene	< 0.000657	U	0.00200	0.000657	mg/L			04/01/22 11:49	1
m-Xylene & p-Xylene	<0.000629	U	0.00400	0.000629	mg/L			04/01/22 11:49	1
o-Xylene	< 0.000642	U	0.00200	0.000642	mg/L			04/01/22 11:49	1
Xylenes, Total	<0.000642	U	0.00400	0.000642	mg/L			04/01/22 11:49	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	73		70 - 130		04/01/22 11:49	1
1,4-Difluorobenzene (Surr)	88		70 - 130		04/01/22 11:49	1

Lab Sample ID: LCS 880-22760/3

**Matrix: Water** 

**Analysis Batch: 22760** 

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

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1158		mg/L		116	70 - 130	
Toluene	0.100	0.1164		mg/L		116	70 - 130	
Ethylbenzene	0.100	0.1104		mg/L		110	70 - 130	
m-Xylene & p-Xylene	0.200	0.2236		mg/L		112	70 - 130	

### QC Sample Results

Client: Crain Environmental Job ID: 880-13092-1 SDG: Lea Co. NM Project/Site: Flying M SA #2

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

Lab Sample ID: LCS 880-22760/3 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

**Analysis Batch: 22760** 

LCS LCS Spike %Rec Analyte Added Result Qualifier Unit %Rec Limits o-Xylene 0 100 0.1127 mg/L 113 70 - 130

LCS LCS Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 104 70 - 130 1,4-Difluorobenzene (Surr) 93 70 - 130

Lab Sample ID: LCSD 880-22760/4 **Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA** 

**Matrix: Water** 

**Analysis Batch: 22760** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1270		mg/L		127	70 - 130	9	20
Toluene	0.100	0.1166		mg/L		117	70 - 130	0	20
Ethylbenzene	0.100	0.1100		mg/L		110	70 - 130	0	20
m-Xylene & p-Xylene	0.200	0.2222		mg/L		111	70 - 130	1	20
o-Xylene	0.100	0.1109		mg/L		111	70 - 130	2	20

LCSD LCSD Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 104 70 - 130 1,4-Difluorobenzene (Surr) 99 70 - 130

Lab Sample ID: 880-13097-A-7 MS **Client Sample ID: Matrix Spike Matrix: Water** Prep Type: Total/NA

**Analysis Batch: 22760** 

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.000408	U F1	0.100	0.1325	F1	mg/L		133	70 - 130	
Toluene	< 0.000367	U	0.100	0.1214		mg/L		121	70 - 130	
Ethylbenzene	< 0.000657	U	0.100	0.1123		mg/L		112	70 - 130	
m-Xylene & p-Xylene	<0.000629	U	0.200	0.2255		mg/L		113	70 - 130	
o-Xylene	<0.000642	U	0.100	0.1128		mg/L		113	70 - 130	
	MS	MS								

Surrogate	%Recovery Qual	lifier Limits
4-Bromofluorobenzene (Surr)	106	70 - 130
1,4-Difluorobenzene (Surr)	92	70 - 130

Lab Sample ID: 880-13097-A-7 MSD **Client Sample ID: Matrix Spike Duplicate Matrix: Water Prep Type: Total/NA** 

**Analysis Batch: 22760** 

Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added Result Qualifier Limits RPD Limit **Analyte** Unit %Rec <0.000408 UF1 Benzene 0.100 0.1186 mg/L 119 70 - 130 11 25 Toluene <0.000367 U 0.100 0.1214 121 70 - 130 25 mg/L 0 0.100 Ethylbenzene <0.000657 U 0.1126 mg/L 113 70 - 130 0 25 m-Xylene & p-Xylene <0.000629 U 0.200 0.2276 114 70 - 13025 mg/L o-Xylene <0.000642 U 0.100 0.1149 mg/L 115 70 - 130 25

Client: Crain Environmental Job ID: 880-13092-1 SDG: Lea Co. NM Project/Site: Flying M SA #2

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

Lab Sample ID: 880-13097-A-7 MSD

**Matrix: Water** 

**Analysis Batch: 22760** 

**Client Sample ID: Matrix Spike Duplicate** 

**Prep Type: Total/NA** 

MSD MSD %Recovery Qualifier Surrogate Limits 4-Bromofluorobenzene (Surr) 110 70 - 130 1,4-Difluorobenzene (Surr) 86 70 - 130

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

Lab Sample ID: MB 880-22959/1-A

**Matrix: Water** 

**Analysis Batch: 22887** 

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

Prep Batch: 22959

**Prep Type: Total/NA** 

мв мв Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Gasoline Range Organics <0.904 U 4.57 0.904 mg/L 04/04/22 14:13 04/04/22 19:54 (GRO)-C6-C10 Diesel Range Organics (Over <0.904 U 4.57 0.904 mg/L 04/04/22 14:13 04/04/22 19:54 C10-C28) Oll Range Organics (Over C28-C36) 0.872 mg/L 04/04/22 14:13 04/04/22 19:54 <0.872 U 4.57

MB MB Limits Surrogate %Recovery Qualifier 1-Chlorooctane 103 70 - 130 70 - 130 o-Terphenyl 124

Dil Fac Prepared Analyzed 04/04/22 14:13 04/04/22 19:54

**Client Sample ID: Lab Control Sample** 

Lab Sample ID: LCS 880-22959/2-A

**Matrix: Water** 

C10-C28)

Analysis Batch: 22887							Prep I	Batch: 22959
-	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	91.7	78.40		mg/L		85	75 - 125	
Diesel Range Organics (Over	91.7	92.94		mg/L		101	75 - 125	

LCS LCS Surrogate %Recovery Qualifier Limits 1-Chlorooctane 70 - 130 100 o-Terphenyl 117 70 - 130

Lab Sample ID: LCSD 880-22959/3-A

**Matrix: Water** 

Analysis Ratch: 22887

<b>Client Sample</b>	ID:	Lab	Contr	ol	San	nple	Dup	נ
			_	_				ı

Prep Type: Total/NA

Analysis balch: 22007							Prep E	saton: 4	22909
-	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	92.0	78.52		mg/L		85	75 - 125	0	20
Diesel Range Organics (Over	92.0	90.85		mg/L		99	75 - 125	2	20

	LCSD L	CSD	
Surrogate	%Recovery G	Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Ternhenyl	119		70 - 130

Client: Crain Environmental Job ID: 880-13092-1 SDG: Lea Co. NM Project/Site: Flying M SA #2

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

Lab Sample ID: 880-13092-1 MS Client Sample ID: BH-1

**Matrix: Water** 

**Analysis Batch: 22887** 

Prep Type: Total/NA Prep Batch: 22959

Sample Sample Spike MS MS %Rec Result Qualifier Added Result Qualifier %Rec Limits Analyte Unit Gasoline Range Organics 79.7 F1 89.3 79.46 F1 mg/L -0.2 75 - 125 (GRO)-C6-C10 Diesel Range Organics (Over 69.1 F1 89.3 66.52 F1 -3 mg/L 75 - 125

C10-C28)

MS MS Surrogate %Recovery Qualifier Limits 1-Chlorooctane 70 - 130 87 70 - 130 o-Terphenyl 94

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-22725/3 Client Sample ID: Method Blank **Matrix: Water** Prep Type: Total/NA

**Analysis Batch: 22725** 

MB MB

Result Qualifier RL MDL Unit Analyte Prepared Dil Fac Analyzed 0.500 Chloride <0.0210 U 0.0210 mg/L 03/31/22 22:07

Lab Sample ID: LCS 880-22725/4 **Client Sample ID: Lab Control Sample Prep Type: Total/NA** 

**Matrix: Water** 

**Analysis Batch: 22725** 

Spike LCS LCS %Rec Analyte Added Result Qualifier Limits Unit %Rec Chloride 25.0 24.34 97 90 - 110 mg/L

Lab Sample ID: LCSD 880-22725/5 Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA

**Matrix: Water** 

**Analysis Batch: 22725** 

LCSD LCSD RPD Spike %Rec **Analyte** Added Result Qualifier Unit D %Rec Limits RPD Limit Chloride 25.0 23.90 mg/L 96 90 - 110

Lab Sample ID: 880-13085-A-1 MS

**Matrix: Water** 

**Analysis Batch: 22725** 

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Chloride 2.78 25.0 28.02 101 90 - 110 mg/L

Lab Sample ID: 880-13085-A-1 MSD **Client Sample ID: Matrix Spike Duplicate** Prep Type: Total/NA

**Matrix: Water** 

**Analysis Batch: 22725** 

MSD MSD %Rec **RPD** Sample Sample Spike Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit Chloride 25.0 2.78 27.58 99 90 - 110 2 mg/L

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Client Sample ID: Matrix Spike

Prep Type: Total/NA

Client Sample ID: Method Blank

**Client Sample ID: Lab Control Sample** 

Client Sample ID: Lab Control Sample Dup

**Prep Type: Total/NA** 

Prep Type: Total/NA

Prep Type: Total/NA

Client Sample ID: BH-1

Client Sample ID: BH-1

Prep Type: Total/NA

Prep Type: Total/NA

### QC Sample Results

Client: Crain Environmental Job ID: 880-13092-1 Project/Site: Flying M SA #2 SDG: Lea Co. NM

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 880-23205/1

**Matrix: Water** 

**Analysis Batch: 23205** 

MB MB

Result Qualifier RL **MDL** Unit Analyzed Dil Fac Analyte D Prepared 25.0 Total Dissolved Solids 25.0 mg/L 04/08/22 09:55 <25.0 U

Lab Sample ID: LCS 880-23205/2

**Matrix: Water** 

**Analysis Batch: 23205** 

Spike LCS LCS %Rec Added Result Qualifier D %Rec Limits Unit 1000 989.0 80 - 120 **Total Dissolved Solids** mg/L 99

Lab Sample ID: LCSD 880-23205/3

**Matrix: Water** 

**Analysis Batch: 23205** 

Spike LCSD LCSD %Rec **RPD** Added Result Qualifier Limits **RPD** Analyte Unit D %Rec Limit Total Dissolved Solids 1000 1005 101 80 - 120 10 mg/L

Lab Sample ID: 880-13092-1 DU

**Matrix: Water** 

**Analysis Batch: 23205** 

DU DU **RPD** Sample Sample Analyte Result Qualifier Result Qualifier Unit **RPD** Limit Total Dissolved Solids 3820 H 3664 mg/L 10

Method: SM 4500 H+ B - pH

Lab Sample ID: 880-13092-1 DU

Released to Imaging: 8/17/2022 1:13:14 PM

**Matrix: Water** 

**Analysis Batch: 23203** 

DU DU **RPD** Sample Sample Result Qualifier Analyte Result Qualifier Unit D RPD Limit pН 7.3 HF 7.3 S.U. 0.3 10 23.2 HF 23.4 Deg. C 0.9 10 Temperature

# **QC Association Summary**

Job ID: 880-13092-1 Client: Crain Environmental Project/Site: Flying M SA #2 SDG: Lea Co. NM

#### **GC VOA**

#### **Analysis Batch: 22736**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13092-1	BH-1	Total/NA	Water	8021B	
MB 880-22736/8	Method Blank	Total/NA	Water	8021B	
LCS 880-22736/3	Lab Control Sample	Total/NA	Water	8021B	
LCSD 880-22736/4	Lab Control Sample Dup	Total/NA	Water	8021B	
880-13092-1 MS	BH-1	Total/NA	Water	8021B	
880-13092-1 MSD	BH-1	Total/NA	Water	8021B	

#### **Analysis Batch: 22760**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-22760/8	Method Blank	Total/NA	Water	8021B	
LCS 880-22760/3	Lab Control Sample	Total/NA	Water	8021B	
LCSD 880-22760/4	Lab Control Sample Dup	Total/NA	Water	8021B	
880-13097-A-7 MS	Matrix Spike	Total/NA	Water	8021B	
880-13097-A-7 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	

#### **Analysis Batch: 22836**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13092-1	BH-1	Total/NA	Water	Total BTEX	

#### GC Semi VOA

#### **Analysis Batch: 22887**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13092-1	BH-1	Total/NA	Water	8015B NM	22959
880-13092-1	BH-1	Total/NA	Water	8015B NM	22959
MB 880-22959/1-A	Method Blank	Total/NA	Water	8015B NM	22959
LCS 880-22959/2-A	Lab Control Sample	Total/NA	Water	8015B NM	22959
LCSD 880-22959/3-A	Lab Control Sample Dup	Total/NA	Water	8015B NM	22959
880-13092-1 MS	BH-1	Total/NA	Water	8015B NM	22959

#### Prep Batch: 22959

<b>Lab Sample ID</b> 880-13092-1	Client Sample ID BH-1	Prep Type Total/NA	Matrix Water	Method Prep Batch 8015NM Aq Prep
880-13092-1	BH-1	Total/NA	Water	8015NM Aq Prep
MB 880-22959/1-A	Method Blank	Total/NA	Water	8015NM Aq Prep
LCS 880-22959/2-A	Lab Control Sample	Total/NA	Water	8015NM Aq Prep
LCSD 880-22959/3-A	Lab Control Sample Dup	Total/NA	Water	8015NM Aq Prep
880-13092-1 MS	BH-1	Total/NA	Water	8015NM Aq Prep

#### **Analysis Batch: 23015**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13092-1	BH-1	Total/NA	Water	8015 NM	_

#### **HPLC/IC**

#### **Analysis Batch: 22725**

<b>Lab Sample ID</b> 880-13092-1	Client Sample ID BH-1	Prep Type Total/NA	Matrix Water	Method 300.0	Prep Batch
MB 880-22725/3	Method Blank	Total/NA	Water	300.0	
LCS 880-22725/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-22725/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-13085-A-1 MS	Matrix Spike	Total/NA	Water	300.0	

# **QC Association Summary**

Client: Crain Environmental
Project/Site: Flying M SA #2
Job ID: 880-13092-1
SDG: Lea Co. NM

#### **HPLC/IC (Continued)**

#### **Analysis Batch: 22725 (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13085-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

#### **General Chemistry**

#### **Analysis Batch: 23203**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13092-1	BH-1	Total/NA	Water	SM 4500 H+ B	
880-13092-1 DU	BH-1	Total/NA	Water	SM 4500 H+ B	

#### **Analysis Batch: 23205**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13092-1	BH-1	Total/NA	Water	SM 2540C	
MB 880-23205/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 880-23205/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 880-23205/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
880-13092-1 DU	BH-1	Total/NA	Water	SM 2540C	

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#### **Lab Chronicle**

Client: Crain Environmental
Project/Site: Flying M SA #2
Job ID: 880-13092-1
SDG: Lea Co. NM

Client Sample ID: BH-1 Lab Sample ID: 880-13092-1

Drop Time	Batch	Batch	D	Dil	Initial	Final	Batch	Prepared	Amalyat	l ab
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	22736	03/31/22 20:54	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22836	04/01/22 15:21	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23015	04/05/22 10:37	AJ	XEN MID
Total/NA	Prep	8015NM Aq Prep			33.5 mL	3 mL	22959	04/04/22 14:13	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22887	04/04/22 20:58	AJ	XEN MID
Total/NA	Prep	8015NM Aq Prep			33.8 mL	3 mL	22959	04/04/22 14:13	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22887	04/04/22 21:40	AJ	XEN MID
Total/NA	Analysis	300.0		20			22725	04/01/22 21:54	CH	XEN MID
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	23205	04/08/22 09:55	SC	XEN MID
Total/NA	Analysis	SM 4500 H+ B		1			23203	04/08/22 09:52	SC	XEN MID

#### **Laboratory References:**

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

**Eurofins Midland** 

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# **Accreditation/Certification Summary**

Client: Crain Environmental Job ID: 880-13092-1 Project/Site: Flying M SA #2 SDG: Lea Co. NM

#### **Laboratory: Eurofins Midland**

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

Authority		Program	Identification Number	Expiration Date		
Texas		NELAP	T104704400-21-22	06-30-22		
The following analytes		eport, but the laboratory is r	not certified by the governing authority.	This list may include analytes for which		
Analysis Method	Prep Method	Matrix	Analyte			
300.0		Water	Chloride			
8015 NM		Water	Total TPH			
SM 2540C		Water	Total Dissolved Solids			
SM 4500 H+ B		Water	Temperature			
Total BTEX		Water	Total BTEX			

# **Method Summary**

Client: Crain Environmental Project/Site: Flying M SA #2

Job ID: 880-13092-1 SDG: Lea Co. NM

Method Method Description		Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
SM 2540C	Solids, Total Dissolved (TDS)	SM	XEN MID
SM 4500 H+ B	pH	SM	XEN MID
5030B	Purge and Trap	SW846	XEN MID
8015NM Aq Prep	Microextraction	SW846	XEN MID

#### **Protocol References:**

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### **Laboratory References:**

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

**Eurofins Midland** 

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# **Sample Summary**

Client: Crain Environmental Project/Site: Flying M SA #2 Job ID: 880-13092-1

SDG: Lea Co. NM

Lab Sample ID Client Sample ID Matrix Collected Received 880-13092-1 BH-1 Water 03/29/22 11:10 03/30/22 15:18

# **Curofins** The connect of the connection of the connection

Company Name:

# Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Bill to: (if different) Company Name

SUN Casa

Program:

UST/PST PRP Brownfields RRC

Superfund [

Work Order Comments

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Work Order No: 13092

Revised Date: 08/25/2020 Rev. 2020.2		6					5
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		2	3/130/22			Sain	- Contraction
Date/Time	Received by (Signature)	Relinquished by (Signature)	Date/Time	ıre)	Received by: (Signature)	Relipquished by: (Signature)	Relipquishe
	s and conditions and the control previously negotiated.	of service. Eurofins Xenco, Mainten under the cost of samples constitutes a value purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins 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 losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously nego	Eurofins Xenco, its affiliates and s spenses incurred by the client if s to Eurofins Xenco, but not analy	order from client company to sponsibility for any losses or ex \$5 for each sample submitted	samples constitutes a valid purchase framples and shall not assume any replied to each project and a charge of	nco will be liable only for the cost of other charge of \$85.00 will be ap	of Eurofins Xenco. An
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					And the state of t		
	880-13092 Chain of Custody					The second secon	
			6 XXX		GN 3/29/22 1110	6	カルー
Sample Comments	Sa		B	Depth Comp	Matrix Date Time Sampled Sampled	Sample Identification Ma	Sample I
NaOH+Ascorbic Acid SAPC	NaOH+A		PH TE		Corrected Temperature:		Iotal Containers
Zn Acetate+NaOH Zn	Zn Aceta		メ	2,4	Temperature Reading	Seals: Yes No (N/A	Sample Custody Seals:
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> NaSO <sub>3</sub>	Na <sub>2</sub> S <sub>2</sub> O.		01.	.1	Correction Factor	eals: Yes No (NJA)	Cooler Custody Seals:
4 NABIS	NaHSO 4 NABIS			9.4H	Thermometer ID	d Intact: ( ( ( Ves) No	Samples Received Intact:
	H <sub>3</sub> PO <sub>4</sub> HP		eters 4		Yes (No ) Wetice:	IPT Temp Blank:	SAMPLE RECEIPT
	H, SQ, H,			the lab, if received by 4:30pm		,	PO#
3	HCL, HC			he day recei		5	Sampler's Name:
	Cool Cool			4/7/22	NM Due Date	Lea Co. N	Project Location.
VO DI Water H <sub>2</sub> O	None NO	÷	Pres. Code	Rush	<b>⊠</b> Rou		Project Number
Preservative Codes	Pre	ANALYSIS REQUEST	(	Turn Around		Flying N SA # 2	Project Name:
Other-	rables. EDD ADaPT	1 1		cindy.	7244 Email.	(575) 441-7244	Phone:
] TRRP [] Level IV []	Reporting Level III ☐ Level III ☐ PST/UST ☐ TRRP ☐	9710	Midland.	City, State ZIP	TR 79761	Messa.	City, State ZIP
	State of Project: NM		P.O. Box 53570	Address.	ホギロ	2925 E.	Address:

## **Login Sample Receipt Checklist**

Client: Crain Environmental Job Number: 880-13092-1 SDG Number: Lea Co. NM

Login Number: 13092 List Source: Eurofins Midland

List Number: 1

Creator: Rodriguez, Leticia

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

Euronnis Milalana

Released to Imaging: 8/17/2022 1:13:14 PM

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# **ANALYTICAL REPORT**

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

Laboratory Job ID: 880-15046-1

Laboratory Sample Delivery Group: Lea Co. NM

Client Project/Site: Flying M SA #2

Revision: 1

For:

eurofins

Received by OCD: 8/4/2022 11:04:38 AM

.....LINKS

Review your project results through

EOL

**Have a Question?** 

www.eurofinsus.com/Env

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Visit us at:

Crain Environmental 2925 E. 17th St. Odessa, Texas 79761

Attn: Cindy Crain

MRAMER

Authorized for release by: 6/2/2022 8:56:05 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: Crain Environmental
Project/Site: Flying M SA #2
Laboratory Job ID: 880-15046-1
SDG: Lea Co. NM

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#### **Definitions/Glossary**

Client: Crain Environmental

Project/Site: Flying M SA #2

Job ID: 880-15046-1

SDG: Lea Co. NM

Qualifiers

**GC VOA** 

Qualifier Qualifier Description

U Indicates the analyte was analyzed for but not detected.

**GC Semi VOA** 

Qualifier Qualifier Description

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

**HPLC/IC** 

U Indicates the analyte was analyzed for but not detected.

**Glossary** 

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery
CFL Contains Free Liquid
CFU Colony Forming Unit
CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

#### **Case Narrative**

Client: Crain Environmental
Project/Site: Flying M SA #2
Job ID: 880-15046-1
SDG: Lea Co. NM

Job ID: 880-15046-1

**Laboratory: Eurofins Midland** 

Narrative

Job Narrative 880-15046-1

#### **REVISION**

The report being provided is a revision of the original report sent on 5/31/2022. The report (revision 1) is being revised due to BTEX parameters missing on final report.

Report revision history

#### Receipt

The samples were received on 5/23/2022 12:04 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.2°C

#### **GC VOA**

Method Total\_BTEX\_GCV: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 880-26211 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### GC Semi VOA

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

#### HPLC/IC

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

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Job ID: 880-15046-1 SDG: Lea Co. NM

Client: Crain Environmental
Project/Site: Flying M SA #2

Client Sample ID: MW-2

Lab Sample

Lab Sample ID: 880-15046-1

**Matrix: Water** 

Date Collected: 05/19/22 10:00 Date Received: 05/23/22 12:04

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000408	U	0.00200	0.000408	mg/L			05/25/22 23:51	1
Toluene	< 0.000367	U	0.00200	0.000367	mg/L			05/25/22 23:51	1
Ethylbenzene	< 0.000657	U	0.00200	0.000657	mg/L			05/25/22 23:51	1
m-Xylene & p-Xylene	<0.000629	U	0.00400	0.000629	mg/L			05/25/22 23:51	1
o-Xylene	< 0.000642	U	0.00200	0.000642	mg/L			05/25/22 23:51	1
Xylenes, Total	<0.000642	U	0.00400	0.000642	mg/L			05/25/22 23:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	122		70 - 130					05/25/22 23:51	1
1,4-Difluorobenzene (Surr)	92		70 - 130					05/25/22 23:51	1
Method: Total BTEX - Total B	TEX Calcula	tion							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.000657	U	0.00400	0.000657	mg/L			05/31/22 12:57	1
Method: 8015 NM - Diesel Rar Analyte	Result	Qualifier	RL		Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Total TPH	<0.898	U	4.55	0.898	mg/L			05/27/22 12:03	1
Method: 8015B NM - Diesel R	ange Organ	ics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<0.898	U	4.55	0.898	mg/L		05/26/22 14:03	05/26/22 17:39	1
Diesel Range Organics (Over C10-C28)	<0.898	U	4.55	0.898	mg/L		05/26/22 14:03	05/26/22 17:39	1
Oll Range Organics (Over C28-C36)	<0.867	U	4.55	0.867	mg/L		05/26/22 14:03	05/26/22 17:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	111		70 - 130				05/26/22 14:03	05/26/22 17:39	1
o-Terphenyl	122		70 - 130				05/26/22 14:03	05/26/22 17:39	1
Method: 300.0 - Anions, Ion C	hromatogra	phy							
•	_	Qualifier	RL		Unit				Dil Fac

Client Sample ID: MW-3

Date Collected: 05/19/22 10:50

Lab Sample ID: 880-15046-2

Matrix: Water

25.0

1.05 mg/L

908

Date Received: 05/23/22 12:04

Chloride

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000408	U	0.00200	0.000408	mg/L			05/25/22 23:31	1
Toluene	< 0.000367	U	0.00200	0.000367	mg/L			05/25/22 23:31	1
Ethylbenzene	< 0.000657	U	0.00200	0.000657	mg/L			05/25/22 23:31	1
m-Xylene & p-Xylene	<0.000629	U	0.00400	0.000629	mg/L			05/25/22 23:31	1
o-Xylene	<0.000642	U	0.00200	0.000642	mg/L			05/25/22 23:31	1
Xylenes, Total	<0.000642	U	0.00400	0.000642	mg/L			05/25/22 23:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	123		70 - 130			· ·		05/25/22 23:31	1
1.4-Difluorobenzene (Surr)	94		70 - 130					05/25/22 23:31	1

**Eurofins Midland** 

05/25/22 22:40

# **Client Sample Results**

Client: Crain Environmental Job ID: 880-15046-1 Project/Site: Flying M SA #2 SDG: Lea Co. NM

**Client Sample ID: MW-3** Lab Sample ID: 880-15046-2

Date Collected: 05/19/22 10:50 Date Received: 05/23/22 12:04 **Matrix: Water** 

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00100	U	0.00200	0.00100	mg/L			05/25/22 23:31	1
- Method: 8015 NM - Diesel Rar	nge Organic	s (DRO) (0	GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<0.901	U	4.56	0.901	mg/L			05/27/22 12:03	1
Method: 8015B NM - Diesel Ra	ange Organi	ics (DRO)	(GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<0.901	U	4.56	0.901	mg/L		05/26/22 14:03	05/26/22 18:01	
Diesel Range Organics (Over C10-C28)	<0.901	U	4.56	0.901	mg/L		05/26/22 14:03	05/26/22 18:01	,
Oll Range Organics (Over C28-C36)	<0.869	U	4.56	0.869	mg/L		05/26/22 14:03	05/26/22 18:01	,
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	127		70 - 130				05/26/22 14:03	05/26/22 18:01	-
o-Terphenyl	135	S1+	70 - 130				05/26/22 14:03	05/26/22 18:01	•
Method: 300.0 - Anions, Ion C	hromatogra	vha							
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	490		10.0	0.421	mg/L			05/25/22 22:49	20

DFBZ = 1,4-Difluorobenzene (Surr)

# **Surrogate Summary**

Client: Crain Environmental

Project/Site: Flying M SA #2

Job ID: 880-15046-1

SDG: Lea Co. NM

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

Matrix: Water Prep Type: Total/NA

			Pe	ent Surroga
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-15046-1	MW-2	122	92	
880-15046-2	MW-3	123	94	
Surrogate Legeno	i			
BFB = 4-Bromofluc	probenzene (Surr)			

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

Matrix: Water Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		1CO1	OTPH1				
Lab Sample ID	Client Sample ID	(70-130)	(70-130)				
880-15046-1	MW-2	111	122				
880-15046-2	MW-3	127	135 S1+				
880-15197-B-1-B MS	Matrix Spike	88	85				
880-15197-B-1-C MSD	Matrix Spike Duplicate	88	85				
LCS 880-26369/2-A	Lab Control Sample	104	102				
LCSD 880-26369/3-A	Lab Control Sample Dup	108	105				
MB 880-26369/1-A	Method Blank	109	115				

**Surrogate Legend** 

1CO = 1-Chlorooctane OTPH = o-Terphenyl

**Eurofins Midland** 

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# QC Sample Results

Client: Crain Environmental Job ID: 880-15046-1 Project/Site: Flying M SA #2 SDG: Lea Co. NM

**Method: Total BTEX - Total BTEX Calculation** 

Lab Sample ID: MB 880-26190/5-A

**Matrix: Water** 

Analyte

Total BTEX

**Analysis Batch: 26211** 

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

Prep Batch: 26190

MB MB Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac

0.00100 mg/L

Lab Sample ID: MB 880-26211/39 **Client Sample ID: Method Blank Matrix: Water** 

0.00200

Prep Type: Total/NA

05/24/22 14:35 05/25/22 12:32

**Analysis Batch: 26211** 

	IVID	IVID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00100	U	0.00200	0.00100	mg/L	<del> =</del>		05/25/22 23:09	1

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

<0.00100 U

MD MD

Lab Sample ID: MB 880-26369/1-A **Client Sample ID: Method Blank Matrix: Water** Prep Type: Total/NA

**Analysis Batch: 26295** 

Prep Batch: 26369 MB MB Result Qualifier RL **MDL** Unit Analyzed Dil Fac **Analyte** Prepared 05/26/22 09:03 05/26/22 10:44 Gasoline Range Organics <0.904 U 4.57 0.904 mg/L (GRO)-C6-C10 Diesel Range Organics (Over <0.904 U 4.57 0.904 mg/L 05/26/22 09:03 05/26/22 10:44 C10-C28) Oll Range Organics (Over C28-C36) <0.872 U 4.57 0.872 mg/L 05/26/22 09:03 05/26/22 10:44

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	109		70 - 130	05/26/22 09:03	05/26/22 10:44	1
o-Terphenyl	115		70 - 130	05/26/22 09:03	05/26/22 10:44	1

Lab Sample ID: LCS 880-26369/2-A **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

**Analysis Batch: 26295** 

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	91.7	79.04		mg/L		86	75 - 125	
Diesel Range Organics (Over C10-C28)	91.7	72.59		mg/L		79	75 - 125	

LCS LCS

	L00 L00	
Surrogate	%Recovery Qualifie	r Limits
1-Chlorooctane	104	70 - 130
o-Terphenyl	102	70 - 130

Lab Sample ID: LCSD 880-26369/3-A

Matrix: Water

matrix: rrator								٠٠٠ . ت	
Analysis Batch: 26295							Prep E	Batch: 2	26369
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	92.0	82.66		mg/L		90	75 - 125	4	20
(GRO)-C6-C10									
Diesel Range Organics (Over	92.0	76.31		mg/L		83	75 - 125	5	20
C10-C28)									

**Eurofins Midland** 

Prep Batch: 26369

Prep Type: Total/NA

Client Sample ID: Lab Control Sample Dup

Released to Imaging: 8/17/2022 1:13:14 PM

Client: Crain Environmental Job ID: 880-15046-1 SDG: Lea Co. NM Project/Site: Flying M SA #2

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

Lab Sample ID: LCSD 880-26369/3-A

**Matrix: Water** 

**Analysis Batch: 26295** 

Client Sample ID: Lab Control Sample Dup

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 26369

LCSD LCSD

%Recovery Qualifier Limits Surrogate 1-Chlorooctane 108 70 - 130 o-Terphenyl 105 70 - 130

Client Sample ID: Matrix Spike Lab Sample ID: 880-15197-B-1-B MS **Prep Type: Total/NA** 

**Matrix: Water** 

**Analysis Batch: 26295** Prep Batch: 26369 MS MS %Rec Sample Sample Spike Limits

Analyte Result Qualifier Added Result Qualifier Unit %Rec Gasoline Range Organics <0.893 U 89.6 91.62 mg/L 102 75 - 125 (GRO)-C6-C10 mg/L Diesel Range Organics (Over <0.893 U 89.6 83.08 93 75 - 125

C10-C28)

MS MS Surrogate %Recovery Qualifier Limits 1-Chlorooctane 88 70 - 130 70 - 130 o-Terphenyl 85

Lab Sample ID: 880-15197-B-1-C MSD

**Matrix: Water Prep Type: Total/NA Analysis Batch: 26295** Prep Batch: 26369

Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added Result Qualifier Limits **RPD Analyte** Unit D %Rec I imit <0.893 U Gasoline Range Organics 89.6 93.27 mg/L 104 75 - 125 2 20 (GRO)-C6-C10 89.6 Diesel Range Organics (Over <0.893 U 83.29 mg/L 93 75 - 125 0 20

C10-C28)

MSD MSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 70 - 130 88 o-Terphenyl 70 - 130

85

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-26254/3 Client Sample ID: Method Blank

**Matrix: Water** 

**Analysis Batch: 26254** 

MB MB Result Qualifier RL **MDL** Unit Dil Fac Analyte Prepared Analyzed 0.500 Chloride <0.0210 U 0.0210 mg/L 05/25/22 19:32

Lab Sample ID: LCS 880-26254/4 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

**Matrix: Water** 

**Analysis Batch: 26254** 

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits Chloride 25.0 24.46 98 mg/L

**Eurofins Midland** 

Prep Type: Total/NA

Chloride

# **QC Sample Results**

Client: Crain Environmental Job ID: 880-15046-1 Project/Site: Flying M SA #2 SDG: Lea Co. NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

9.41

Client Sample ID: Lab Control Sample Dup

90 - 110

102

Lab Sample ID: LCSD 880-26254/5 **Matrix: Water** Prep Type: Total/NA **Analysis Batch: 26254** 

LCSD LCSD RPD Spike %Rec Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit Chloride 25.0 25.04 mg/L 100 90 - 110 2 20

Client Sample ID: Matrix Spike Lab Sample ID: 880-15135-A-1 MS

**Matrix: Water** Prep Type: Total/NA **Analysis Batch: 26254** 

34.99

mg/L

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits

25.0

Lab Sample ID: 880-15135-A-1 MSD **Client Sample ID: Matrix Spike Duplicate Matrix: Water** 

Prep Type: Total/NA **Analysis Batch: 26254** 

Sample Sample Spike MSD MSD %Rec RPD Analyte Result Qualifier Added Result Qualifier Limits RPD Limit Unit %Rec

Chloride 9.41 25.0 33.37 96 90 - 110 20 mg/L

# **QC Association Summary**

Client: Crain Environmental

Project/Site: Flying M SA #2

Job ID: 880-15046-1

SDG: Lea Co. NM

**GC VOA** 

Prep Batch: 26190

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-26190/5-A	Method Blank	Total/NA	Water	5035	

**Analysis Batch: 26211** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15046-1	MW-2	Total/NA	Water	8021B	
880-15046-2	MW-3	Total/NA	Water	8021B	
880-15046-2	MW-3	Total/NA	Water	Total BTEX	
MB 880-26190/5-A	Method Blank	Total/NA	Water	Total BTEX	26190
MB 880-26211/39	Method Blank	Total/NA	Water	Total BTEX	
LCS 880-26211/34	Lab Control Sample	Total/NA	Water	Total BTEX	
LCSD 880-26211/35	Lab Control Sample Dup	Total/NA	Water	Total BTEX	
880-15046-2 MS	MW-3	Total/NA	Water	Total BTEX	
880-15046-2 MSD	MW-3	Total/NA	Water	Total BTEX	

**Analysis Batch: 26584** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15046-1	MW-2	Total/NA	Water	Total BTEX	

#### **GC Semi VOA**

#### **Analysis Batch: 26295**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15046-1	MW-2	Total/NA	Water	8015B NM	26369
880-15046-2	MW-3	Total/NA	Water	8015B NM	26369
MB 880-26369/1-A	Method Blank	Total/NA	Water	8015B NM	26369
LCS 880-26369/2-A	Lab Control Sample	Total/NA	Water	8015B NM	26369
LCSD 880-26369/3-A	Lab Control Sample Dup	Total/NA	Water	8015B NM	26369
880-15197-B-1-B MS	Matrix Spike	Total/NA	Water	8015B NM	26369
880-15197-B-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	8015B NM	26369

#### Prep Batch: 26369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15046-1	MW-2	Total/NA	Water	8015NM Aq Prep	
880-15046-2	MW-3	Total/NA	Water	8015NM Aq Prep	
MB 880-26369/1-A	Method Blank	Total/NA	Water	8015NM Aq Prep	
LCS 880-26369/2-A	Lab Control Sample	Total/NA	Water	8015NM Aq Prep	
LCSD 880-26369/3-A	Lab Control Sample Dup	Total/NA	Water	8015NM Aq Prep	
880-15197-B-1-B MS	Matrix Spike	Total/NA	Water	8015NM Aq Prep	
880-15197-B-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	8015NM Aq Prep	

#### **Analysis Batch: 26439**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15046-1	MW-2	Total/NA	Water	8015 NM	
880-15046-2	MW-3	Total/NA	Water	8015 NM	

#### HPLC/IC

#### **Analysis Batch: 26254**

<b>Lab Sample ID</b> 880-15046-1	Client Sample ID MW-2	Prep Type Total/NA	Matrix Water	Method 300.0	Prep Batch
880-15046-2	MW-3	Total/NA	Water	300.0	
MB 880-26254/3	Method Blank	Total/NA	Water	300.0	

**Eurofins Midland** 

6/2/2022 (Rev. 1)

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# **QC Association Summary**

Client: Crain Environmental
Project/Site: Flying M SA #2
Job ID: 880-15046-1
SDG: Lea Co. NM

# **HPLC/IC (Continued)**

#### **Analysis Batch: 26254 (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-26254/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-26254/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-15135-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
880-15135-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

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#### **Lab Chronicle**

Client: Crain Environmental Job ID: 880-15046-1 Project/Site: Flying M SA #2 SDG: Lea Co. NM

**Client Sample ID: MW-2** Lab Sample ID: 880-15046-1

**Matrix: Water** 

Date Collected: 05/19/22 10:00 Date Received: 05/23/22 12:04

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1			26211	05/25/22 23:51	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			26584	05/31/22 12:57	SM	XEN MID
Total/NA	Analysis	8015 NM		1			26439	05/27/22 12:03	AJ	XEN MID
Total/NA	Prep	8015NM Aq Prep			33 mL	3 mL	26369	05/26/22 14:03	DM	XEN MID
Total/NA	Analysis	8015B NM		1			26295	05/26/22 17:39	SM	XEN MID
Total/NA	Analysis	300.0		50			26254	05/25/22 22:40	СН	XEN MID

Client Sample ID: MW-3 Lab Sample ID: 880-15046-2

Date Collected: 05/19/22 10:50 **Matrix: Water** 

Date Received: 05/23/22 12:04

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1			26211	05/25/22 23:31	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			26211	05/25/22 23:31	MR	XEN MID
Total/NA	Analysis	8015 NM		1			26439	05/27/22 12:03	AJ	XEN MID
Total/NA	Prep	8015NM Aq Prep			32.9 mL	3 mL	26369	05/26/22 14:03	DM	XEN MID
Total/NA	Analysis	8015B NM		1			26295	05/26/22 18:01	SM	XEN MID
Total/NA	Analysis	300.0		20			26254	05/25/22 22:49	CH	XEN MID

#### **Laboratory References:**

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

# **Accreditation/Certification Summary**

Client: Crain Environmental Job ID: 880-15046-1
Project/Site: Flying M SA #2 SDG: Lea Co. NM

#### **Laboratory: Eurofins Midland**

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

Authority		Program	Identification Number	Expiration Date
Texas		NELAP	T104704400-21-22	06-30-22
The following analytes the agency does not do		eport, but the laboratory is i	not certified by the governing authority.	This list may include analytes for which
Analysis Method	Prep Method	Matrix	Analyte	
		171644171	Allalyto	
300.0		Water	Chloride	
300.0 8015 NM				

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# **Method Summary**

Client: Crain Environmental Project/Site: Flying M SA #2

Job ID: 880-15046-1 SDG: Lea Co. NM

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Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5030B	Purge and Trap	SW846	XEN MID
8015NM Aq Prep	Microextraction	SW846	XEN MID

# 6

#### **Protocol References:**

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

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#### **Laboratory References:**

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

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# **Sample Summary**

Client: Crain Environmental Project/Site: Flying M SA #2 Job ID: 880-15046-1

SDG: Lea Co. NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-15046-1	MW-2	Water	05/19/22 10:00	05/23/22 12:04
880-15046-2	MW-3	Water	05/19/22 10:50	05/23/22 12:04

# Seurofins Xenco mvionnent esting

City, State ZIP:

\ddress: ompany Name

2925 E

Suramental 1700

> Company Name, Bill to, (if different)

P.O. Box

53570

Southwest Royalties

Program:

UST/PST | PRP | Brownfields | RRC |

Superfund [

Work Order Comments

easa Hale

Midland TX

79710

Reporting Level II Level III State of Project: 1/1/14

PST/UST | TRRP |

Level IV

Deliverables.

EDD

ADaPT 🗆

Other:

575)441-7244 10k=550

79761

City, State ZIP

cindy. crain @ amail. com

Project Manager

# Chain of Custody

Midland, TX (432) 704-5440 San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550 Carlsbad NM (575) 988-3199 Houston, TX (281) 240-4200, Dallas TX (214) 902-0300

www.xenco.com	Work Order No:
Page / of /	15040

A PROPERTY OF THE PROPERTY OF	3 Ling Lian	Relipquished by: (Signature)  Received by: (Signature)	Notice: Signature of this document and relinquishment of samples Constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins 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 losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to sech project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	nd Metal(s) to be analyzed	Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas					MW-3 BW 5/19/22 1050 -	MW-2 6N 5/A)22 1000 -	Sample Identification Matrix Date Time Depth	Total Containers.   Corrected Temperature:   C	Sample Custody Seals. Yes No (N/A) Temperature Reading	Cooler Custody Seals. Yes No (I/A) Correction Factor 2	Samples Received Intact: (Yes) No The	SAMPLE RECEIPT Temp Blank. Yes No Wet Ice: Yes) No		TAT starts the d	Project Location Lea Co NM Due Date: 5/27/22	Project Number Rush	Project Name: Flying M DA # Q Turn Around
	K S/23/2-	, Date/Time	ompany to Eurofins Xenco, its losses or expenses incurred be submitted to Eurofins Xenco	8RCRA Sb As Ba	11 Al Sb As Ba F					(e) X	6 X	Comp Cont	34	80		iram 524	eters		by		Pres. Code	
	CY 2	me Relinquished by (Signature)	a filliates and subcontractors. It assigns standard terms and con by the client if such losses are due to circumstances beyond the c but not analyzed. These terms will be enforced unless previous		8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cii Fe Ph Mg Mm N			880-15046 Chain of C				B; Ch	TE, lar,	k isle	*S							ANALYSIS REQUEST
		Received by (Signature)	dditions control sy negotiated.	Ag TI U Hg 1631/2451/7470/7471				of Custody			4/1/0	Sam	NaOH+Asc	Zn Acetate	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> NaSO <sub>3</sub>	NaHSO 4 NABIS	H <sub>3</sub> PO <sub>4</sub> HP	H <sub>2</sub> S0H <sub>2</sub>	HCL. HC	Cool Cool	None NO	Prese
		Date/Time		v zn 471	W 75				7.00		THEA ON!	Sample Comments	NaOH+Ascorbic Acid SAPC	Zn Acetate+NaOH Zn	NaSO 3	NABIS			HNO, HN		DI Water: H <sub>2</sub> O	Preservative Codes

Revised Date: 08/25/2020 Rev 2020.2

# **Login Sample Receipt Checklist**

Client: Crain Environmental Job Number: 880-15046-1 SDG Number: Lea Co. NM

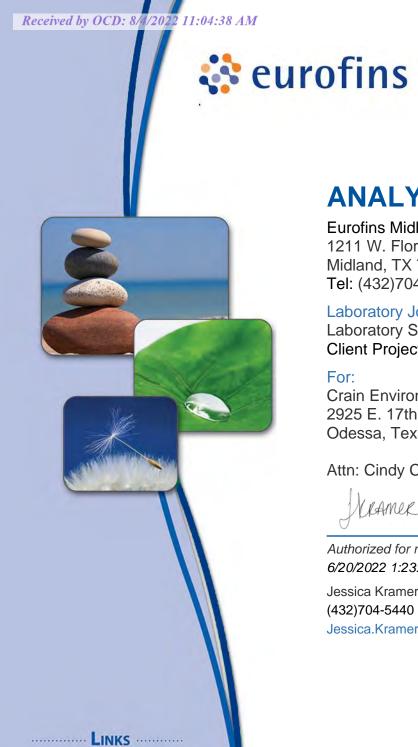
Login Number: 15046 **List Source: Eurofins Midland** 

List Number: 1

Creator: Rodriguez, Leticia

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

<6mm (1/4").



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# **Environment Testing America**

# **ANALYTICAL REPORT**

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

Laboratory Job ID: 880-15938-1

Laboratory Sample Delivery Group: Lea Co., NM

Client Project/Site: Flying M SA #2

For:

Crain Environmental 2925 E. 17th St. Odessa, Texas 79761

Attn: Cindy Crain

CRAMER

Authorized for release by: 6/20/2022 1:23:25 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Crain Environmental
Project/Site: Flying M SA #2

Laboratory Job ID: 880-15938-1 SDG: Lea Co., NM

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#### **Definitions/Glossary**

Client: Crain Environmental Job ID: 880-15938-1 Project/Site: Flying M SA #2 SDG: Lea Co., NM

#### **Qualifiers**

#### **GC VOA**

Qualifier **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

**GC Semi VOA** 

Qualifier **Qualifier Description** 

Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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

**HPLC/IC** 

Qualifier **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

**Glossary** 

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

Percent Recovery %R CFL Contains Free Liquid CFU Colony Forming Unit CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor** 

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

**EDL** Estimated Detection Limit (Dioxin) LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level" Minimum Detectable Activity (Radiochemistry) MDA MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit Minimum Level (Dioxin) ML MPN Most Probable Number Method Quantitation Limit MQL

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present **PQL Practical Quantitation Limit** 

**PRES** Presumptive

QC

**Quality Control** RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

Relative Percent Difference, a measure of the relative difference between two points **RPD** 

TEF Toxicity Equivalent Factor (Dioxin) Toxicity Equivalent Quotient (Dioxin) **TEQ** 

**TNTC** Too Numerous To Count

#### **Case Narrative**

Client: Crain Environmental Job ID: 880-15938-1
Project/Site: Flying M SA #2 SDG: Lea Co., NM

Job ID: 880-15938-1

**Laboratory: Eurofins Midland** 

Narrative

Job Narrative 880-15938-1

#### Receipt

The samples were received on 6/15/2022 3:21 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.7°C

#### **GC VOA**

Method 8021B: The following sample was diluted because the initial analysis produced a significant negative result - the absolute value exceeded the reporting limit (RL): MW-3 (880-15938-3). Reporting limits (RLs) are elevated as a result.

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

#### GC Semi VOA

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: MW-1 (880-15938-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD\_NM: The method blank for preparation batch 880-27757 and analytical batch 880-27733 contained Gasoline Range Organics (GRO)-C6-C10 and Diesel Range Organics (Over C10-C28) above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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

#### HPLC/IC

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

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Job ID: 880-15938-1

SDG: Lea Co., NM

Client Sample ID: MW-1

Client: Crain Environmental

Project/Site: Flying M SA #2

Date Collected: 06/14/22 13:50 Date Received: 06/15/22 15:21

Lab Sample ID: 880-15938-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000408	U	0.00200	0.000408	mg/L			06/16/22 19:23	1
Toluene	< 0.000367	U	0.00200	0.000367	mg/L			06/16/22 19:23	1
Ethylbenzene	<0.000657	U	0.00200	0.000657	mg/L			06/16/22 19:23	1
m-Xylene & p-Xylene	<0.000629	U	0.00400	0.000629	mg/L			06/16/22 19:23	1
o-Xylene	<0.000642	U	0.00200	0.000642	mg/L			06/16/22 19:23	1
Xylenes, Total	<0.000642	U	0.00400	0.000642	mg/L			06/16/22 19:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130					06/16/22 19:23	1
1,4-Difluorobenzene (Surr)	100		70 - 130					06/16/22 19:23	1
Method: Total BTEX - Total BTEX	Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte Total TPH	- Result <0.901	Qualifier U	RL 4.56	MDL 0.901	Unit mg/L	D	Prepared	Analyzed 06/20/22 12:52	Dil Fac
			4.56	0.901	mg/L			06/20/22 12:52	1
Method: 8015B NM - Diesel Rang			D.	MDI	1114		B	A	D!! E
Analyte		Qualifier	RL 4.50		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<0.901	U	4.56	0.901	mg/L		06/17/22 09:00	06/18/22 07:54	1
Diesel Range Organics (Over C10-C28)	<0.901	U	4.56	0.901	mg/L		06/17/22 09:00	06/18/22 07:54	1
Oll Range Organics (Over C28-C36)	<0.869	U	4.56	0.869	mg/L		06/17/22 09:00	06/18/22 07:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	123		70 - 130				06/17/22 09:00	06/18/22 07:54	1
o-Terphenyl	137	S1+	70 - 130				06/17/22 09:00	06/18/22 07:54	1
Method: 300.0 - Anions, Ion Chro	0 . ,								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<del>-</del>			5.00	0.210	mg/L			06/17/22 11:21	10

**Client Sample ID: MW-2** Lab Sample ID: 880-15938-2 Date Collected: 06/14/22 14:45 **Matrix: Water** 

Date Received: 06/15/22 15:21

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000408	U	0.00200	0.000408	mg/L			06/16/22 19:49	1
Toluene	< 0.000367	U	0.00200	0.000367	mg/L			06/16/22 19:49	1
Ethylbenzene	< 0.000657	U	0.00200	0.000657	mg/L			06/16/22 19:49	1
m-Xylene & p-Xylene	<0.000629	U	0.00400	0.000629	mg/L			06/16/22 19:49	1
o-Xylene	<0.000642	U	0.00200	0.000642	mg/L			06/16/22 19:49	1
Xylenes, Total	<0.000642	U	0.00400	0.000642	mg/L			06/16/22 19:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130			=		06/16/22 19:49	1
1,4-Difluorobenzene (Surr)	91		70 - 130					06/16/22 19:49	1

Job ID: 880-15938-1

SDG: Lea Co., NM

Client Sample ID: MW-2

Client: Crain Environmental

Project/Site: Flying M SA #2

Date Collected: 06/14/22 14:45 Date Received: 06/15/22 15:21

Lab Sample ID: 880-15938-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.000657	U	0.00400	0.000657	mg/L			06/17/22 09:40	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<0.901	U	4.56	0.901	mg/L			06/20/22 12:52	1
Method: 8015B NM - Diesel Rang	o Organics (D	RO) (GC)							
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<0.901	U	4.56	0.901	mg/L		06/17/22 09:00	06/18/22 09:10	
(GRO)-C6-C10									
Diesel Range Organics (Over	<0.901	U	4.56	0.901	mg/L		06/17/22 09:00	06/18/22 09:10	•
C10-C28)									
Oll Range Organics (Over C28-C36)	<0.869	U	4.56	0.869	mg/L		06/17/22 09:00	06/18/22 09:10	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	99	-	70 - 130				06/17/22 09:00	06/18/22 09:10	
o-Terphenyl	110		70 - 130				06/17/22 09:00	06/18/22 09:10	
Method: 300.0 - Anions, Ion Chro	matography								
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1440	-	25.0	1.05	mg/L			06/16/22 23:00	50

**Client Sample ID: MW-3** Lab Sample ID: 880-15938-3 Date Collected: 06/14/22 15:40 **Matrix: Water** 

Date Received: 06/15/22 15:21

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00408	U	0.0200	0.00408	mg/L			06/16/22 20:15	10
Toluene	< 0.00367	U	0.0200	0.00367	mg/L			06/16/22 20:15	10
Ethylbenzene	< 0.00657	U	0.0200	0.00657	mg/L			06/16/22 20:15	10
m-Xylene & p-Xylene	<0.00629	U	0.0400	0.00629	mg/L			06/16/22 20:15	10
o-Xylene	< 0.00642	U	0.0200	0.00642	mg/L			06/16/22 20:15	10
Xylenes, Total	<0.00642	U	0.0400	0.00642	mg/L			06/16/22 20:15	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	118		70 - 130					06/16/22 20:15	10
	94		70 - 130					06/16/22 20:15	10
1,4-Difluorobenzene (Surr)  Method: Total BTEX - Total BT  Analyte	EX Calculation	Qualifier	70 - 730 RL	MDL	Unit	D	Prepared		
• * * * * * * * * * * * * * * * * * * *			70 - 130						70
• * * * * * * * * * * * * * * * * * * *	EX Calculation			MDL 0.00657		<u>D</u>	Prepared	<b>Analyzed</b> 06/17/22 09:40	
Method: Total BTEX - Total BT Analyte Total BTEX	EX Calculation Result <0.00657	U	RL			<u>D</u>	Prepared	Analyzed	Dil Fac
Method: Total BTEX - Total BT Analyte	EX Calculation Result <0.00657  ge Organics (DR	U	RL	0.00657		<u>D</u>	Prepared Prepared	Analyzed	Dil Fac
Method: Total BTEX - Total BT Analyte Total BTEX Method: 8015 NM - Diesel Ran	EX Calculation Result <0.00657  ge Organics (DR	O) (GC) Qualifier	RL 0.0400	0.00657	mg/L Unit			Analyzed 06/17/22 09:40	Dil Fac
Method: Total BTEX - Total BT Analyte Total BTEX  Method: 8015 NM - Diesel Ran Analyte	EX Calculation Result <0.00657  ge Organics (DRO Result <0.898	O) (GC) Qualifier U		0.00657 <b>MDL</b>	mg/L Unit			Analyzed 06/17/22 09:40 Analyzed	Dil Fac
Method: Total BTEX - Total BT Analyte Total BTEX  Method: 8015 NM - Diesel Ran Analyte Total TPH  Method: 8015B NM - Diesel Ra	EX Calculation Result <0.00657  ge Organics (DR) Result <0.898  unge Organics (D	O) (GC) Qualifier U		0.00657 MDL 0.898	mg/L Unit			Analyzed 06/17/22 09:40 Analyzed	Dil Fac
Method: Total BTEX - Total BT Analyte Total BTEX  Method: 8015 NM - Diesel Ran Analyte Total TPH	EX Calculation Result <0.00657  ge Organics (DR) Result <0.898  unge Organics (D	U O) (GC) Qualifier U RO) (GC) Qualifier	RL 0.0400 RL 4.55	0.00657 MDL 0.898	mg/L  Unit mg/L  Unit	<u>D</u>	Prepared	Analyzed 06/17/22 09:40  Analyzed 06/20/22 12:52	Dil Fac  Dil Fac

# **Client Sample Results**

Client: Crain Environmental Job ID: 880-15938-1 Project/Site: Flying M SA #2 SDG: Lea Co., NM

**Client Sample ID: MW-3** Lab Sample ID: 880-15938-3

Date Collected: 06/14/22 15:40 **Matrix: Water** Date Received: 06/15/22 15:21

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	<0.867	U	4.55	0.867	mg/L		06/17/22 09:00	06/18/22 09:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130				06/17/22 09:00	06/18/22 09:32	1
o-Terphenvl	109		70 - 130				06/17/22 09:00	06/18/22 09:32	1

Method: 300.0 - Anions, Ion Chromatography										
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	469		10.0	0.421	mg/L			06/16/22 23:09	20

# **Surrogate Summary**

Client: Crain Environmental Job ID: 880-15938-1
Project/Site: Flying M SA #2 SDG: Lea Co., NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Water Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Sample ID	Client Sample ID	(70-130)	(70-130)	
15720-A-1 MS	Matrix Spike	114	108	
5720-A-1 MSD	Matrix Spike Duplicate	106	95	
15938-1	MW-1	115	100	
15938-2	MW-2	115	91	
15938-3	MW-3	118	94	
880-27653/3	Lab Control Sample	103	99	
0 880-27653/4	Lab Control Sample Dup	109	100	
880-27653/8	Method Blank	83	93	

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Water Prep Type: Total/NA

		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-15938-1	MW-1	123	137 S1+
880-15938-1 MS	MW-1	92	96
880-15938-1 MSD	MW-1	97	102
880-15938-2	MW-2	99	110
880-15938-3	MW-3	98	109
LCS 880-27757/2-A	Lab Control Sample	94	107
LCSD 880-27757/3-A	Lab Control Sample Dup	99	111
MB 880-27757/1-A	Method Blank	111	127

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

#### QC Sample Results

Client: Crain Environmental Job ID: 880-15938-1 Project/Site: Flying M SA #2 SDG: Lea Co., NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-27653/8

**Matrix: Water** 

Analysis Batch: 27653

Client	Sample	ID:	Meth	od E	Blank	

Prep Type: Total/NA

MB MB Dil Fac Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Benzene <0.000408 U 0.00200 0.000408 mg/L 06/16/22 11:07 Toluene <0.000367 U 0.00200 0.000367 mg/L 06/16/22 11:07 Ethylbenzene 06/16/22 11:07 <0.000657 U 0.00200 0.000657 mg/L m-Xylene & p-Xylene <0.000629 U 0.00400 0.000629 mg/L 06/16/22 11:07 o-Xylene <0.000642 U 0.00200 0.000642 mg/L 06/16/22 11:07 Xylenes, Total <0.000642 U 0.00400 0.000642 mg/L 06/16/22 11:07

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		70 - 130		06/16/22 11:07	1
1,4-Difluorobenzene (Surr)	93		70 - 130		06/16/22 11:07	1

Lab Sample ID: LCS 880-27653/3 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

**Analysis Batch: 27653** 

LCS LCS %Rec Spike Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.100 0.08318 mg/L 83 70 - 130 Toluene 0.100 0.08612 mg/L 86 70 - 130 Ethylbenzene 0.100 0.09575 mg/L 96 70 - 130 95 m-Xylene & p-Xylene 0.200 0.1891 mg/L 70 - 130 0.100 o-Xylene 0.09290 mg/L 93 70 - 130

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: LCSD 880-27653/4

**Matrix: Water** 

**Analysis Batch: 27653** 

<b>Client Sample II</b>	D: Lab	Control	Sample Dup
		Dron T	mar Total/NIA

Prep Type: Total/NA

Client Sample ID: Matrix Spike

	Spike	LCSD	LCSD			%Rec		RPD	
Analyte	Added	Result	Qualifier Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.08934	mg/L		89	70 - 130	7	20	
Toluene	0.100	0.09106	mg/L		91	70 - 130	6	20	
Ethylbenzene	0.100	0.1006	mg/L		101	70 - 130	5	20	
m-Xylene & p-Xylene	0.200	0.2001	mg/L		100	70 - 130	6	20	
o-Xylene	0.100	0.09787	mg/L		98	70 - 130	5	20	

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1.4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: 880-15720-A-1 MS

Matrix: Water									Prep Type: Total/NA	
Analysis Batch: 27653										
	Sample	Sample	Spike	MS	MS				%Rec	
nalyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	

<0.000408 U Benzene 0.100 0.1035 mg/L 103 70 - 130 Toluene <0.000367 U 0.100 0.1080 mg/L 108 70 - 130

#### QC Sample Results

Client: Crain Environmental Job ID: 880-15938-1 Project/Site: Flying M SA #2 SDG: Lea Co., NM

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

Lab Sample ID: 880-15720-A-1 MS

**Matrix: Water** 

Analysis Batch: 27653

Client Sample ID: Matrix Spike

Prep Type: Total/NA

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.000657	U	0.100	0.1158		mg/L		116	70 - 130	
m-Xylene & p-Xylene	<0.000629	U	0.200	0.2287		mg/L		114	70 - 130	
o-Xylene	<0.000642	U	0.100	0.1147		mg/L		115	70 - 130	

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	114		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

**Analysis Batch: 27653** 

**Matrix: Water** 

Lab Sample ID: 880-15720-A-1 MSD

Sample Sample Spike MSD MSD %Rec RPD Result Qualifier RPD Limit Analyte babbA Result Qualifier Unit %Rec Limits Benzene <0.000408 U 0.100 0.08268 mg/L 83 70 - 130 22 25 Toluene <0.000367 U 0.100 0.08640 mg/L 86 70 - 130 22 25 Ethylbenzene <0.000657 U 0.100 0.09580 96 70 - 130 19 25 mg/L <0.000629 U 0.200 m-Xylene & p-Xylene 0.1898 mg/L 95 70 - 130 19 25 <0.000642 U 0.100 0.09397 70 - 130 20 o-Xylene mg/L 94

MSD MSD

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

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

Lab Sample ID: MB 880-27757/1-A

**Matrix: Water** 

**Analysis Batch: 27733** 

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 27757

MB MB Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac Analyte 06/17/22 09:00 06/18/22 06:49 1.231 J 4.57 0.904 mg/L Gasoline Range Organics (GRO)-C6-C10 06/17/22 09:00 06/18/22 06:49 Diesel Range Organics (Over 1.153 J 4.57 0.904 mg/L C10-C28) OII Range Organics (Over C28-C36) <0.872 U 4.57 0.872 mg/L 06/17/22 09:00 06/18/22 06:49

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	111		70 - 130	06/17/22 09:00	06/18/22 06:49	1
o-Terphenyl	127		70 - 130	06/17/22 09:00	06/18/22 06:49	1

Lab Sample ID: LCS 880-27757/2-A

**Matrix: Water** 

**Analysis Batch: 27733** 

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

Prep Batch: 27757

	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics	91.7	74.37		mg/L		81	75 - 125
(GRO)-C6-C10							
Diesel Range Organics (Over	91.7	90.76		mg/L		99	75 - 125
C10-C28)							

Job ID: 880-15938-1

SDG: Lea Co., NM

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

Lab Sample ID: LCS 880-27757/2-A

**Matrix: Water** 

Analysis Batch: 27733

Client: Crain Environmental

Project/Site: Flying M SA #2

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 27757

LCS LCS

Surrogate %Recovery Qualifier Limits 1-Chlorooctane 94 70 - 130 o-Terphenyl 107 70 - 130

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 27757

Lab Sample ID: LCSD 880-27757/3-A **Matrix: Water** 

**Analysis Batch: 27733** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	92.0	77.98		mg/L		85	75 - 125	5	20
(GRO)-C6-C10									
Diesel Range Organics (Over	92.0	94.29		mg/L		102	75 - 125	4	20
C10-C28)									

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	111		70 - 130

Lab Sample ID: 880-15938-1 MS Client Sample ID: MW-1

**Matrix: Water** Prep Type: Total/NA **Analysis Batch: 27733** Prep Batch: 27757

Sample Sample Spike MS MS Result Qualifier Result Qualifier Analyte Added Unit D %Rec Limits Gasoline Range Organics < 0.901 U 90.9 91.56 mg/L 101 75 - 125

(GRO)-C6-C10 Diesel Range Organics (Over <0.901 U 90.9 91.27 mg/L 100 75 - 125

C10-C28)

MS MS Surrogate %Recovery Qualifier Limits 70 - 130 1-Chlorooctane 92 o-Terphenyl 96 70 - 130

Lab Sample ID: 880-15938-1 MSD Client Sample ID: MW-1 **Matrix: Water** 

Prep Type: Total/NA **Analysis Batch: 27733** Prep Batch: 27757

Spike MSD MSD RPD Sample Sample %Rec

Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<0.901	U	90.9	98.53		mg/L		108	75 - 125	7	20
(GRO)-C6-C10											
Diesel Range Organics (Over	< 0.901	U	90.9	98.71		mg/L		109	75 - 125	8	20

C10-C28)

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	97		70 - 130
o-Terphenyl	102		70 - 130

Job ID: 880-15938-1

SDG: Lea Co., NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-27724/3

**Matrix: Water** 

**Analysis Batch: 27724** 

Client: Crain Environmental

Project/Site: Flying M SA #2

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

Analyte Result Qualifier RLMDL Unit D Prepared Analyzed Dil Fac Chloride <0.0210 U 0.500 0.0210 mg/L 06/16/22 19:24

MB MB

Lab Sample ID: LCS 880-27724/4 Client Sample ID: Lab Control Sample **Matrix: Water** Prep Type: Total/NA

**Analysis Batch: 27724** 

Spike LCS LCS %Rec Added Analyte Result Qualifier Unit D %Rec Limits Chloride 25.0 25.63 mg/L 103 90 - 110

Lab Sample ID: LCSD 880-27724/5 Client Sample ID: Lab Control Sample Dup **Matrix: Water** Prep Type: Total/NA

Analysis Batch: 27724

LCSD LCSD RPD Spike %Rec Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit Chloride 25.0 25.56 mg/L 102 90 - 110

Lab Sample ID: 880-15951-A-1 MS Client Sample ID: Matrix Spike **Matrix: Water** Prep Type: Total/NA

**Analysis Batch: 27724** 

MS MS Sample Sample Spike %Rec Added Analyte Result Qualifier Result Qualifier Unit %Rec Limits Chloride 40.3 25.0 64.43 90 - 110 mg/L

Lab Sample ID: 880-15951-A-1 MSD Client Sample ID: Matrix Spike Duplicate Prep Type: Total/NA

**Matrix: Water** 

**Analysis Batch: 27724** 

Sample Sample Spike MSD MSD %Rec RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit 25.0 Chloride 40.3 64.56 mg/L 97 90 - 110

Lab Sample ID: 880-15993-A-1 MS Client Sample ID: Matrix Spike Prep Type: Total/NA

**Matrix: Water** 

**Analysis Batch: 27724** 

Sample Sample Spike MS MS %Rec Result Qualifier Added Analyte Result Qualifier Unit D %Rec Limits Chloride 8.59 25.0 33 94 mg/L 101 90 - 110

Lab Sample ID: 880-15993-A-1 MSD Client Sample ID: Matrix Spike Duplicate Prep Type: Total/NA

**Matrix: Water** 

**Analysis Batch: 27724** 

MSD MSD %Rec RPD Sample Sample Spike Analyte Result Qualifier Added Result Qualifier Limits RPD Limit Unit D %Rec Chloride 8.59 25.0 33.94 mg/L 101 90 - 110 20

# **QC Association Summary**

Client: Crain Environmental Job ID: 880-15938-1
Project/Site: Flying M SA #2 SDG: Lea Co., NM

#### **GC VOA**

#### Analysis Batch: 27653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15938-1	MW-1	Total/NA	Water	8021B	
880-15938-2	MW-2	Total/NA	Water	8021B	
880-15938-3	MW-3	Total/NA	Water	8021B	
MB 880-27653/8	Method Blank	Total/NA	Water	8021B	
LCS 880-27653/3	Lab Control Sample	Total/NA	Water	8021B	
LCSD 880-27653/4	Lab Control Sample Dup	Total/NA	Water	8021B	
880-15720-A-1 MS	Matrix Spike	Total/NA	Water	8021B	
880-15720-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	

#### Analysis Batch: 27782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15938-1	MW-1	Total/NA	Water	Total BTEX	
880-15938-2	MW-2	Total/NA	Water	Total BTEX	
880-15938-3	MW-3	Total/NA	Water	Total BTEX	

#### **GC Semi VOA**

#### Analysis Batch: 27733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15938-1	MW-1	Total/NA	Water	8015B NM	27757
880-15938-2	MW-2	Total/NA	Water	8015B NM	27757
880-15938-3	MW-3	Total/NA	Water	8015B NM	27757
MB 880-27757/1-A	Method Blank	Total/NA	Water	8015B NM	27757
LCS 880-27757/2-A	Lab Control Sample	Total/NA	Water	8015B NM	27757
LCSD 880-27757/3-A	Lab Control Sample Dup	Total/NA	Water	8015B NM	27757
880-15938-1 MS	MW-1	Total/NA	Water	8015B NM	27757
880-15938-1 MSD	MW-1	Total/NA	Water	8015B NM	27757

#### Prep Batch: 27757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15938-1	MW-1	Total/NA	Water	8015NM Aq Prep	
880-15938-2	MW-2	Total/NA	Water	8015NM Aq Prep	
880-15938-3	MW-3	Total/NA	Water	8015NM Aq Prep	
MB 880-27757/1-A	Method Blank	Total/NA	Water	8015NM Aq Prep	
LCS 880-27757/2-A	Lab Control Sample	Total/NA	Water	8015NM Aq Prep	
LCSD 880-27757/3-A	Lab Control Sample Dup	Total/NA	Water	8015NM Aq Prep	
880-15938-1 MS	MW-1	Total/NA	Water	8015NM Aq Prep	
880-15938-1 MSD	MW-1	Total/NA	Water	8015NM Aq Prep	

#### Analysis Batch: 27903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15938-1	MW-1	Total/NA	Water	8015 NM	
880-15938-2	MW-2	Total/NA	Water	8015 NM	
880-15938-3	MW-3	Total/NA	Water	8015 NM	

#### **HPLC/IC**

#### Analysis Batch: 27724

La	ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
88	30-15938-1	MW-1	Total/NA	Water	300.0	
88	30-15938-2	MW-2	Total/NA	Water	300.0	
88	30-15938-3	MW-3	Total/NA	Water	300.0	

# **QC Association Summary**

Client: Crain Environmental Job ID: 880-15938-1
Project/Site: Flying M SA #2 SDG: Lea Co., NM

#### **HPLC/IC** (Continued)

#### **Analysis Batch: 27724 (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-27724/3	Method Blank	Total/NA	Water	300.0	
LCS 880-27724/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-27724/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-15951-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
880-15951-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
880-15993-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
880-15993-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

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Client: Crain Environmental Project/Site: Flying M SA #2 Job ID: 880-15938-1

SDG: Lea Co., NM

Client Sample ID: MW-1

Date Received: 06/15/22 15:21

Lab Sample ID: 880-15938-1 Date Collected: 06/14/22 13:50

**Matrix: Water** 

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1			27653	06/16/22 19:23	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27782	06/17/22 09:40	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			27903	06/20/22 12:52	SM	XEN MID
Total/NA	Prep	8015NM Aq Prep			32.9 mL	3 mL	27757	06/17/22 09:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27733	06/18/22 07:54	SM	XEN MID
Total/NA	Analysis	300.0		10			27724	06/17/22 11:21	СН	XEN MID

Lab Sample ID: 880-15938-2 **Client Sample ID: MW-2** 

Date Collected: 06/14/22 14:45 **Matrix: Water** 

Date Received: 06/15/22 15:21

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1			27653	06/16/22 19:49	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27782	06/17/22 09:40	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			27903	06/20/22 12:52	SM	XEN MID
Total/NA	Prep	8015NM Aq Prep			32.9 mL	3 mL	27757	06/17/22 09:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27733	06/18/22 09:10	SM	XEN MID
Total/NA	Analysis	300.0		50			27724	06/16/22 23:00	СН	XEN MID

**Client Sample ID: MW-3** Lab Sample ID: 880-15938-3 Date Collected: 06/14/22 15:40 **Matrix: Water** 

Date Received: 06/15/22 15:21

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		10			27653	06/16/22 20:15	MR	XEN MIC
Total/NA	Analysis	Total BTEX		1			27782	06/17/22 09:40	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			27903	06/20/22 12:52	SM	XEN MID
Total/NA	Prep	8015NM Aq Prep			33 mL	3 mL	27757	06/17/22 09:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27733	06/18/22 09:32	SM	XEN MID
Total/NA	Analysis	300.0		20			27724	06/16/22 23:09	CH	XEN MID

Laboratory References:

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

# **Accreditation/Certification Summary**

Client: Crain Environmental Job ID: 880-15938-1
Project/Site: Flying M SA #2 SDG: Lea Co., NM

#### **Laboratory: Eurofins Midland**

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

Authority	P	Program	Identification Number	<b>Expiration Date</b>	
exas		NELAP	T104704400-21-22	06-30-22	
The following analytes the agency does not of	' '	out the laboratory is not certifi	ed by the governing authority. This list ma	ay include analytes for whic	
Analysis Method	Prep Method	Matrix	Analyte		
			7 than y to		
300.0		Water	Chloride		
300.0 8015 NM		Water Water	<b>.</b>		

3

4

5

7

10

12

13

114

### **Method Summary**

Client: Crain Environmental Project/Site: Flying M SA #2 Job ID: 880-15938-1 SDG: Lea Co., NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5030B	Purge and Trap	SW846	XEN MID
8015NM Aq Prep	Microextraction	SW846	XEN MID

#### Protocol References:

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

#### Laboratory References:

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

# **Sample Summary**

Client: Crain Environmental Project/Site: Flying M SA #2 Job ID: 880-15938-1

SDG: Lea Co., NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-15938-1	MW-1	Water	06/14/22 13:50	06/15/22 15:21
880-15938-2	MW-2	Water	06/14/22 14:45	06/15/22 15:21
880-15938-3	MW-3	Water	06/14/22 15:40	06/15/22 15:21

Address.

State of Project: NH

Program:

UST/PST PRP Brownfields

RRC □

Superfund

Work Order Comments

www.xenco.com

Bill to: (if different)

Company Name:

Address.

2925 2055

Company Name Project Manager

# Xelco Environment lesting

# Chain of Custody

Houston, TX (281) 240-4200, Dallas TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392 7550 Carlsbad, NM (575) 988-3199

Wor
Vork Order No:
er No:
Sa
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	of the state of th	4	121					5
		2 2	N. Colo				1	3 fresh from
ure) Date/Time	e) Received by (Signature)	Relinquished by (Signature)	Date/Time	D	Received by: (Signature)	Received	signature)	Relinquished by (Signature)
	and the control previously negotiated.	of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	xpenses incurred by the o	ach sample submitted	nd a charge of \$5 for e	d to each project a	charge of \$85.00 will be applied	of Eurofins Xenco. A minimum
	and conditions	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions	Eurofins Xenco, its affiliat	m client company to	alid purchase order fro	ples constitutes a	ent and relinquishment of sam	Notice: Signature of this docum
/7470 /747	Hg 1631	dcrc	A Sb As Ba Be	11	TCLP / SPLP 6010	alyzed	Circle Method(s) and Metal(s) to be analyzed	Circle Method(s) ar
Sr TI Sn II V Zn	Mn Mo Ni K Se Ag SiO, Na Sr	3 Cd Ca Cr Co Cu Fe Pb Ma	Sb As Ba Be B	13PPM Texas 11 Al Sb	8RCRA 13PPM	8	200.8 / 6020:	Total 200.7 / 6010
								The state of the s
	Custody							
	200-15938 Chain of City							
	•							
		X		1	1		6W	MW-3
		X	e X		1445		M &	MW-2
		X		1	1350 -	6/14/22	8W	MN-)
Sample Comments		Ch.	Cont 77	Depth Grab/ #	Time D Sampled	Sampled	ation Matrix	Sample Identification
NaOH+Ascorbic Acid SAPC		lon	E)		emperature:	Corrected Temperature		lotal Containers.
Zn Acetate+NaOH Zn		ich	4		e Reading	Temperature Reading:	Yes No (N/A	Sample Custody Seals.
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> NaSO <sub>3</sub>		, 	OL.		actor.	Correction Factor	Yes No N/A	Cooler Custody Seals.
NaHSO 4 NABIS			51	R	i io	Thermometer ID:	Yes No	Samples Received Intact:
			eters	Yes) No	) Wet Ice: /	Yes No	Temp Blank:	SAMPLE RECEIPT
5				by 4.30pm	the lab, if received by 4.30pm		,	PO#
HCL HC HNO HN				received by	ĕ.		Cindy Cain	Sampler's Name:
				6/23/22	Due Date:		Lea Co. NM	Project Location.
None NO DI Water H.O			Pres.	Rush	X Routine [		,	Project Number
Preservative Codes	SI	ANALYSIS REQUEST	C	und	Turn Around	58 # 2	China M SI	Project Name
ADaPT Other	Deliverables. EDD AD	sil. con	Crain@ ampil.com	Cindy C	Email	244	1575) 441- 7244	Phone:
Reporting Level II 🗌 Level III 🗍 PST/UST 📗 TRRP 📗 Level IV 📗	Reporting Level II Level III	d 7X 79710	Midland TX	City, State ZIP		1877 X	Chessa, TX	City, State ZIP-

#### **Login Sample Receipt Checklist**

Job Number: 880-15938-1 Client: Crain Environmental SDG Number: Lea Co., NM

Login Number: 15938 **List Source: Eurofins Midland** 

List Number: 1

Creator: Rodriguez, Leticia

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

**Appendix D: Soil Boring Logs** 

Log		Client: Location	Southwe	est Royalties, Inc.	Completion Date Drilling Contractor						e 250 o <sub>j</sub> 71 155
SP	1	Purpose		tion for	Drilling Method Boring Diameter	Hollow Stem 6.5"	Auger	Surface	Elevation (f	t) 4,348	
Page 1	of 1	Project:	Flyingm	n_drl_19	Sample Type	Split-Spoon		Total D	epth (ft)	34	
Depth in Feet	Li	ithology	USCS	De	scription	Field EC	Calculated Chloride	Lab Chloride (mg/kg)	Lab TPH (mg/kg)	Lab BTEX (mg/kg)	
0			SC L		caliche						
5			SS	medium/	fine grained sand	0.23	475				
10			SS	Finegraine	ed Standstone Hard	8.31	12,137				
15			SS	Finegrain	ed Standstone Soft	2.88	4,300 /				
			С		Clay	3.44 /	5,108				
20	-					4.34	6,407				
25 —	-		С		Clay						
30	_ ///					1.31	2034 /				
-			SP	medium/	fine grained sand						

Lithology

☑ Clay : SandStone

☑ Caliche : Sand

35

10ft of Bentonite Hole Plug 3/8 with backfill to surface

0.12

316

<60

<63.4



<0.208

Received by	OCD: 8/4/202	2 11:04	!:38 AM						Page	251 of 31
Log	Client: Southwest Royalties, Inc.		•	02/21/2019		Latitud	е	33.5017		
Log	Location	:Flying M	12	Drilling Contractor		eering Associa	ates Longitu	ıde	-103.591	35
SP2	D	Dalinaa	4: <i>E_</i> _	Drilling Method	Hollow Stem Auger Surf		Surface	Elevation (ft	Elevation (ft) 3348	
	Purpose:	Chloride	tion for es	Boring Diameter	6.5" Split Speep			epth (ft)	34	
	Project:	Flyinan	n_drl_19	Sample Type	Split-Spoon		TOtal Di	epui (ii)	34	
Page 1 of	1	1 17.11911	u							
Depth in Feet	Lithology	USCS	Des	scription	Field EC	Calculated Chloride	Lab Chloride (mg/kg)	Lab TPH (mg/kg)	Lab BTEX (mg/kg)	
0	<b></b>									
	**********									
	**********									
	***************************************									
	**********	SC	CI	ayey Sand						
5 —	*********				7.06	10,199				
	************									
	**********									
	*********									
	xxxxxxxxx				5.46	7,889				
10										
		SS	Brittle Fine gra	ained Sandstone - Hard						
			2 9.5							
15 —					2.21 /	3,199				
					3.85	5,566				
20 —		SS	Brittle Fine ar	ained Sandstone - Soft						
		00	Dittio i illo git	amou canacione con						
25 —					3.31 /	4,786				
						,/				
		SC	Sandy	clay fine grained						
-		50	Januy	olay iirio grailled						
					0.58	846				
30 —										
-										
-		SC	Sandy	clay fine grained						
-					0.12	182.76	61	<61.1	<0.212	
1 1	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		1		0.12	i 18∠./b □	U I	\ \U.I	~U.Z IZ	

	Litho	ology	
$\otimes\!$	Caliche		Sand
	SandStor	те	

10ft of Bentonite Hole Plug 3/8 with backfill to surface



2904 W 2nd St Roswell, New Mexico 88201 Received by OCD: 8/4/2022 11:04:38 AM Page 252 of 315 Client: Southwest Royalties, Inc. Completion Date 02/21/2019 Latitude 33.50171 Log **Drilling Contractor** Atkins Engineering Associates Location: Flying M2 -103.59143 Longitude **Drilling Method** Hollow Stem Auger SP3 Surface Elevation (ft) 3349 Purpose: Delineation for **Boring Diameter** 6.5" Chlorides Total Depth (ft) 39 Sample Type Split-Spoon Project: Flyingm\_drl\_19 Page 1 of 1 Depth Lab Lab Lab Calculated Field in Lithology **USCS** Description Chloride TPH **BTEX** Chloride EC Feet (mg/kg) (mg/kg) (mg/kg) 0 SCL Sandy caliche 7,405 5.01 5 SS

Brittle Fine grained Sandstone, clay 10 4.7 6,957 SS Brittle Fine grained Sandstone - Hard SS Brittle Fine grained Sandstone - Soft 2.39 3,623 15 SC medium/fine grained sand, clay 3.15 4,720 20 С Clay 5.59 8,242 25 3.85 5,730 SP medium/fine grained sand 2.15 3,277 30 1.42 2,223 SP medium/fine grained sand 35 <0.208 0.16 405 130 <63.4 40

10ft of Bentonite Hole Plug 3/8 with backfill to surface



2904 W 2nd St Roswell, New Mexico 88201

Received by OCI	D: 8/4/202	2 11:04	1:38 AM	0 10 0	00/04/0040		14:4		Page	253 of 31
Log	Client:			Completion Date Drilling Contractor	02/21/2019 Atkins Engin	eering Associa	Latitude ates		33.5017	00
	Location	: Flying iv	12	Drilling Method	Hollow Stem		Longitu		-103.591	28
SP4	Purpose:	Delinea Chloride	tion for es	Boring Diameter	6.5"			Elevation (f		
	Project:		n_drl_19	Sample Type	Split-Spoon		Total D	epth (ft)	19	
Page 1 of 1	1 Toject.	Flyingii							I I	
Depth in Li	ithology	USCS	Des	scription	Field EC	Calculated Chloride	Lab Chloride	Lab TPH	Lab BTEX	
Feet							(mg/kg)	(mg/kg)	(mg/kg)	
5 —		SCL	Sa	ndy caliche	6.4	9,380				
10 —   15 — 		SS	Finegraine	rd Standstone Hard	7.05	2,424	120	<63.4	<0.208	

 10ft of Bentonite Hole Plug 3/8 with backfill to surface



2904 W 2nd St Roswell, New Mexico 88201

											1 46	ge i oi	
Boring	g/Well N	Vumber	ſ:			Permit 1	Number:						
		F	BH-1					OSE File Nbr: L 152	78				
Site N	ame: So	outhwes	st Royaltie	es, Inc.		Borehol	le Start Da	ate: 03/24/22	Borehole Start	Time: 1	520		AM 🗹 PM
	Flying I	M SA I	Unit 4" Tr	runk Lin	ıe		End Da	ate: 03/24/22	End 7	Γime:			AM 🏻 PM
Enviro	onmenta					Geologi	ist's Name			Environmen	tal Technician's Name:		
- ·III:			nvironme			. 771 1 1		Cindy Crain	<i></i>	None ): Borehole Depth (feet):			
Drillin	ng Comp	<sub>pany:</sub> Talon L	DE	ļ	Paveme		kness (incl .00	ches): Borehole Diam	neter (inches):  6	Boi	ehole i		(feet): 57
Drillin	ng Metho		<u>-                                    </u>	Apparen	t Boreho	ole DTW (i		Measured Well DTW		OVA (list m	odel ar		
	_	Rotary	!			are conten							FID PID
Dispos	sition of	f Drill (	Cuttings [	check m	ethod(s)	)]:	1	Orum	☐ Backfill	✓ Stock	cpile		Other
(descr	ibe if ot	her or	multiple ii	tems are	checke	d):							
			n (check o			Well	☐ Grou	ut 🔲 Bentonite	✓ Backfil	l <b>V</b> (	Other (d	lescribe	e)
		-			d a sam	nole coll	ected. Th	he boring will either b					<i></i>
0.5			700	100		p.5 2 1		10 25g : : :	. P. 23 - 1	O			Lab Soil and
Sar	San Int	Sample Recovery (inches)	Fiel Rea				De				US(	Moisture	Groundwater
Sample Type	Sample Depth Interval (feet)	ple Reco	Field Chloride Reading (ppm)		1		Depth (feet)	Sample	e Description		USCS Symbol	ure	Samples (list
· Ty	Dep I (fe	lecor	nlori (pp		l		(feet	~	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		ymł	Con	sample number and depth or
þe	et)	very	de m)		1		Ü				) []	Content	temporary screen
	$\vdash$	$\vdash$						Light red, well sorted sa	and. Fine to med	dium grained.		``	interval)
							1	No odors or staining. D		-	SW	D	
			'				2						
			'				3						
			'										
			'				4						
SS	4.5-5	18	1,636					Light red, well sorted sa No odors or staining. D		dium grained.	sw	D	
	"-	'-	.,				5	140 00010 01 0109	Λιγ.			_	
			'				6						
			'										
							7						
							8						
			'				9						
			'					Light red, well sorted sa	and. Fine to med	dium grained.			
DC	9-10	18	2,493				10	No odors or staining. D	Ory.		SW	D	
								Light tan to white, fine		andstone,			
			'				11	hard. No odors or stain	ning. Dry.		SS	D	
	1 '	1 ,	. '	,			10						i l

Page 2 of 4

Borin	g/Well N	Number	:	Permit Nun	nber: L 15278	8		Site Name: Southwest Royalties	Borehole	Start D	ate:	03/24/22
	В	H-1						Flying M SA Unit 4" Trunkline		End Date:		03/24/22
Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	Field Chloride Reading (ppm)			Depth (feet)		Sample Description		USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
Pe DC	et) 19-20	very 18	ide (m) 4,059			13 14 15 16 17 18 19 20 21 22 23 24 25 26 27	Light ta hard. N	n to white, fine grained, brittle sand o odors or staining. Dry.  In to white, fine grained, brittle sand o odor or staining. Dry.  In green, clayey sand, well sorted. No. Dry.	dstone,	bol S S S S	ntent D D	temporary screen
DC	29-30	18	1,016			28 29 30	Grayish staining	n green, clayey sand, well sorted. N g. Dry.	o odor or	SC	D	

Page 3 of
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Borin	Boring/Well Number:			Permit Numbe	r: L 1527	8	Site Name: Southwest Royalties Borehole	Start I	Date:	03/24/22
	В	H-1					Flying M SA Unit 4" Trunkline	End D	ate:	03/24/22
Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	Field Chloride Reading (ppm)			Depth (feet)	Sample Description	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
						31 32 33 34 35 36 37 38	Grayish green, clayey sand, well sorted. No odor or staining. Moist.	SC	М	
DC	39-40	18	<279			39 40 41 42	Orangish red, well sorted sand. No odor or staining. Moist.	SW	М	
						43 44 45 46 47 48	Depth to Water (3/29/22) = 42.37'  Gravelly, medium sorted, silty sand. No odor or staining. Dry.	SP	D	

Page 4 of 4

- 1
4

Borin	g/Well N	Numbei	::	Permit 1	Number	: L 1527	8		Site Name: Southwest Royalties   Borehold	Start I	Date:	03/24/22
	В	H-1							Flying M SA Unit 4" Trunkline	End D	ate:	03/24/22
Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	Field Chloride Reading (ppm)				Depth (feet)		Sample Description	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DC	49-50	18	<279				49 50 51 52	Gravell staining	y, medium sorted, silty sand. No odor or g. Dry.	SP	D	
							53 54 55 55 56	Dry	ed, silty clay. Non-plastic. No odor or staining epth of Boring	CL	D	

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings Moisture Content Codes:  $\mathbf{D} = \text{Dry}$ ;  $\mathbf{M} = \text{Moist}$ ;  $\mathbf{W} = \text{Wet}$ ;  $\mathbf{S} = \text{Saturated}$ 

												Pag	ge 1 of	4
Borin	g/Well l	Numbei	r:			Permit 1	Number:							
			BH-2				NM	IOSE F	ile Nbr: L 152	78				
Site N	ame: So	outhwe	st Royaltie	es, Inc.		Boreho	le Start D	ate:	05/05/22	Borehole Start	Time:	1030	<b>▼</b> A	AM PM
	Flying	M SA I	Unit 4" Tr	runk Lin	ie		End Da	ate:	05/05/22	End T	Γime:	1230		AM 🔽 PM
Envir	onmenta					Geologi	ist's Nam				Environmental Technician's Name:			
Dr:11:.	C ng Com		nvironme		Dovomo	nt Thicl	cness (inc		ndy Crain Borehole Diam	natar (inchas):	None Borehole Depth (feet):			(fact):
וווווו		рапу: Гаlon I	_PE		Paveme		.00	nes):	Borenoie Dian	6	ВО	orenoie i	-	(leet): 53
Drilli	ng Meth			Apparen	t Boreho	le DTW (		Mea	asured Well DTW	_	OVA (list n	nodel ar		
	Air I	Rotary		from sc	oil moistu	re conten	it): 41	l w	ater recharges in	well): 46.30				FID 🗌 PID
Dispo	sition of	f Drill (	Cuttings [	check m	ethod(s)	]:		Orum	☐ Spread	☐ Backfill	✓ Stoce	kpile		Other
(descr	ibe if ot	her or	multiple i	tems are	checked	d):								
Boreh	ole Con	npletion	n (check o	one):		Well	☐ Gro	ut	☐ Bentonite	Backfil	1 🔽	Other (d	lescribe	e)
Groui	ndwate	r was	encounte	red and	d a sam	ple coll	ected. Th	ne borir	ng will be eithe	er plugged or c	ompleted a	s a MV	٧	
		Se	I										M	Lab Soil and
Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	Field Chloride Reading (ppm)				Dep					USCS Symbol	Moisture	Groundwater Samples (list
ple [	ple I val (	ple Reco	Chl				Depth (feet)		Sample	Description		SSy	ıre C	sample number
Гуре	)eptl (feet	cove s)	orid				eet)					mbo	Content	and depth or temporary screen
,,	n )	ry	e 1)										ent	interval)
									ed, well sorted	and. Fine to med	lium grained.	SW	D	
							1			.,.				
							2							
							3							
							4							
							_							
							5							
							6							
							_							
							7							
							8							
							0							
							9							
							_							
							10							
							11							
							12						1	

Page 2 of

- 4
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Borin	g/Well l	Number	:	Permit	it Number: L 15278 Site Name: Southwest Roya		Site Name: Southwest Royalties	es Borehole Start Date:		ate:	05/05/22		
	В	H-2							Flying M SA Unit 4" Trunkline		End Date:		05/05/22
Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	Field Chloride Reading (ppm)				Depth (feet)		Sample Description		USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
							13		d, well sorted sand. Fine to mediungs or staining. Dry.	m grained.	SS	D	
							14 15 16 17 18 19		n to white, fine grained, brittle sand o odor or staining. Dry.	dstone,			
							20 21				SS	D	
							22						
							23 24	Grayish staining	n green, clayey sand, well sorted. N g. Dry.	lo odor or	sc	D	
							25 26						
							27						
							28 29	Orangis Dry.	sh red, well sorted sand. No odor o	r staining.	SC	M	
							30						

	οf	2	Page	D.
	Ωt	- '-	Page	ν,

Borin	g/Well l	Number	:	Permit 1	Number:	L 1527	8		Site Name: Southwest Royalties	Borehole	Start D	ate:	05/05/22
	В	H-2							Flying M SA Unit 4" Trunkline		End Da	ate:	05/05/22
Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	Field Chloride Reading (ppm)				Depth (feet)		Sample Description		USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
							31	Orangis Dry.	sh red, well sorted sand. No odor or	staining.	SC	М	
							32						
							33						
							34						
							36						
							37						
							38						
							39 40				SW	M	
							41	Light ta Damp.	n, well sorted sand. No odor or stai	ning.			
							42						
							43						
				\			44						
				l l	À A		46	Depth t	o Water (5/19/22) = 46.30'				
							47						
							48						

Permit Number: L 15278

Depth (feet)

49

50

51

52

53

55

56

staining. Dry.

Boring/Well Number:

Sample Depth Interval (feet)

Sample Type

BH-2

Sample Recovery (inches)

Field Chloride Reading (ppm)

#### **SOIL BORING LOG**

Site Name: Southwest Royalties

Flying M SA Unit 4" Trunkline

**Sample Description** 

Light tan, well sorted sand. No odor or staining.

Gravelly, medium sorted, silty sand. No odor or

Dark red, silty clay. Non-plastic. No odor or staining.

Page	4	of	
1 420	-	OI.	

Borehole Start Date:

SP

CL

D

D

End Da	ate:	05/05/22
USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
	l	

05/05/22

S	Sample	Type Co	odes: 1	PH = Post I	Hole; H	$\mathbf{IA} = \mathbf{Hand}$	l Auger;	SS = Split	t Spoon;	ST = Shelby Tube;	<b>DP</b> = Direct Push;	SC = S	onic Core	e; <b>D</b> (	C = Drill Cuttings
N	Moistu	re Conte	nt Code	es: $\mathbf{D} = D\mathbf{r}$	y; <b>M</b> =	Moist; V	$\mathbf{W} = \mathbf{Wet};$	S = Satur	rated						

Total Depth of Boring = 53'

								Pag	ge 1 of	4
Boring/Well Number:		Permit Num	mber:							
BH-3			NMC	OSE F	ile Nbr: L 1527	_				
Site Name: Southwest Royalties, I	nc.	Borehole St	tart Da	ite:	05/05/22	Borehole Start	Γime:	1320	<b>▼</b> A	AM PM
Flying M SA Unit 4" Trunk	< Line	Е	End Dat	te:	05/05/22	End T	Γime:	1520		AM 🗹 PM
Environmental Contractor:		Geologist's	s Name				Environmental Technician's Name:			ı's Name:
Crain Environmental Drilling Company:		ent Thicknes	Cindy Crain t Thickness (inches): Borehole Diameter (inches):			None Borehole Depth (feet):			(feet):	
Talon LPE	T uvenik	0.00		103).		6	Do	remore	-	57
Drilling Method(s): App	parent Boreho	ole DTW (in fe	eet	Mea	sured Well DTW	(in feet after	OVA (list n	nodel ar	nd chec	k type):
Air Rotary fro	om soil moistu	ire content):	44		ater recharges in v					FID 🗌 PID
Disposition of Drill Cuttings [chec	k method(s)	)]:	☐ Dr	rum	☐ Spread	☐ Backfill	✓ Stoce	kpile		Other
(describe if other or multiple items	s are checke	d):								
Borehole Completion (check one):	: 🗆	Well	Grou	lt	☐ Bentonite	Backfil	1	Other (d	lescribe	<del>;</del> )
Groundwater was encountered	and a sam	ple collecte	ed. Th	e borin	ig will be eithe	er plugged or co	ompleted a	s a MV	٧.	
Field Chloride Reading (ppm)  Sample Recovery (inches)  Sample Depth Interval (feet)  Sample Type		1	Depth (feet)			e Description		USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
			1	No odor Light tar	rs or staining. D	grained, brittle sa		SW SS	D O	
		_	- <sup>11</sup>							

Page 2 of 4

Borin	g/Well l	Number	:	Permit 1	Number:	L 1527	8		Site Name: Southwest Roya	alties Bo	orehole	Start D	ate:	05/05/22
	В	H-3							Flying M SA Unit 4" Trunkline		]	End Da	ite:	05/05/22
Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	Field Chloride Reading (ppm)				Depth (feet)		Sample Description			USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
							13		in to white, fine grained, brittle lo odor or staining. Dry.	tle sandsto	one,	SS	D	
							14							
							15							
							16							
							17							
							18							
							19					SS	D	
							20 21							
							22							
							23							
							24	Orangis Dry.	sh red, well sorted sand. No	odor or st	taining.	SC	M	
							25							
							26							
							27							
							28							
							29							
							30							

Page 3 of 4

Borin	g/Well l	Number	:	Permit 1	Number:	: L 1527	8	Site Name	e: Southwest Royalties	Borehole	Start D		05/05/22
		H-3						Flying M	1 SA Unit 4" Trunkline		End Da		05/05/22
Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	Field Chloride Reading (ppm)				Depth (feet)	Sa	mple Description		USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
							31	Orangish red, wel Dry.	l sorted sand. No odor or	staining.	sc	М	
							32						
							33						
							34						
							35						
							36						
							37						
							38						
							39						
							41						
							42						
							43	Damp					
							44	υαπρ					
							45						
							46						
							47						
							48						

Page	4	οf	
rage	4	OI	

										50 4 01	
Borin	g/Well l	Number	r:	Permit	Number	: L 1527	8	Site Name: Southwest Royalties Borehole	Start I	Date:	05/05/22
	В	H-3						Flying M SA Unit 4" Trunkline	End D	ate:	05/05/22
Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	Field Chloride Reading (ppm)				Depth (feet)	Sample Description	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
							49	Yellowish, silty sand. No odor or staining. Depth to water (5/19/22) = 48.33'	SC	M	
							50				
							51	Dark red, silty clay. Non-plastic. No odor or staining. Dry	CL	D	
							52		0.2		
							53 54				
							55				
							56	Total Depth of Boring = 57'			
							57	Total Dopart of Borning – 57			

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

**Appendix E: Waste Manifests** 

SUPERIOR PRINTING SERVICE, INC.

Received by OCD: 8/4/2022 11:04:38 AM JOSEPH INC.	697			Company Man Contact Information
TVI IIIC.	GENER	ATOR		Phone No
Operator No.		Location of Origin Lease/Well	-74	s 127
Operators Name			1.	
Address				
City, State, Zip				
Phone No.				
THORE NO.				
TRUCK TIME STAMP	DISPOSAL	FACILITY		RECEIVING AREA
IN:OUT:		1	Name/No. L	ANDFILL
Site Name / Permit No. Commercial Landfarm (N		Phone No575-3		
Address P.O. Box 1658 Roswell, NM 88202	W-711-1-0020)	Phone No. 373-3	947-0434	
	YES NO	If YES, was reading	na > 50 micro r	pentgens? (Circle One) YES NC
Pass the Paint Filter Test? (Circle One)			.5	
1	TRANSP	ORTER		
Transporter's Name	Acronible	Driver's Name		
Address		Print Name		
		Phone No		
Phone No		Truck No		
hereby certify that the above named material(s) was/	were picked up at the Generator	's site listed above and d	lelivered without	incident to the disposal facility listed below
		_1110	2/ 1	server E. Jarton
	SIGNATURE	DELIVERY DA	V	DRIVER'S SIGNATURE
Exempt E&P Waste/Service I		ace volume next to wa	aste type in ba	rrels or cubic yards)
	N-INJECTABLE WATERS		INJECTABLE	
	shout Water (Non-Injectable) mpletion Fluid/Flowback (Non-Injec	etable)	Washout Wat	er (Injectable)luid/Flowback (Injectable)
Water Based Cuttings Pro	duced Water (Non-Injectable)			ter (Injectable)
	thering Line Water/Waste (Non-Injection			e Water/Waste (Injectable)
	ERNAL USE ONLY ck Washout (Exempt Waste)		OTHER EXEM	Pheration process of the waste)
Gas Plant Waste	or vacation (Exchipt vacto)		(.)	The state of the s
WASTE GENERATION PROCESS:   Drilling	□ Completion	□ Produ	ection	☐ Gathering Lines
(All non-exempt E&P waste must b	lon-Exempt E&P Waste/Service analyzed and be below the threst	ce Identification and A hold limits for toxicity (TCL	Amount  P), ignition, corro	siveness, and reactivity.)
Non-Exempt Other:		*Please select from		
	2007		Y - Yards	
		Liquid	r - rarus	E - Each
	C-1	38		
hereby certify that according to the Resource Conservat	tion and Recovery Act (RCRA) and	the US Environmental Pro	otection Agency's	July 1988 regulatory determination, the above
described waste load is (Check the appropriate classificati	ion)			
RCRA EXEMPT: Oil field wastes generaccepts certifications	rated from oil and gas exploration on a per month only basis.)	and production operations	and are not mix	ed with non-exempt waste. (Gandy Marley, Inc
	The state of the s	roand the minimum standard	vdo for wests be	zardous by characteristics established in RCRA
regulations, 40 CFR 2	261.21-261.24, or listed hazardous v	waste as defined by 40 CFF	R, part 261, subpa	art D, as amended. The following documentation
	aste as non-hazardous is attached.			Add and the same of the same o
☐ MSDS Information	RCRA Hazardo	us Waste Analysis	_	Other (Provide Description Below)
T EMERCENCY NON OUR FIFE D. From the book				
■ EMERGENCY NON-OILFIELD: Emergency non-hazar ous waste determinat	tion and a description of the waste	must accompany this form	ment of Public S i.)	arety. (The order, documentation of non-hazard-
(PRINT) AUTHORIZED AGENTS SIGNATURE	DAT	ΓE	707	SIGNATURE
English Jak Hada Had	4/200	GM		Lambert 1 12 See
NAME (PRINT)	DATE	TITLE		SIGNATURE
Released to Imaging: 8/17/2022 1:13:14 PM	И			SUPERIOR PRINTING SERVICE, INC

Received by OCD: 8/4/2	022 11:04:38 AM NEW MEXICO NON	I-HAZARDOUS OILFIELD WA	STE MANIFEST / DISP	OSAL TICKET	Company Man Contact Information
Inc.	3968	8			Phone No.
		GENERA	The second secon	page 1	1 Hone No.
Operator No.			Location of Orig	in + 1131	2-2-11
	suchurst Mou			1	1)
	J				
TIONE NO.					
TRUCK T	IME STAMP	DISPOSAL I	FACILITY		RECEIVING AREA
IN: 11900	OUT:			Namo/No I	LANDFILL
		_			
	mmercial Landfarm (NM-711	-1-0020)	Phone No. 575	-347-0434	
Address P.O. Box 1658 Ro			navina navina		
	Taken? (Circle One) YES	NO	If YES, was read	ding > 50 micro	roentgens? (Circle One) YES NO
Pass the Paint Filt	ter Test? (Circle One) YES	TRANSPO	RTER		
Transmortaria Nama	Willy Maint				
			· ·		
Phone No		iokad up at the Caparatar's	Truck No.		it incident to the disposal facility listed below
nereby certify that the above	named material(s) was/were p	icked up at the Generator's	site listed above and	delivered withou	it incluent to the disposal facility listed below
SHIPMENT DATE	DRIVER'S SIGNAT	TURE	DELIVERY	DATE	DRIVER'S SIGNATURE
	t E&P Waste/Service Identif				
			ce volume next to v		
Oil Based Muds	100000000000000000000000000000000000000	CTABLE WATERS		INJECTABLE	
Oil Based Cuttings Water Based Muds		Vater (Non-Injectable) n Fluid/Flowback (Non-Injecta	able)		ter (Injectable) Fluid/Flowback (Injectable)
Water Based Cuttings		Water (Non-Injectable)		2017	ater (Injectable)
Produced Formation Solids	Gathering	Line Water/Waste (Non-Inject			ne Water/Waste (Injectable)
Tank Bottoms		USE ONLY		OTHER EXE	MPT WASTES
&P Contaminated Soil	Truck Wash	hout (Exempt Waste)		(Types and g	eneration process of the waste)
Gas Plant Waste					
WASTE GENERATION PROCES	SS: Drilling	□ Completion	□ Pro	duction	☐ Gathering Lines
	Non Ev	compt EPD Wasta/Sarvia	a Identification and	Amount	
(All non-	exempt E&P waste must be analy	empt E&P Waste/Service zed and be below the threshold			osiveness, and reactivity.)
Jon-Exempt Other:			*Please select fro	om Non-Exempt V	Vaste List on back
QUANTITY:	B - Barrels		,	Y - Yard	
QUANTITY:	B - Barrels		iquia	Y - Yard	E - Each
		C-13	IR.		
h	- the December 0	and the second second second second			to the 1000 was datased at the above
hereby certify that according to described waste load is (Check		d Hecovery Act (HCHA) and t	ne US Environmental F	Protection Agency	's July 1988 regulatory determination, the above
RCRA EXEMPT:			nd production operation	ns and are not mi	xed with non-exempt waste. (Gandy Marley, Ind
	accepts certifications on a p	er month only basis.)			
RCRA NON-EXEMPT:					azardous by characteristics established in RCR
		non-hazardous is attached. (0			part D, as amended. The following documentatio
☐ MSDS Ir	nformation	RCRA Hazardous	s Waste Analysis	(	Other (Provide Description Below)
- 11105011	TOTAL COLO		, radio ranaly die		
T EMERGENCY NON-OIL FIEL	D: Emergency non-hazardous	non-oilfield waste that has be	en ordered by the Depa	artment of Public	Safety. (The order, documentation of non-hazard
- EMENGENCI NON-OILFIE	ous waste determination and	d a description of the waste m	nust accompany this for	rm.)	Salety. (The order, desamentation of her mazare
(PRINT) AUTHORIZED A	AGENTS SIGNATURE	DATE			SIGNATURE
2 - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 1					
	The state of		GI	ΛI	Company Some Sugar
· William /	281110101 1	DATE			SIGNATURE
NAME (PRINT) Released to Imaging: 8/		DATE	TIT	LL.	SUPERIOR PRINTING SERVICE, INC
cicused to imaging. 0/.	1//2022 1.13.14 I NI				JOPENION PHINTING SERVICE, IN

Received by OCD: 8/4/2	022 11:04:38 4M CO NON-HAZA	RDOUS OILFIELD WASTE MANIFES	ST / DISPOSAL TICKET	Company Man Contact Information
GM inc.	39679			Name
TV IIIC.	27017	GENERATOR		Phone No.
Operator No			of Origin Vell	and 19
	Withwest Rides			
	11-1			
THORE IVO.				
TRUCK T	IME STAMP	DISPOSAL FACILITY		RECEIVING AREA
IN: To Hand C	OUT:		Name/N	o. LANDFILL
			100000000000000000000000000000000000000	0
	nmercial Landfarm (NM-711-1-002	Phone N	lo. <u>575-347-0434</u>	
Address P.O. Box 1658 Ro		1///50	50	0.00.1.0.1.0.1.0.1.0.1.0.0.0.0.0.0.0.0.
	Taken? (Circle One) YES NO er Test? (Circle One) YES NO		was reading > 50 mi	cro roentgens? (Circle One) YES NO
rass the raint rit	er rest? (Circle Orie) TES	TRANSPORTER		
Transporter's Name	4. hu I'llentray	A STATE OF THE PARTY OF THE PAR	Name	
Address	À			
Phone No.			1	
	named material(s) was/were picked u			ithout incident to the disposal facility listed below.
,	,	//	18.27	1 = 5 + 6
SHIPMENT DATE	DRIVER'S SIGNATURE	DE	LIVERY DATE	DRIVER'S SIGNATURE
	E&P Waste/Service Identification	n and Amount (Place volume r	ext to waste type	
Oil Based Cuttings Water Based Muds Water Based Cuttings Produced Formation Solids Tank Bottoms E&P Contaminated Soil	Produced Water (	Flowback (Non-Injectable)  Non-Injectable)  ater/Waste (Non-Injectable)  NLY	Comple Produce Gatherin OTHER	tit Water (Injectable) tion Fluid/Flowback (Injectable) ad Water (Injectable) ng Line Water/Waste (Injectable)  EXEMPT WASTES and generation process of the waste)
Gas Plant Waste WASTE GENERATION PROCES	Pe. Delling	□ Completion	□ Production	☐ Gathering Lines
		E&P Waste/Service Identificat	ion and Amount	
Non-Exempt Other:		*Please	select from Non-Exen	npt Waste List on back
QUANTITY:	B - Barrels	L - Liquid	10 Y-	Yards E - Each
		<u>C-138</u>		
I hereby certify that according to described waste load is (Check		very Act (RCRA) and the US Environ	nmental Protection Ag	ency's July 1988 regulatory determination, the above
RCRA EXEMPT:			operations and are no	ot mixed with non-exempt waste. (Gandy Marley, Inc.
☐ RCRA NON-EXEMPT:	Oil field waste which is non-hazard regulations, 40 CFR 261.21-261.24,	ous that does not exceed the minim or listed hazardous waste as defined	by 40 CFR, part 261,	ste hazardous by characteristics established in RCRA subpart D, as amended. The following documentation
☐ MSDS In	Charles and the Control of the Contr	zardous is attached. (Check the app  RCRA Hazardous Waste Analy		Other (Provide Description Below)
☐ EMERGENCY NON-OILFIEL		field waste that has been ordered by cription of the waste must accompar		blic Safety. (The order, documentation of non-hazard-
(PRINT) AUTHORIZED A	GENTS SIGNATURE	DATE		SIGNATURE
		(2) -11	GMI	
Solling 1	1018 114 111	) ×1		CIONATION
NAME (PRINT) Released to Imaging: 8/			TITLE	SIGNATURE SUPERIOR PRINTING SERVICE, INC.

Received by OCD: 8/4/2	022 11:04:38 AM NEW MEXICO NON-HAZAF	RDOUS OILFIELD WASTE MANIFEST / D	ISPOSAL TICKET	Page 288 of 31 Company Man Contact Information
M inc.	39708			Name
	07,00	GENERATOR		Phone No
Operator No		1	Origin	4.09 19
	Doulewest Rodal			
	Junitim 21 Strate			
			No	
Phone No		AFE/PO No.		
TRUCK	TIME STAMP	DISPOSAL FACILITY		DECENTING ADDA
1111 50 21				RECEIVING AREA
IN: 16, 10,719	OUT:		Name/No. L	ANDFILL
Site Name / Permit No. Co	mmercial Landfarm (NM-711-1-0020	Phone No. 5	575-347-0434	
Address P.O. Box 1658 R		Priorie No		
	Taken? (Circle One) YES NO	If YES, was n	eading > 50 micro r	roentgens? (Circle One) YES NO
	ter Test? (Circle One) YES NO	, , , , , , , , , , , , , , , , , , , ,	odding 2 oo moro i	osingono. (onoie ono)
	1 3 31 . 1	TRANSPORTER		
Transporter's Name	Kity I Minterval		e	
CALL TO A STATE OF THE STATE OF			1	
	e named material(s) was/were nicked u			t incident to the disposal facility listed below
Thereby cortiny that the above	mamed material(s) was were pieked up	at the denerator's site listed above a	ed me	1 - 1
SHIPMENT DATE	DRIVER'S SIGNATURE	DELIVE	RY DATE	DRIVER'S SIGNATURE
	t E&P Waste/Service Identification			
			to waste type in ba	arreis or cubic yards)
Oil Based Muds	NON-INJECTABLE		INJECTABLE	
Oil Based Cuttings Water Based Muds	Washout Water (No Completion Fluid/F	lowback (Non-Injectable)		ter (Injectable) Fluid/Flowback (Injectable)
Water Based Cuttings	Produced Water (N			ater (Injectable)
Produced Formation Solids		er/Waste (Non-Injectable)		ne Water/Waste (Injectable)
Tank Bottoms	INTERNAL USE ON			MPT WASTES
E&P Contaminated Soil Gas Plant Waste	Truck Washout (Exe	empt Waste)	_ (Types and ge	eneration process of the waste)
WASTE GENERATION PROCE	SS: Divilling	□ Completion □ F		D.O. W. at an I.V.
WASTE GENERATION PROCE	SS: a brilling	- Completion	Production	☐ Gathering Lines
	Non-Exempt F	&P Waste/Service Identification a	and Amount	
(All non-	exempt E&P waste must be analyzed and			osiveness, and reactivity.)
Non-Exempt Other:		*Please selec	t from Non-Exempt W	/aste List on back
QUANTITY:			Y - Yard	
QUARTITI.	B - Barreis	L - Elquid	r - rarus	E - Each
		C-138		
I hereby certify that according described waste load is (Check	o the Resource Conservation and Recover the appropriate classification)	ery Act (RCRA) and the US Environment	al Protection Agency	s July 1988 regulatory determination, the above
RCRA EXEMPT:		nd gas exploration and production opera	ations and are not mix	ked with non-exempt waste. (Gandy Marley, Inc
HOHA EXEMPT:	accepts certifications on a per month		ations and are not mix	and with homesompt waste. (daridy maney, mo
RCRA NON-EXEMPT:	Oil field waste which is non-hazardo	us that does not exceed the minimum si	tandards for waste ha	zardous by characteristics established in RCRA
	regulations, 40 CFR 261.21-261.24, c	or listed hazardous waste as defined by 40	0 CFR, part 261, subp	art D, as amended. The following documentation
П	The state of the s	ardous is attached. (Check the appropria	A CHARLES AND A CONTRACTOR	A CONTRACTOR OF THE PARTY OF TH
☐ MSDS I	nformation	RCRA Hazardous Waste Analysis	_	Other (Provide Description Below)
			-	
☐ EMERGENCY NON-OILFIE				Safety. (The order, documentation of non-hazard
	ous waste determination and a descr	iption of the waste must accompany this	torm.)	
(PRINT) AUTHORIZED	AGENTS SIGNATURE	DATE		SIGNATURE
				64 2 17
9.12 18385 V V	111 101 11-19.	21	GMI	Burger that is sally and
NAME (PRINT	DATE	<del></del>	TITLE	SIGNATURE
Released to Imaging: 8/				SUPERIOR PRINTING SERVICE, INC.

Received by OCD: 8/4/2022 11:04:38 AM NEW MEXICO N	ON-HAZARDOUS OILFIELD WASTE MA	ANIFEST / DISPOS	AL TICKET	Company Man Compact Information
<b>GM</b> inc. 3970	n E			Name / And A filter
TVLIIIC.	GENERATOR	1		Phone No.
		The second secon	Flyn	W / W
Operator No.	er is think	ease/Well	- Jugar	1
Operators Name			The state of the s	1
Address				
City, State, Zip				
Phone No	AF	E/PO No		
TOUGH TIME OTAMO	DISPOSAL FACI	LITY _		EOEN/INIO ADEA
TRUCK TIME STAMP			н	ECEIVING AREA
IN: 1.6.0 34//1 OUT:	_	N	ame/No. LAN	DFILL
Site Name / Permit No. Commercial Landfarm (NM-7	711-1-0020) PH	none No. 575-3	17-0434	
Address P.O. Box 1658 Roswell, NM 88202		ione ivo.		
NORM Readings Taken? (Circle One) YES	S NO If	YES, was readin	a > 50 micro roen	tgens? (Circle One) YES NO
Pass the Paint Filter Test? (Circle One) YES		,	9	
and the second	TRANSPORTE	R		
Transporter's Name	1 to waste Di	river's Name		
Address				
7,001000				
Dhana Ma				
Phone No  I hereby certify that the above named material(s) was/were				
Thereby certify that the above hamed materially massives.	- p.o o - o - o - o - o - o - o - o - o	I fulled.	-13 41	to the state of
SHIPMENT DATE DRIVER'S SIGN	NATURE	DELIVERY DA		DRIVER'S SIGNATURE
Exempt E&P waste/Service iden	ntification and Amount (Place vol	ume next to wa	ste type in barre	is of cubic yards)
	NJECTABLE WATERS		INJECTABLE WAT	
	ut Water (Non-Injectable) etion Fluid/Flowback (Non-Injectable)		Washout Water (In	njectable) /Flowback (Injectable)
	ed Water (Non-Injectable)		Produced Water (	
				ater/Waste (Injectable)
	NAL USE ONLY		OTHER EXEMPT	
E&P Contaminated Soil Truck W Gas Plant Waste	Vashout (Exempt Waste)		(Types and general	ation process of the waste)
WASTE GENERATION PROCESS:  Drilling	□ Completion	□ Produ	otion	☐ Gathering Lines
WASTE GENERATION PROCESS. & Diming	a completion	□ Floud	Stion	d damering Lines
Non-	-Exempt E&P Waste/Service Iden	tification and A	mount	
(All non-exempt E&P waste must be an	nalyzed and be below the threshold limit	s for toxicity (TCLF	), ignition, corrosive	ness, and reactivity.)
Non-Exempt Other:		Please select from	Non-Exempt Waste	List on back
QUANTITY: B - Barre		1	Y - Yards	E - Each
		-		
	C-138			
I haraby partify that according to the Decourse Conservation		E		
I hereby certify that according to the Resource Conservation described waste load is (Check the appropriate classification)	and Recovery Act (RCRA) and the US	Environmental Pro	tection Agency's Ju	ly 1988 regulatory determination, the above
☐ RCRA EXEMPT: Oil field wastes generated	d from oil and gas exploration and prod	duction operations	and are not mixed	with non-exempt waste. (Gandy Marley, Inc.
accepts certifications on	a per month only basis.)			
RCRA NON-EXEMPT: Oil field waste which is n	non-hazardous that does not exceed the	e minimum standar	ds for waste hazard	dous by characteristics established in RCRA D, as amended. The following documentation
demonstrating the waste	as non-hazardous is attached. (Check t	he appropriate iten	ns as provided.)	
☐ MSDS Information	RCRA Hazardous Waste	e Analysis		Other (Provide Description Below)
☐ EMERGENCY NON-OILFIELD: Emergency non-hazardou	us, non-oilfield waste that has been orde	ered by the Depart	ment of Public Safet	v. (The order, documentation of non-hazard-
	and a description of the waste must acc			• • • • • • • • • • • • • • • • • • • •
(PRINT) AUTHORIZED AGENTS SIGNATURE	DATE			SIGNATURE
Buckeyelle Beauty	11-14-31	GMI		
NAME (PRINT)	DATE	TITLE		SIGNATURE
Released to Imaging: 8/17/2022 1:13:14 PM		11166		SUPERIOR PRINTING SERVICE, INC.

Received by OCD: 8/4/	NEW MEXICO NON-HA /2022 11:04:38 AM	ZARDOUS OILFIELD WAST	E MANIFEST / DISI	POSAL TICKET	Company Page 290	093150
YV_inc.	39680				Name	
		GENERAT	OR		Phone No	
Operator No.			Location of Orig	gin		
Operators Name	outburst Ro	1014155			9 11-	
City. State. Zip.						
THORIC TYO.						
TRUCK T	TIME STAMP	DISPOSAL FA	CILITY	DE	CEIVING AREA	
IN. 9743 APT	OUT:					
				Name/No. LANDE		
	nmercial Landfarm (NM-711-1-00	20)	Phone No. 575	i-347-0434		
Address P.O. Box 1658 Ro						
Pass the Paint Filt		O O TRANSPOR	TER	ding > 50 micro roentge		
Address						
Dhone Ne						
I hereby certify that the above	named material(s) was livers pieted		Truck No.	XX.		
and and another	named material(s) was/were picked	up at the Generator's site	listed above and	delivered without incide	nt to the disposal facility list	ed below.
SHIPMENT DATE	DRIVER'S SIGNATURE		DELIVERY	A Kanda		
	The state of the s	on and America (Discovery	DELIVERY (		DRIVER'S SIGNATURE	
Oil Based Muds	E&P Waste/Service Identification		olume next to v	vaste type in barrels o	or cubic yards)	
Oil Based Cuttings	Washout Water (I			INJECTABLE WATER		
Water Based Muds	Completion Fluid	/Flowback (Non-Injectable)		Washout Water (Inject Completion Fluid/Flo		
Water Based Cuttings	Produced Water	(Non-Injectable)		Produced Water (Inje	(aldala)	
Produced Formation Solids Tank Bottoms	Gathering Line W	ater/Waste (Non-Injectable)		Gathering Line Water		
E&P Contaminated Soil	Truck Washout (E			OTHER EXEMPT WA (Types and generation	n process of the waste)	-
Gas Plant Waste						
WASTE GENERATION PROCES	SS: Drilling	☐ Completion	☐ Prod	luction	☐ Gathering Lines	
(All non-e	Non-Exempt exempt E&P waste must be analyzed an	E&P Waste/Service Ide d be below the threshold lir	entification and	Amount LP), ignition, corrosivenes	s, and reactivity.)	
Non-Exempt Other:			*Please select fro	m Non-Exempt Waste List	t on back	
QUANTITY:	B - Barrels	L - Liquid	d	Y - Yards	E - Each	
		<u>C-138</u>				
hereby certify that according to described waste load is (Check the	the Resource Conservation and Reco	very Act (RCRA) and the U	S Environmental Pr	rotection Agency's July 19	988 regulatory determination,	the above
	te appropriate classification)					
☐ RCRA EXEMPT:	Oil field wastes generated from oil accepts certifications on a per mon	th only basis.)	oduction operation	s and are not mixed with	non-exempt waste. (Gandy M	arley, Inc.
RCRA NON-EXEMPT:	Oil field waste which is non-hazard regulations, 40 CFR 261.21-261.24, demonstrating the waste as non-ha	or listed hazardous waste a	is defined by 40 CF	R nart 261 subnart D as	by characteristics established amended. The following docu-	I in RCRA mentation
☐ MSDS Info						
u Misbs IIII	omaton	RCRA Hazardous Was	ste Analysis	☐ Other	(Provide Description Below)	
■ EMERGENCY NON-OILFIELD	D: Emergency non-hazardous, non-oilf ous waste determination and a desc	ield waste that has been or cription of the waste must a	dered by the Depar ecompany this forn	tment of Public Safety. (Ti n.)	he order, documentation of no	n-hazard-
(PRINT) AUTHORIZED AG	GENTS SIGNATURE	DATE			SIGNATURE	
1111100111111	141/4/14 1173	X.Z	GM	I Lan		
NAME (PRINT)	DATE		TITLE		SIGNATURE	
Released to Imaging.	8/17/2022 1:13:14 PM				SUPERIOR REINITING SER	WOE WA

4V_inc.	39700	GENER	ATOR	NamePhone No
Operator No.		GENER	Location of Or	igin III
Operator No.	504+1 West Rn		Lease/Well	They I'll
		The state of the s	Name & No	
Address			County	
City, State, Zip				0
Phone No				
TRUCK	TIME STAMP	DISPOSAL I		
17 6 1 1 1 1 A L		DIO! GOAL!	AOILITI	RECEIVING AREA
IN: 50170019	OUT:			Name/No. LANDFILL
Site Name / Permit No. Co	mmercial Landfarm (NM-711-1-0	020)	D- 1 57	
Address P.O. Box 1658 F			Phone No. 57	5-347-0434
	T 1 0 (0) 1 0 1	NO NO	If VEC was rea	ding : 50 minutes ( ) (0)   1   6
Pass the Paint Fi		NO.	ii i ES, was rea	iding > 50 micro roentgens? (Circle One) YES
	77 18 11 19	TRANSPO	RTER	
ransporter's Name	10 NORDD PAIN	12 MAY 15		
Phone No			Truck No.	751
hereby certify that the above	e named material(s) was/were picked	up at the Generator's	site listed above and	d delivered without incident to the disposal facility listed belo
			11-10	delivered without incluent to the disposal facility listed belo
SHIPMENT DATE	DRIVER'S SIGNATURE		DELIVERY	DATE DRIVER'S SIGNATURE
Exemp	t E&P Waste/Service Identification	on and Amount (Plac		waste type in barrels or cubic yards)
Dil Based Muds	NON-INJECTABI		e volume next to	
il Based Cuttings				INJECTABLE WATERS Washout Water (Injectable)
Vater Based Muds	———— Completion Fluid	d/Flowback (Non-Injectab	ole)	Completion Fluid/Flowback (Injectable)
Vater Based Cuttings Produced Formation Solids	Produced Water Gathering Line W			Produced Water (Injectable)
ank Bottoms	Gathering Line W	Vater/Waste (Non-Injectal	ble)	Gathering Line Water/Waste (Injectable)
&P Contaminated Soil	Truck Washout (E			OTHER EXEMPT WASTES (Types and generation process of the waste)
as Plant Waste				
ASTE GENERATION PROCE	SS: Drilling	☐ Completion	□ Proc	duction   Gathering Lines
	No			
(All non-	exempt E&P waste must be analyzed an	E&P Waste/Service	Identification and	Amount CLP), ignition, corrosiveness, and reactivity.)
on-Exempt Other:				
UANTITY:	P. Perrela			om Non-Exempt Waste List on back
	B - Barrels	L - Lic	quid	Y - Yards E - Each
		C-138		
nereby certify that according to	o the Resource Conservation and Rese			
escribed waste load is (Check t	he appropriate classification)	very Act (HCHA) and the	US Environmental P	rotection Agency's July 1988 regulatory determination, the above
RCRA EXEMPT:	Oil field wastes generated from oil	and gas exploration and	production operation	ns and are not mixed with non-exempt waste. (Gandy Marley, In
	The Calabana and Andrew Mon	arrolly basis.		
RCRA NON-EXEMPT:	Oil field waste which is non-hazard	ous that does not excee	ed the minimum stand	lards for waste hazardous by characteristics established in RCF
	demonstrating the waste as non-ha			
☐ MSDS In		RCRA Hazardous V		Other (Provide Description Below)
				— Other (Frence Description Below)
EMERGENCY NON-OILFIEL	D: Emergency non-hazardous, non-oilf	field waste that has been	ordered by the Depar	rtment of Public Safety. (The order, documentation of non-hazard
	ous waste determination and a desc	cription of the waste mus	st accompany this form	m.)
	OENTE CIONALE			
(DDINE) ALTH LODGE		DATE		SIGNATURE
(PRINT) AUTHORIZED AG	GENTS SIGNATURE			
(PRINT) AUTHORIZED A	GENTS SIGNATURE			
(PRINT) AUTHORIZED A	aents signature			

Received by OCD: 8/4/2	022 11.07.30 7111	-HAZARDOUS OILFIELD WA	OTE MANIFEST / DIS	SPOSAL TICKET	Company Page 292 of 315 Name
IV IIIC.	3971	Maria de la companya della companya	TOR		Phone No.
Operator No.		GENERA	Location of Or	igin	100
Operators No.		7 77	Lease/Well	1 Staffen	0 17
Operators Name			Name & No		
Address					
City, State, Zip					
Phone No			AFE/PO No		
TRUCK TII	ME STAMP	DISPOSAL F			
		<u> </u>	AUILITI	R	ECEIVING AREA
IN: 16 341170	UT:			Name/No. LANI	DFILL
Site Name / Permit No. Com	mercial Landfarm (NM-711-1	-0020)	Phone No. 57		
Address P.O. Box 1658 Ros			Phone No57	5-347-0434	
NORM Readings Ta		NO	If VES was roa	ding > E0 miore	
Pass the Paint Filter	r Test? (Circle One) YES	NO	ii i LO, was lea	ding > 50 micro roent	tgens? (Circle One) YES No
	1. 1. 1. 12	TRANSPO	RTER		
Transporter's Name	(4DD Fili)	1005	Driver's Name		
Address			Print Name		
Phone No			Torresta Mari		
hereby certify that the above no	amed material(s) was/were picl	ked up at the Generator's s	ite listed above and	I delivered without inci-	dent to the disposal facility listed below
			11.16	delivered without men	dent to the disposal facility listed below
SHIPMENT DATE	DRIVER'S SIGNATUI	RE	DELIVERY	DATE	A DOMESTIC OF THE PARTY OF THE
Exempt E	&P Waste/Service Identifica				DRIVER'S SIGNATURE
Oil Based Muds	NONLIN IECT	ABLE WATERS	volume next to t		
		er (Non-Injectable)		Mashout Water (Ini	
	Completion F	luid/Flowback (Non-Injectabl	e)	Washout Water (Inj	Territorial Materials (Color)
Secretary of F. M. S. W.	Produced Wa	ter (Non-Injectable)		Produced Water (In	signatable)
only Detterne		e Water/Waste (Non-Injectab	le)	Gathering Line Wat	ter/Waste (Injectable)
OD Contracts of 10 "	INTERNAL US			OTHER EXEMPT W	VASTES
Gas Plant Waste	Truck Washou	it (Exempt Waste)		(Types and generat	ion process of the waste)
VASTE GENERATION PROCESS:	□ Drilling	☐ Completion			
		= completion	U Proc	duction	☐ Gathering Lines
	Non-Exen	pt E&P Waste/Service I	dentification and	Amount	
(All non-exe	impt E&P waste must be analyzed	and be below the threshold	limits for toxicity (TC	LP), ignition, corrosivene	ess, and reactivity.)
Ion-Exempt Other:			*Please select fro	m Non-Exempt Waste L	ist on back
NUANTITY:	B - Barrels	L - Liq		Y - Yards	E - Each
				. , , , ,	E - Each
		C-138			
hereby certify that according to the	e Resource Conservation and Re	ecovery Act (RCRA) and the	US Environmental P	rotection Agency's July	1988 regulatory determination, the above
RCRA EXEMPT:	Oil field wastes generated from accepts certifications on a per n	oil and gas exploration and	production operation	s and are not mixed wit	h non-exempt waste. (Gandy Marley, Inc.
RCRA NON-EXEMPT:					
- MONTHON EXEMPT.	regulations, 40 CFR 261.21-261.	ardous that does not exceed 24, or listed hazardous waste	the minimum stand	ards for waste hazardou	us by characteristics established in RCRA as amended. The following documentation
	demonstrating the waste as non	-hazardous is attached. (Che	ck the appropriate ite	ems as provided.)	as amended. The following documentation
☐ MSDS Inform		RCRA Hazardous W			er (Provide Description Below)
EMERGENCY NON-OILFIELD:	Emergency non-hazardous, non-	oilfield waste that has been	ordered by the Depar	tment of Public Safety. (	The order, documentation of non-hazard-
	ous waste determination and a d	escription of the waste must	accompany this form	n.)	The state of the s
(PRINT) AUTHORIZED AGEN	ATS SIGNATURE				
(FINIVE) AUTHORIZED AGEN	VI S SIGNATURE	DATE			SIGNATURE
			011	•	
INCHESSION SA	LI SHIN IN F	1 100 8	GM		
NAME (PRINT)  Released to Imaging: 8/	DATE	<u> </u>	TITLE		SIGNATURE

Received by OCD: 8/	4/2022 11:04:38 AM	CO NON-HAZARDOUS OILFIELD WAS	TE MANIFEST / DISF	OSAL TI	CKET Company Page 293 of 315
4V inc.	39	706			Name
		GENERA'			Phone No
Operator No.			Location of Orig	jin	FRIDA 17
Operators Name	5041/100034	3004/1105			
Address					
City, State, Zip					
Phone No.					
		DISPOSAL FA			
The second secon	TIME STAMP		ACILITY	1100	RECEIVING AREA
IN: 11001/11	OUT:			Name	/No. LANDFILL
Site Name / Permit No. Co					
Address _ P.O. Box 1658 I		M-711-1-0020)	Phone No. 575	-347-043	34
		YES NO	H VEO		
	ilter Test? (Circle One)		If YES, was read	ing > 50	micro roentgens? (Circle One) YES NO
	The state of the s	TRANSPOR	TER		
Transporter's Name	Mass A				
Address					
Phone No					
I hereby certify that the abov	e named material(s) was/s	were nicked up at the Constate all	Truck No.	01	without incident to the disposal facility listed below
		rene piened up at the Generator's sit	e listed above and d	delivered	without incident to the disposal facility listed below
SHIPMENT DATE	DRIVER'S S	SIGNATURE	DELIVERY D		
Exemp					DRIVER'S SIGNATURE
Oil Based Muds		dentification and Amount (Place	volume next to w	aste typ	pe in barrels or cubic yards)
Oil Based Cuttings		I-INJECTABLE WATERS hout Water (Non-Injectable)			CTABLE WATERS
Water Based Muds	Com	apletion Fluid/Flowback (Non-Injectable	)		out Water (Injectable) Detion Fluid/Flowback (Injectable)
Water Based Cuttings	Prod	luced Water (Non-Injectable)			uced Water (Injectable)
Produced Formation Solids Tank Bottoms		ering Line Water/Waste (Non-Injectable RNAL USE ONLY	a)		ering Line Water/Waste (Injectable)
E&P Contaminated Soil		Washout (Exempt Waste)			ER EXEMPT WASTES s and generation process of the waste)
Gas Plant Waste				(3)	- and grades of the waste)
WASTE GENERATION PROCE	SS: Drilling	□ Completion	☐ Produ	uction	☐ Gathering Lines
700	No	n-Exempt E&P Waste/Service Id	lentification and A	Amount	
		analyzed and be below the threshold I	imits for toxicity (TCL	P), ignitio	n, corrosiveness, and reactivity.)
Non-Exempt Other:			*Please select from	n Non-Ex	empt Waste List on back
QUANTITY:	B - Ba	arrels L - Liqu	id	Y	- Yards E - Each
		<u>C-138</u>			
I hereby certify that according t described waste load is (Check	to the Resource Conservation	on and Recovery Act (RCRA) and the L	JS Environmental Pro	otection A	gency's July 1988 regulatory determination, the above
RCRA EXEMPT:	Oil field wastes genera				not mixed with non-exempt waste. (Gandy Marley, Inc.
RCRA NON-EXEMPT:	Oil field waste which is	non-hazardous that does not exceed	the minimum standa	rde for w	aste hazardous by characteristics established in RCRA
☐ MSDS In	nformation	to as non nazardous is attached. (Chec	k trie appropriate iter	ns as pro	vided.)
_ 10001	normation	RCRA Hazardous Wa	ste Analysis		Other (Provide Description Below)
☐ EMERGENCY NON-OILFIEL	D: Emergency non-hazard	ous, non-oilfield waste that has been o	rdered by the Departi	ment of P	Public Safety. (The order, documentation of non-hazard-
	ous waste determination	n and a description of the waste must a	accompany this form.	)	
(PRINT) AUTHORIZED A	GENTS SIGNATURE	DATE			0000
		DAIL			SIGNATURE
	Transh . "		GMI		
NAME (PRINT)	7 4 4 7 - 1 8 4 7 - 2 2	DATE	-		- Punistred & Mession
Released to Imaging:	8/17/2022 1:13:14 I	PM	TITLE		SIGNATURE

Received by OCD: 8/4/2	022 11:04:38 AM	I-HAZARDOUS OILFIELD WAST	E MANIFEST / DIS	SPOSAL TICKET	2 mg	
YV_inc.	3974	7			Name	
		GENERAT	OR		Phone No	
Operator No.			Location of Or Lease/Well	igin	title of the	
Operators Name56	withward which	21/200				
Address						
City, State, Zip						
Phone No.						
TRUCK TIN	ME STAMP	DISPOSAL FA	CILITY		RECEIVING AREA	
IN:OI	IT:					
				Name/No	LANDFILL	
Site Name / Permit No. Comm		1-0020)	Phone No. 57	5-347-0434		
Address P.O. Box 1658 Ros						
	Test? (Circle One) YES	NO NO TRANSPOR		ding > 50 mic	ro roentgens? (Circle One) YES	NO
Transporter's Name	CAUDIS PATH	2015	Driver's Name			
Address			Print Name			
			Phone No.			
Phone No			Truck No	A SHOW WAS A		
I hereby certify that the above na	med material(s) was/were pic	ked up at the Generator's site	listed above and	delivered with	out incident to the disposal facility list	ad balau
			11-313	1. 27/2	and the disposal facility list	ed Delow
SHIPMENT DATE	DRIVER'S SIGNATU	RE	DELIVERY	DATE	DRIVER'S SIGNATURE	
Exempt E	&P Waste/Service Identific	ation and Amount (Place v	olume next to	waste type in	barrels or cubic yards)	
Water Based Muds Water Based Cuttings Produced Formation Solids Tank Bottoms	Washout Wa Completion I Produced Wa Gathering Lir INTERNAL U	TABLE WATERS ter (Non-Injectable) Fluid/Flowback (Non-Injectable) ater (Non-Injectable) ne Water/Waste (Non-Injectable) SE ONLY ut (Exempt Waste)		Washout V Completion Produced Gathering OTHER EX	e Florid/Flamback (Internet)	
WASTE GENERATION PROCESS:	☐ Drilling	□ Completion	□ Proc	duction	☐ Gathering Lines	
(All non-exe	Non-Exer	npt E&P Waste/Service Ide d and be below the threshold lin	entification and	Amount		
Ion Evernet Other		De Belein the threshold in				
QUANTITY:	B - Barrels				Waste List on back	
	B - barrers	L - Liquid		Y - Yar	ds E - Each	
		C-138				
hereby certify that according to the	Resource Conservation and R		S Environmental P	rotection Agenc	y's July 1988 regulatory determination, the	ere sagement
RCRA EXEMPT:	accepts certifications on a per r	oil and gas exploration and pro month only basis.)	duction operation	s and are not m	nixed with non-exempt waste. (Gandy Ma	rley, Inc.
RCRA NON-EXEMPT:	Oil field waste which is non-haz regulations, 40 CFR 261,21-261	zardous that does not exceed the	ne minimum stand	ards for waste h	nazardous by characteristics established part D, as amended. The following docum	in RCRA entation
☐ MSDS Inform		RCRA Hazardous Was			Other (Provide Description Below)	
EMERGENCY NON-OIL FIELD:	Emergency non-hazardous	Elleratur V IV IV				
	ous waste determination and a	description of the waste must ac	fered by the Depar company this form	tment of Public n.)	Safety. (The order, documentation of non-	-hazard-
(PRINT) AUTHORIZED AGEN	TS SIGNATURE	DATE			SIGNATURE	
					SIGNATORE	
NAME (DOUT)	Julio - 18 mi	or the of	GM		Land Helder J. Gallia	
NAME (PRINT)  Released to Imaging: 8/	17/2022 1:13:14 PM		TITLE		SIGNATURE	Alt had

		-HAZARDOUS OILFIELD WAST	E MANIFEST / DISF	POSAL TICKET	Company Page 293 of 345
YV_inc.	5973				Phone No.
		GENERAT	OR Location of Orio	nin .	and the second
Operator No.			Lease/Well	giri J. J.	1429 F
Operators Name			Name & No	/	
Address					
City, State, Zip					
Phone No.					
TOUCK TIME	AE OTAMB	DISPOSAL FA			
TRUCK TIM		DIOI COALTA	OILIT I		RECEIVING AREA
IN:OU	JT:			Name/No. L/	ANDFILL
Site Name / Permit No. Comm	nercial Landfarm (NM-711-	1-0020)	DI 1. E7E		
Address P.O. Box 1658 Rosv		. 0020)	Phone No. 575	1-347-0434	
NORM Readings Tak		NO NO TRANSPOR		ding > 50 micro ro	entgens? (Circle One) YES NO
Transporter's Name	Wash Pars				
Address		THE RESERVE OF THE PARTY OF THE			
Phone No					
I hereby certify that the above na	med material(s) was/were pic	ked up at the Generator's site	Truck No	alathana divitta at	incident to the disposal facility listed below
	γο, παο, πο, ο ρ, ο	ned up at the deficiator's site	insted above and	delivered without i	ncident to the disposal facility listed below
SHIPMENT DATE	DRIVER'S SIGNATU	RE	DELIVERY D	DATE	POWERS AND
Exempt E/		ation and Amount (Place v			DRIVER'S SIGNATURE
Water Based Cuttings Produced Formation Solids Tank Bottoms	Produced W. Gathering Lir INTERNAL U	Fluid/Flowback (Non-Injectable) ater (Non-Injectable) ne Water/Waste (Non-Injectable) <u>SE ONLY</u> ut (Exempt Waste)		Produced Wate Gathering Line OTHER EXEMP	Water/Waste (Injectable)
WASTE GENERATION PROCESS:	☐ Drilling	☐ Completion	□ Prod	luction	☐ Gathering Lines
(All non-exer	Non-Exer	mpt E&P Waste/Service Ide	entification and	Amount	
Von Evernet Other		ed and be below the threshold lin			
			*Please select fro	m Non-Exempt Was	te List on back
QUANTITY:	B - Barrels	L - Liquie	d <u></u>	Y - Yards	E - Each
		0.400			
horoby parties that are it is a		<u>C-138</u>			
described waste load is (Check the a	e Resource Conservation and F appropriate classification)	Recovery Act (RCRA) and the U	S Environmental Pr	rotection Agency's J	uly 1988 regulatory determination, the above
RCRA EXEMPT:	Oil field wastes generated from accepts certifications on a per	n oil and gas exploration and pr month only basis.)	oduction operation	s and are not mixed	with non-exempt waste. (Gandy Marley, Inc.
	10guiations, 40 Of h 201,21-20	zardous that does not exceed t 1.24, or listed hazardous waste a n-hazardous is attached. (Check	is defined by 40 CE	R part 261 cubpart	rdous by characteristics established in RCRA D, as amended. The following documentation
☐ MSDS Inform		RCRA Hazardous Was			Other (Provide Description Below)
EMERGENCY NON-OILFIELD:	Emergency non-hazardous, nor ous waste determination and a	n-oilfield waste that has been on description of the waste must a	dered by the Depar ccompany this form	tment of Public Safe	ety. (The order, documentation of non-hazard-
(PRINT) AUTHORIZED AGEN	ITS SIGNATURE	DATE			SIGNATURE
Ludgerha 1		27.27	GM		

Received by OCD: 8/	4/2022 11:04:38 AM		TE MANIFEST / D	ISPOSAL TIC	CKET Company Page 226 of Alas
IV IIIC.	3974				Phone No.
Operator No.		GENERAT	Location of O	rigin	pro 1
Operators Name	miller State Ma	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Lease/Well _		Tilled 11
	august ala		Name & No		
Address	<u> </u>		County		
City State 7:-			API No		
Oity, State, Zip					
Phone No					
TRUCK	TIME STAMP	DISPOSAL FA			
THE RESERVE OF THE PARTY OF THE					RECEIVING AREA
IN:	OUT:			Name/	No. LANDFILL
Site Name / Permit No. Co	ommercial Landfarm (NM-711	-1-0020)	Phone No. 57	75-347-043	4
Address _ P.O. Box 1658 I	Roswell, NM 88202		Thorie No	0 0 11 0 10	
Pass the Paint F	s Taken? (Circle One) YES filter Test? (Circle One) YES	NO NO TRANSPOR		ading > 50	micro roentgens? (Circle One) YES NC
	10000 1211		Driver's Name		
Address			Print Name		
			Phone No		
			Truck No	y To the	
I hereby certify that the abov	e named material(s) was/were pr	icked up at the Generator's site	listed above an	d delivered	without incident to the disposal facility listed below.
				1-27/	V. Crop
SHIPMENT DATE	DRIVER'S SIGNAT		DELIVERY		DRIVER'S SIGNATURE
Exemp	ot E&P Waste/Service Identifi	ication and Amount (Place	olume next to	waste type	e in barrels or cubic yards)
Oil Based Muds		CTABLE WATERS			TABLE WATERS
Oil Based Cuttings Water Based Muds		/ater (Non-Injectable)		Washo	out Water (Injectable)
Water Based Cuttings	Completion Produced V	Fluid/Flowback (Non-Injectable) Vater (Non-Injectable)	4		letion Fluid/Flowback (Injectable)
Produced Formation Solids		ine Water/Waste (Non-Injectable)	M <del>ercoll</del>		ced Water (Injectable) ring Line Water/Waste (Injectable)
Tank Bottoms	INTERNAL			OTHE	R EXEMPT WASTES
E&P Contaminated Soil Gas Plant Waste	Truck Wash	out (Exempt Waste)		(Types	and generation process of the waste)
WASTE GENERATION PROCE	SS: Drilling	☐ Completion	□ Pro	oduction	☐ Gathering Lines
	Non-Ev	omnt EPR Wests (Carrier Ld			a damoning Lines
(All non	-exempt E&P waste must be analyz	empt E&P Waste/Service Idea and be below the threshold line	nits for toxicity (T	Amount CLP), ignition	n, corrosiveness, and reactivity.)
Non-Exempt Other:			*Please select fi	rom Non-Exe	empt Waste List on back
QUANTITY:	B - Barrels	L - Liqui		Y-	
					E - Each
		C-138			
hereby certify that according	to the Resource Conservation and	Recovery Act (RCRA) and the U	S Environmental	Protection A	gency's July 1988 regulatory determination, the above
	and appropriate classification)				
RCRA EXEMPT:	Oil field wastes generated fro accepts certifications on a per	m oil and gas exploration and pr r month only basis )	oduction operation	ins and are n	not mixed with non-exempt waste. (Gandy Marley, Inc.
RCRA NON-EXEMPT:	Oil field waste which is non-h regulations, 40 CFR 261.21-26	azardous that does not exceed t	is defined by 40 (	EH part 261	iste hazardous by characteristics established in RCRA, subpart D, as amended. The following documentation
☐ MSDS In	nformation	☐ RCRA Hazardous Was		terns as prov	Other (Provide Description Below)
					= 2444 ( revise Sessiption Bolow)
EMERGENCY NON-OILFIEI	<ul> <li>Emergency non-hazardous, no ous waste determination and a</li> </ul>	on-oilfield waste that has been or a description of the waste must a	dered by the Dep ecompany this for	artment of Purm.)	ublic Safety. (The order, documentation of non-hazard-
(PRINT) AUTHORIZED A	AGENTS SIGNATURE	DATE			SIGNATURE
					SIGNATURE
					million of the second
1343A211		327. 37	GN	Л	Admikatelling I Brook
NAME (PRINT)		TE	TITI		- The supplied of the supplied
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Received by OCD: 8/	4/2022 11:04:38 AM	ON-HAZARDOUS OILFIELD WAST	TE MANIFEST / DI	SPOSAL TICKET	Company Page 290 of 315
W inc.	3973	7			Name
		GENERAT			Phone No.
Operator No			Location of O	rigin	11 19
Operators Name	5001/ml=57	40110/1/19			
Address					
City, State, Zip					
Phone No					
TRUCK	TIME STAMP	DISPOSAL FA	CILITY		RECEIVING AREA
IN://///////	OUT:			Name/No. L	
					ANDFILL
	ommercial Landfarm (NM-71	1-1-0020)	Phone No. 57	5-347-0434	
Address P.O. Box 1658 I		NO			
	s Taken? (Circle One) YES Filter Test? (Circle One) YES	NO NO	If YES, was rea	iding > 50 micro r	oentgens? (Circle One) YES NO
		TRANSPOR	TER		
Transporter's Name	HANDO HAY	44213	Driver's Name		
Address					
Phone No.			Truck No.		English with a more than the results
I hereby certify that the above	e named material(s) was/were p	picked up at the Generator's site	e listed above and	d delivered without	incident to the disposal facility listed below
			1/-		The state of the s
SHIPMENT DATE	DRIVER'S SIGNAT	TURE	DELIVERY	DATE	DRIVER'S SIGNATURE
Exemp	ot E&P Waste/Service Identif	fication and Amount (Place	volume next to	waste type in ba	
Oil Based Muds		CTABLE WATERS		INJECTABLE	
Oil Based Cuttings		Vater (Non-Injectable)	<u> </u>	Washout Water	
Water Based Muds Water Based Cuttings	Completion	n Fluid/Flowback (Non-Injectable)			uid/Flowback (Injectable)
Produced Formation Solids	— Gathering	Water (Non-Injectable) Line Water/Waste (Non-Injectable)			ter (Injectable) e Water/Waste (Injectable)
Tank Bottoms		. USE ONLY		OTHER EXEM	
E&P Contaminated Soil	Truck Wasi	hout (Exempt Waste)			neration process of the waste)
Gas Plant Waste WASTE GENERATION PROCE	ERC. D Delline				
WASTE GENERATION PROCE	.ss. u brilling	☐ Completion	□ Pro	oduction	☐ Gathering Lines
(All non	Non-Ex	empt E&P Waste/Service Id	entification and	d Amount	
	-exempt E&P waste must be analy		mits for toxicity (T	CLP), ignition, corros	siveness, and reactivity.)
			*Please select fr	rom Non-Exempt Wa	aste List on back
QUANTITY:	B - Barrels	L - Liqui	d	Y - Yards	E - Each
		<u>C-138</u>			
nereby certify that according described waste load is (Check	to the Resource Conservation and the appropriate classification)	d Recovery Act (RCRA) and the U	IS Environmental	Protection Agency's	July 1988 regulatory determination, the above
RCRA EXEMPT:		om oil and gas exploration and pr	roduction operatio	ons and are not mixe	ed with non-exempt waste. (Gandy Marley, Inc
RCRA NON-EXEMPT:					
- HONA NON-EXEMPT.	regulations, 40 CFR 201.21-2	nazardous that does not exceed to 261.24, or listed hazardous waste a non-hazardous is attached. (Checi	as defined by 40 C	FR nart 261 subnar	ardous by characteristics established in RCRA rt D, as amended. The following documentation
☐ MSDS II		RCRA Hazardous Was			Other (Provide Description Below)
D EMERGENOV NON OU FUE					
- EWERGENCY NON-OILFIE	LD: Emergency non-hazardous, r ous waste determination and	non-oilfield waste that has been or a description of the waste must a	rdered by the Department of th	artment of Public Sa rm.)	fety. (The order, documentation of non-hazard-
(PRINT) AUTHORIZED A	AGENTS SIGNATURE	DATE			SIGNATURE
		D/AL			SIGNATURE
	1/14/1/20 11		GN	/II	
NAME (PRINT		ATE			
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Received by OCD: 8/4	3976	9			Company Page 29	
		GENERAT	OR		Phone No	
Operator No.			Location of O	rigin	24 27	
Operators Name	OBUDINE IL HO	<u> </u>	Name & No			1,70
Address						
City, State, Zip						
TRUING		DISPOSAL FA				
	TIME STAMP	DISPOSAL FA	CILITY	R	RECEIVING AREA	
IN:	OUT:			Name/No. LAN	DFILL	
Site Name / Permit No. Co	mmercial Landfarm (NM-711-					
Address P.O. Box 1658 R		1-0020)	Phone No. 57	5-347-0434		
NORM Readings	Taken? (Circle One) YES  Iter Test? (Circle One) YES	NO NO TRANSPOR		ading > 50 micro roen	atgens? (Circle One) YE	ES NO
Transporter's Name	(1) (DD) File					
Phone No			Truck No.			
I hereby certify that the above	e named material(s) was/were pid	cked up at the Generator's site	listed above an	d delivered without inc	ident to the disposal facility i	isted below.
SHIPMENT DATE	DRIVER'S SIGNATU	JRE	DELIVERY	DATE	DRIVER'S SIGNATURE	
Exemp	t E&P Waste/Service Identific					
Oil Based Cuttings Water Based Muds Water Based Cuttings Produced Formation Solids Tank Bottoms E&P Contaminated Soil Gas Plant Waste	Washout Washou	ater (Non-Injectable) Fluid/Flowback (Non-Injectable) /ater (Non-Injectable) /ater (Non-Injectable) /ine Water/Waste (Non-Injectable) JSE ONLY put (Exempt Waste)		Produced Water (I Gathering Line Water OTHER EXEMPT V	njectable) Flowback (Injectable) Injectable) ater/Waste (Injectable)	
WASTE GENERATION PROCE	SS: Drilling	☐ Completion	□ Pro	oduction	☐ Gathering Lines	
(All non-	Non-Exe exempt E&P waste must be analyze	mpt E&P Waste/Service Id	entification and	d Amount		
		ou and be below the threshold in				
QUANTITY:	B - Barrels			rom Non-Exempt Waste	List on back	
	b - barrels	L - Liqui	d	Y - Yards	E - Eacl	n
		C-138				
hereby certify that according to	the Resource Conservation and		0.5			
described waste load is (Check t	the Resource Conservation and the appropriate classification)	necovery Act (nona) and the U	S Environmental I	Protection Agency's July	/ 1988 regulatory determination	n, the above
RCRA EXEMPT:	Oil field wastes generated from accepts certifications on a per	n oil and gas exploration and premonth only basis.)	oduction operation	ons and are not mixed w	ith non-exempt waste. (Gandy	Marley, Inc.
RCRA NON-EXEMPT:		azardous that does not exceed to 1.24, or listed hazardous waste a on-hazardous is attached. (Check			ous by characteristics establish as amended. The following do	ed in RCRA cumentation
☐ MSDS In		RCRA Hazardous Was			her (Provide Description Below)	
EMERGENCY NON-OILFIEL	D: Emergency non-hazardous, no ous waste determination and a	n-oilfield waste that has been or description of the waste must a	dered by the Depa ccompany this for	artment of Public Safety. rm.)	(The order, documentation of r	non-hazard-
(PRINT) AUTHORIZED A	GENTS SIGNATURE	DATE			SIGNATURE	
- 11/1/11/11/11/11	1887184 21.	2221	GN			
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		POSAL TICKET Company Parge 299 of 31a
9V inc. 39753		Phone No.
	ERATOR Location of Or	
Operator No.	Lease/Well	giri
Operators Name		
Address		
City, State, Zip		
Phone No		
TRUCK TIME CTAMP DISPOSAL	L FACILITY	
	LIACILITY	RECEIVING AREA
IN:OUT:		Name/No. LANDFILL
Site Name / Permit No. Commercial Landfarm (NM-711-1-0020)		
Address P.O. Box 1658 Roswell, NM 88202	Phone No. 57!	5-347-0434
NORM Readings Taken? (Circle One) YES NO	KVEO	
Pass the Paint Filter Test? (Circle One) YES NO	If YES, was rea	ding > 50 micro roentgens? (Circle One) YES N
	PORTER	
Transporter's Name		
Address		
Phone No.		
I hereby certify that the above named material(s) was/were picked up at the Generator	Truck No	
The Generato	ir's site listed above and	delivered without incident to the disposal facility listed below
SHIPMENT DATE DRIVER'S SIGNATURE	DELIVERY	DATE DRIVER'S SIGNATURE
	DELIVERY	DITTELLOGICINATURE
Exempt E&P Waste/Service Identification and Amount (P	lace volume next to	vaste type in barrels or cubic yards)
Oil Based Cuttings NON-INJECTABLE WATERS Washout Water (Non-Injectable)		INJECTABLE WATERS
Water Based Muds Completion Fluid/Flowback (Non-Injectable)	ctable)	Washout Water (Injectable)
Water Based Cuttings — Produced Water (Non-Injectable)		Completion Fluid/Flowback (Injectable) Produced Water (Injectable)
Produced Formation Solids Gathering Line Water/Waste (Non-Injection Solids INTERNAL USE ONLY CONTROL OF THE CONTRO	ectable)	Gathering Line Water/Waste (Injectable)
E&P Contaminated Soil INTERNAL USE ONLY Truck Washout (Exempt Waste)		OTHER EXEMPT WASTES (Types and generation process of the waste)
Gas Plant Waste		(Types and generation process of the waste)
WASTE GENERATION PROCESS:   Drilling  Completion	□ Proc	luction
Non-Exempt E&P Waste/Servi	ice Identification and	Amount
(All non-exempt E&P waste must be analyzed and be below the thres		
Non-Exempt Other:		m Non-Exempt Waste List on back
QUANTITY: B - Barrels L -	- Liquid	Y - Yards E - Each
<u>C-1</u>		
hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and described waste load is (Check the appropriate classification)	the US Environmental P	rotection Agency's July 1988 regulatory determination, the above
		s and are not mixed with non-exempt waste. (Gandy Marley, Inc
	roand the	
		ards for waste hazardous by characteristics established in RCRAR, part 261, subpart D, as amended. The following documentation ms as provided.)
☐ MSDS Information ☐ RCRA Hazardou		Other (Provide Description Below)
EMERGENCY NON-OILFIELD: Emergency non-hazardous, non-oilfield waste that has be ous waste determination and a description of the waste relationship.	een ordered by the Depar must accompany this form	tment of Public Safety. (The order, documentation of non-hazard-
(PRINT) AUTHORIZED AGENTS SIGNATURE DATI	E	SIGNATURE
Kindrey Marshy W.	GM	

4V inc.	5976.	GENERA	TOP	NamePhone No
Operator No.			Location of Or	rigin
Operators Name	outherst for		Lease/Well	The first of the second
			Name & No	
	<u> </u>		County	
			API No	
Phone Ne			Rig Name & No	0
Priorie No.			AFE/PO No	
TRUCK T	IME STAMP	DISPOSAL P		
				RECEIVING AREA
	OUT:			Name/No. LANDFILL
	nmercial Landfarm (NM-711-1	-0020)	Phone No. 57	5-347-0434
Address P.O. Box 1658 Re				
	Taken? (Circle One) YES	NO	If YES, was rea	ading > 50 micro roentgens? (Circle One) YES No
Pass the Paint Filt	er Test? (Circle One) YES	NO		
Transportor's Name		TRANSPO		
	11 2 2 100 - 11/2		Driver's Name	
			Print Name	
			Phone No	
Phone No			This real a Killer	
Thereby certify that the above	named material(s) was/were pick	ed up at the Generator's s	ite listed above and	d delivered without incident to the disposal facility listed below
SHIPMENT DATE	DDIVEDIO OLONIATI		11/10	3:21
	DRIVER'S SIGNATUR		DELIVERY	
Oil Peeed Mud-	E&P Waste/Service Identifica	ation and Amount (Place	e volume next to	waste type in barrels or cubic yards)
Oil Based Muds Oil Based Cuttings		ABLE WATERS		INJECTABLE WATERS
Water Based Muds	Completion F	er (Non-Injectable) uid/Flowback (Non-Injectabl	le)	Washout Water (Injectable)
Water Based Cuttings	Produced Wa	ter (Non-Injectable)		Completion Fluid/Flowback (Injectable)  Produced Water (Injectable)
Produced Formation Solids Tank Bottoms		Water/Waste (Non-Injectab	le)	Gathering Line Water/Waste (Injectable)
E&P Contaminated Soil	INTERNAL US Truck Washou	t (Exempt Waste)		OTHER EXEMPT WASTES (Types and generation process of the waste)
Gas Plant Waste		· (Exempt viaste)		(Types and generation process of the waste)
WASTE GENERATION PROCES	S: 🗆 Drilling	☐ Completion	□ Proc	duction   Gathering Lines
(All non-e	Non-Exem kempt E&P waste must be analyzed	pt E&P Waste/Service I	dentification and	Amount CLP), ignition, corrosiveness, and reactivity.)
Non-Exempt Other:		and do bolow the threshold		
QUANTITY:	B - Barrels			om Non-Exempt Waste List on back
	b - barreis	L - Liq	uid	Y - Yards E - Each
		C-138		
hereby certify that according to	the Resource Conservation and Re		110 = 1	
escribed waste load is (Check th	e appropriate classification)	covery Act (NCNA) and the	US Environmental P	rotection Agency's July 1988 regulatory determination, the above
RCRA EXEMPT:	Oil field wastes generated from accepts certifications on a per m	oil and gas exploration and	production operation	ns and are not mixed with non-exempt waste. (Gandy Marley, Inc.
RCRA NON-EXEMPT:		erray erray basis.y		
ACHA NON-EXEMPT:	regulations, 40 CFR 261.21-261.	ardous that does not exceed	the minimum stand	lards for waste hazardous by characteristics established in RCRA FR, part 261, subpart D, as amended. The following documentation
		hazardous is attached. (Che	ck the appropriate ite	ems as provided.)
☐ MSDS Info	rmation	RCRA Hazardous W		Other (Provide Description Below)
) EMEDOENOVINOU AUTO-				
EMERGENCY NON-OILFIELD	: Emergency non-hazardous, non- ous waste determination and a d	oilfield waste that has been escription of the waste must	ordered by the Depar	rtment of Public Safety. (The order, documentation of non-hazard-
		see in the waste must	accompany this form	n.)
(PRINT) AUTHORIZED AG	ENTS SIGNATURE	DATE		CIONATION
		- DATE		SIGNATURE
			GM	
			1.9 11/1	

Received by OCD: 8/4/	2022 11:04:38 AM	N-HAZARDOUS OILFIELD WAS	E MANIFEST / DIS	SPOSAL TICKET	Company Page 301 of 315
V inc.	3975	9			Name
		GENERAT	OR		Phone No.
Operator No.			Location of Or	rigin	(a 17)
	while of Al		Name & No		And a second participation of the second
Address		<u>/</u>			
			API No		
City, State, Zip					
Phone No					
		DISPOSAL FA			
	IME STAMP		CILITY		RECEIVING AREA
IN: 16/14/11/1	OUT:			Name/No. LAN	
Site Name / Permit No. Con	nmercial Landfarm (NM-711	-1-0020)			
Address P.O. Box 1658 Ro		-1-0020)	Phone No. 57	5-347-0434	
	Taken? (Circle One) YES	NO	W.V.E.O.		
Transporter's Name			TER		ntgens? (Circle One) YES NC
Address					
			Phone No		
Phone No.			Truck No		
I nereby certify that the above	named material(s) was/were pi	cked up at the Generator's site	listed above and	d delivered without inc	cident to the disposal facility listed below
SHIPMENT DATE	DRIVER'S SIGNATI	URE .	DELIVERY	DATE	DDIVEDIO CIONATURE
Exempt	E&P Waste/Service Identific	cation and Amount (Place)			DRIVER'S SIGNATURE
Oil Based Muds Oil Based Cuttings Water Based Muds Water Based Cuttings Produced Formation Solids Tank Bottoms E&P Contaminated Soil Gas Plant Waste	Washout Washou	ETABLE WATERS ater (Non-Injectable) Fluid/Flowback (Non-Injectable) /ater (Non-Injectable) ine Water/Waste (Non-Injectable) JSE ONLY out (Exempt Waste)		Produced Water ( Gathering Line W OTHER EXEMPT	njectable
WASTE GENERATION PROCES	S: Drilling	☐ Completion	□ Proc	duction	☐ Gathering Lines
	kempt E&P waste must be analyz	empt E&P Waste/Service Ide ed and be below the threshold lin	nits for toxicity (TC	CLP), ignition, corrosive	
Non-Exempt Other:				om Non-Exempt Waste	List on back
QUANTITY:	B - Barrels	L - Liqui	4 27	Y - Yards	E - Each
		0.400			
hereby certify that according to described waste load is (Check th	the Resource Conservation and	C-138 Recovery Act (RCRA) and the U	S Environmental P	Protection Agency's Jul	y 1988 regulatory determination, the above
RCRA EXEMPT:		m oil and gas exploration and pr			vith non-exempt waste. (Gandy Marley, Inc.
RCRA NON-EXEMPT:		azardous that does not exceed to 1.24, or listed hazardous waste a ph-hazardous is attached. (Check			ous by characteristics established in RCRA, as amended. The following documentation
☐ MSDS Info		RCRA Hazardous Was			ther (Provide Description Below)
■ EMERGENCY NON-OILFIELD	: Emergency non-hazardous, no ous waste determination and a	n-oilfield waste that has been or description of the waste must a	dered by the Depa ecompany this for	irtment of Public Safety	/. (The order, documentation of non-hazard-
(PRINT) AUTHORIZED AG	ENTS SIGNATURE	DATE			SIGNATURE
NAME (PRINT)	many 11-	23.21	GM	II.	Complexity Fire Street
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	2022 11:04:38 AM	ARDOUS OILFIELD WAST	TE MANIFEST / DIS	POSAL TICKET	Company Page 342 of 315
YV_inc.	39779				Name
		GENERAT			Phone No.
Operator No.			Location of Ori Lease/Well	gin A	2 //
Operators Name	41/10/37 18/11	019119			1 12 12 12 12 12 12 12 12 12 12 12 12 12
City, State, Zip					
Phone No					
TRUCK TI	ME STAMP	DISPOSAL FA	CILITY	RE	CEIVING AREA
IN: _/6	OUT:				
				Name/No. LAND	
	mercial Landfarm (NM-711-1-002	20)	Phone No. 575	5-347-0434	
Address P.O. Box 1658 Ro					
NORM Readings T			If YES, was read	ding > 50 micro roentg	gens? (Circle One) YES No
rass the raint filte	er Test? (Circle One) YES NO				
Transporter's Name	Bullet Hand as	TRANSPOR			
	TURDO PARTAG		Driver's Name _		
Address					
horoby contifue to a the set			Truck No.		
nereby certify that the above i	named material(s) was/were picked u	ip at the Generator's site	e listed above and	delivered without incide	ent to the disposal facility listed below
CHIDNENT DATE			11 -11	X11416	DRIVER'S SIGNATURE
SHIPMENT DATE	DRIVER'S SIGNATURE		DELIVERY I	DATE	DRIVER'S SIGNATURE
Exempt	E&P Waste/Service Identification	and Amount (Place )	volume next to v	vaste type in barrels	or cubic yards)
Dil Based Muds	NON-INJECTABLE			INJECTABLE WATER	
Oil Based Cuttings Vater Based Muds	Washout Water (No			Washout Water (Inje-	ctable)
Vater Based Cuttings	Completion Fluid/F	Flowback (Non-Injectable)		Completion Fluid/Flo	
bandsond Francis O. P. I		iter/Waste (Non-Injectable)		Produced Water (Inje Gathering Line Wate	
ank Bottoms	INTERNAL USE OF	NLY		OTHER EXEMPT WA	
&P Contaminated Soil las Plant Waste	Truck Washout (Ex	AN A	TO FRA		on process of the waste)
ASTE GENERATION PROCESS	E D Prilling	NYAMINATED	70 600	1/40 1 11	
	. a billing	□ Completion	│	luction	☐ Gathering Lines
	Non-Exempt F	E&P Waste/Service Ide	ontification and	Amazona / Company	
(All non-ex	empt E&P waste must be analyzed and	be below the threshold lin	mits for toxicity (TC	LP), ignition, corrosivenes	ss. and reactivity.)
on-Exempt Other:	LACI TA	int soil	DIE TT	Mon-Exempt Waste Lis	
UANTITY:	B - Barrels	1 11		1 CZ 11	A Commence of the Commence of
		L - Liquid	9.	Y - Yards	E - Each
		C-138		1	
nereby certify that according to t	he Resource Conservation and Recov		0.5	AX	
escribed waste load is (Check the	appropriate classification)	and the U	S Environmental Pr	rotection Agency's July 1	988 regulatory determination, the above
RCRA EXEMPT:	Oil field wastes generated from oil a	nd gas exploration and pr	oduction operation	s and are not mixed with	non-exempt waste. (Gandy Marley, Inc.
	i a poi mona	Torry Dasis.)			
RCRA NON-EXEMPT:	Oil field waste which is non-hazardo	us that does not exceed t	he minimum standa	ards for waste hazardous	by characteristics established in RCRA
	demonstrating the waste as non-haza				s by characteristics established in RCRA s amended. The following documentation
☐ MSDS Info		RCRA Hazardous Was			r (Provide Description Below)
			no / trialysis	□ Other	(Frovide Description Below)
EMERGENCY NON-OILFIELD:	Emergency non-hazardous, non-oilfie	ald waste that has been on	dered by the Depar	tment of Bublic Sofaty /T	he order, documentation of non-hazard-
	ous waste determination and a descri	iption of the waste must a	ccompany this form	n.)	ne order, documentation of non-hazard-
(PRINT) AUTHORIZED AGE	NTS SIGNATURE	DATE			SIGNATURE
11/2/11/2/11/11/11/11			GM		
			Contract to the second		

NAME (PRINT)
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TITLE

SIGNATURE

indicated by Copy of the indicated in th	ON-HAZARDOUS OILFIELD WAST	E MANIFEST / DIS		
4V inc. 3971	3.8		Name	
	GENERAT		Phone No	
Operator No.		Location of Or	rigin Fhatiana //	
Operators Name	Productions			
Address				
City, State, Zip				
Phone No.			0.	
TRUCK TIME STAMP	DISPOSAL FA	CILITY	RECEIVING AREA	
IN: 18.510M OUT:				
			Name/No. LANDFILL	
Site Name / Permit No. Commercial Landfarm (NM-71	1-1-0020)	Phone No. 57	5-347-0434	
Address P.O. Box 1658 Roswell, NM 88202				
NORM Readings Taken? (Circle One) YES	NO	If YES, was rea	ading > 50 micro roentgens? (Circle One) YES	NO
Pass the Paint Filter Test? (Circle One) YES	NO			
- Malana B	TRANSPOR	TER		
Transporter's Name		Driver's Name_		
Address				
Phone No.		Truck No		
I hereby certify that the above named material(s) was/were	picked up at the Generator's site	listed above and	d delivered without incident to the disposal facility listed b	pelow.
		11.24		
SHIPMENT DATE DRIVER'S SIGNA		DELIVERY		
Exempt E&P Waste/Service Identi	fication and Amount (Place v	olume next to	waste type in barrels or cubic yards)	
Oil Donal Muda	ECTABLE WATERS		INJECTABLE WATERS	
Oil Based Cuttings Washout	Water (Non-Injectable)		Washout Water (Injectable)	
Water Based Muds Completic	on Fluid/Flowback (Non-Injectable)		Completion Fluid/Flowback (Injectable)	11.74
	Water (Non-Injectable)	, <u>, , , , , , , , , , , , , , , , , , </u>	Produced Water (Injectable)	
Total Date	Line Water/Waste (Non-Injectable) L USE ONLY		Gathering Line Water/Waste (Injectable)	
E&P Contaminated Soil Truck Was	shout (Exempt Waste)		OTHER EXEMPT WASTES (Types and generation process of the waste)	-
Gas Plant Waste				
WASTE GENERATION PROCESS:   Drilling	□ Completion	□ Proc	duction   Gathering Lines	
(All non-exempt E&P waste must be analy	xempt E&P Waste/Service Ide	entification and	Amount CLP), ignition, corrosiveness, and reactivity.)	
Non Exampt Others	rese and be solow are threshold int			
			om Non-Exempt Waste List on back	
QUANTITY: B - Barrels	L - Liquid	fi <u>literar</u>	Y - Yards E - Each	
	<u>C-138</u>			
I hereby certify that according to the Resource Conservation and described waste load is (Check the appropriate classification)	d Recovery Act (RCRA) and the US	S Environmental P	Protection Agency's July 1988 regulatory determination, the a	bove
accepts certifications on a p	er month only basis.)	oduction operation	ns and are not mixed with non-exempt waste. (Gandy Marley	, Inc.
			dards for waste hazardous by characteristics established in R FR, part 261, subpart D, as amended. The following document	CRA
The state of the s	Horritazardodo lo attached. (Check	the appropriate ite	ems as provided.)	auon
☐ MSDS Information	RCRA Hazardous Wast	te Analysis	Other (Provide Description Below)	
T EMERGENCY NON OUT IT IS				
■ EMERGENCY NON-OILFIELD: Emergency non-hazardous, rous waste determination and	non-oilfield waste that has been ord I a description of the waste must ac	dered by the Depar	artment of Public Safety. (The order, documentation of non-haz	zard-
		assignment of the term		
(PRINT) AUTHORIZED AGENTS SIGNATURE	DATE		CIONATURE	
			SIGNATURE	
		GM		
NAME (PRINT)	ATE .	-		16
Released to Imaging: 8/17/2022 1:13:14 PM	N.E.	TITLE	E SIGNATURE	11

YV_inc.	3977			NamePhone No
		GENE	ERATOR	
Operator No.			Location of O Lease/Well	brigin Angles Angles
Operators Name	THINEST AL	UNA 19155		
Address				
City, State, Zip				Vo
Phone No.				
TRUCK TIM	E STAMP	DISPOSA	L FACILITY	RECEIVING AREA
IN: 10 / 10/11 OU	T:			Name/No. LANDFILL
				Name/No. EARDINE
Site Name / Permit No. Comm		1-0020)	Phone No. 5	75-347-0434
Address P.O. Box 1658 Rosw		110		
NORM Readings Tak	en? (Circle One) YES Test? (Circle One) YES	NO	If YES, was re	ading > 50 micro roentgens? (Circle One) YES NC
r ass the Faint Filter	restr (Circle Offe) 1125	NO	PORTER	
Transporter's Name	MARY HUNT			
Address				
				M&J
hone No			Truck No/	nd delivered without incident to the disposal facility listed below
nereby certify that the above har	neo material(s) was/were pio	cked up at the Generati	or's site listed above an	nd delivered without incident to the disposal facility listed below
SHIPMENT DATE	DRIVER'S SIGNATU	IDE	- A A A A A A A A A A A A A A A A A A A	YEXT X CABO
			DELIVER	
Of December 1			Place volume next to	waste type in barrels or cubic yards)
211 0 110 111		TABLE WATERS ater (Non-Injectable)		INJECTABLE WATERS
• • · · · · · · · · · · · · · · · · · ·		Fluid/Flowback (Non-Injectable)	ectable)	
Water Based Cuttings	5	/ater (Non-Injectable)	,5,0,0,10,	
A STATE OF THE STA		ine Water/Waste (Non-Inj	ectable)	
-000	INTERNAL L Truck Wash	DUT (Exempt Waste)		OTHER EXEMPT WASTES (Types and generation process of the waste)
2 D(+ W/+		out (Exchipt Waste)		(7)255 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.
WASTE GENERATION PROCESS:	☐ Drilling	☐ Completion	□ Pr	oduction
(All non-even	Non-Exe	mpt E&P Waste/Sen	vice Identification an	d Amount
	npt car waste must be analyze	ed and be below the thre	esnoid limits for toxicity (1	CLP), Ignition, corrosiveness, and reactivity.)
			Please select	from Non-Exempt Waste List on back
QUANTITY:	B - Barrels	<u> </u>	- Liquid	Y - Yards E - Each
			400	
			138	
hereby certify that according to the lescribed waste load is (Check the a	Resource Conservation and appropriate classification)	Recovery Act (RCRA) an	nd the US Environmental	Protection Agency's July 1988 regulatory determination, the above
RCRA EXEMPT:		m oil and gas exploration month only basis.)	n and production operati	ons and are not mixed with non-exempt waste. (Gandy Marley, Inc.
	Oil field waste which is non-haregulations, 40 CFR 261.21-26 demonstrating the waste as no	1.24, or listed hazardous	waste as defined by 40 (	ndards for waste hazardous by characteristics established in RCRA CFR, part 261, subpart D, as amended. The following documentation
☐ MSDS Inform			ous Waste Analysis	Other (Provide Description Below)
		- 11010111102230	odd Waste Arlarysis	Cities (Flovide Description Below)
MERGENCY NON-OILFIELD:	Emergency non-hazardous, no ous waste determination and a	on-oilfield waste that has a description of the waste	been ordered by the Dep e must accompany this fo	partment of Public Safety. (The order, documentation of non-hazard- orm.)
(DDINE) ALIEU ODITED AGE	ITS SIGNATURE	DA	ATE	SIGNATURE
(PRINT) AUTHORIZED AGEN				
(PHINT) AUTHORIZED AGEN				
(PRINT) AUTHORIZED AGEN				
(PHINT) AUTHORIZED AGEN	43/4 18	14.21	G	MI Production Control

Operator No.	YV_inc.	397			NamePhone No
Departure Name			GENERAT	The second second	
Operations Name  Name & No. County  API No. County  API No. DISPOSAL FACILITY  RECEIVING AREA Name/No. LANDFILL  Name/No. LandF	Operator No			Location of Or Lease/Well	rigin
City, State, Zip	Operators Name	Wiffenstay ,	KU13/495		
City, State, Zip Phone No	Address				
Phone No.   Prome No.   APEPO No.					
Phone No					
TRUCK TIME STAMP IN: OUT:  Site Name / Permit No. Commercial Landfarm (NM-711-1-0020)  Phone No. 575-847-0434  Address P. Bos 1589 Roswell, NM 88202  NORM Readings Taken? (Circle One) YES NO TRANSPORTER  Fransporter's Name					
IN:					
Name/No. LANDFILL	TRUCK TI	ME STAMP	DISPOSAL FA	CILITY	RECEIVING AREA
Site Name / Permit No. Commercial Landfarm (NM-711-1-0020) Phone No. 575-347-0343 Address Po. Box 1658 Reswell, MM 88202 NORM Readings Takent / Circle One) YES NO Pass the Paint Filter Test? (Circle One) YES NO TRANSPORTER  Transportar's Name Driver's Name Print N	IN: 445749 C	OUT:			
Address P.O. Box 1658 Roswell, NM 88202 NORM Readings Taken? (Circle One) YES NO Pass the Paint Filter Test? (Circle One) YES NO TRANSPORTER  Driver's Name Phone No. Truck No. Phone No.					Name/No. LANDFILL
NORM Readings Taken? (Circle One) YES NO Pass the Plant Filter Test? (Circle One) YES NO TRANSPORTER  Driver's Name Address  Phone No. P			11-1-0020)	Phone No. 57	5-347-0434
Place to Paint Filter Tost? (Circle One) YES NO  IBANSPORTER  Transporter's Name	THE REPORT OF THE PARTY OF THE				
TRANSPORTER  Driver's Name Address		The second of th		If YES, was rea	ading > 50 micro roentgens? (Circle One) YES No
Truck No.   Print Name   Print	Pass the Paint Filte	er Test? (Circle One) YES		TED	
Address	Transport N				
Phone No					
Phone No.   Truck No.   Truck No.   Truck No.   Phereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below   SHIPMENT DATE   DRIVER'S SIGNATURE   DELIVERY DATE   DRIVER'S SIGNATURE   DRI	Address				
SHIPMENT DATE DRIVER'S SIGNATURE DELIVERY DATE DRIVER'S SIGNATURE DRIVER'S SIGNATURE Exempt E&P Waste/Service Identification and Amount (Place volume next to waste type in barrels or cubic yards)  DI Based Muds NON-INICTABLE WATERS  DI Based Cuttings Washout Water (Place Volume next to waste type in barrels or cubic yards)  Washout Water (Place Volume next to waste type in barrels or cubic yards)  Washout Water (Place Volume next to waste type in barrels or cubic yards)  Washout Water (Place Volume next to waste type in barrels or cubic yards)  Washout Water (Place Volume next to waste type in barrels or cubic yards)  Washout Water (Place Volume next to waste type in barrels or cubic yards)  Washout Water (Place Volume next to waste type in barrels or cubic yards)  Washout Water (Place Volume next to waste type in barrels or cubic yards)  Washout Water (Place Volume next to waste type in barrels or cubic yards)  Washout Water (Place Volume next to waste type in barrels or cubic yards)  Washout Water (Place Volume next to waste type in barrels or cubic yards)  Washout Water (Place Volume next to waste (Place Volume next to waste)  Waster Generation Process of the Waster (Place Volume next to waste (Place Volume next to waste)  Waster Generatio				Phone No	
SHIPMENT DATE    DRIVER'S SIGNATURE   DELIVERY DATE   DRIVER'S SIGNATURE	Phone No.			Truck No	<u> </u>
Exempt E&P Waste/Service Identification and Amount (Place volume next to waste type in barrels or cubic yards)    Based Muds	I hereby certify that the above i	named material(s) was/were	picked up at the Generator's site	listed above and	d delivered without incident to the disposal facility listed below
Exempt E&P Waste/Service Identification and Amount (Place volume next to waste type in barrels or cubic yards)    Based Muds				11-24	21 Lace
Dil Based Muds Dil Based Cuttings Washout Water (Non-Injectable) Washout Water (Non-Injectable) Washout Water (Non-Injectable) Washout Water (Non-Injectable) Water Based Outlings Completion Fluid/Flowback (Injectable) Water Based Outlings Produced Water (Non-Injectable) Produced Formation Solids Gathering Line Water (Waster (Non-Injectable) Gathering Line Water (Non-Injectable) Gathering Lin					
Dil Based Cuttings Washout Water (Non-Injectable) Waster Based Muds Completion Fluid/Flowback (Non-Injectable) Water Based Cuttings Produced Water (Non-Injectable) Produced Water (Injectable) Base Plant Waste Base Plant Waste Waste Generation Process: □ Drilling □ Completion □ Production □ Rathering Lines  Non-Exempt E&P Waster (Injectable) Non-Exempt E&P Waster (Injectable)  Non-Exempt E&P Waster (Injectable)  Non-Exempt E&P Waster (Injectable)  Non-Exempt E&P Waster (Injectable)  Non-Exempt E&P Waster (Injectable)  Non-Exempt E&P Waster (Injectable)  Non-Exempt E&P Waster (Injectable)  Non-Exempt E&P Waster (Injectable)  Non-Exempt E&P Waster (Injectable)  Gathering Line Water/Waster (Injectable)  Non-Exempt Under (Injectable)  Non-Exempt E&P Waster (Injectable)  Non-Exempt E&P Waster (Injectable)  Non-Exempt Under (Injectable)  Produced Water (Injectable)  Gathering Line Waster (Injectable)  Inject Inject (Injectable)  Inject Inje	Exempt	E&P Waste/Service Ident	ification and Amount (Place	olume next to	waste type in barrels or cubic yards)
Water Based Muds Completion Fluid/Flowback (Non-Injectable) Produced Vater (Injectable) Produced Formation Solids Produced Formation Solids Gathering Line Water (Non-Injectable) Produced Formation Solids Gathering Line Water (Non-Injectable) Gathering Line Wat	Oil Based Muds	NON-INJ	ECTABLE WATERS		INJECTABLE WATERS
Water Based Cuttings	Oil Based Cuttings				Washout Water (Injectable)
Gathering Line Water/Waste (Non-Injectable)   Gathering Line Water/Waste (Injectable)   Gathering Line Water/Waste (Injectable)   Gathering Lines   Internal				-	
INTERNAL_USE ONLY Truck Washout (Exempt Waste)  SaP Contaminated Soil SaP					
Truck Washout (Exempt Waste)  as Plant Waste  WASTE GENERATION PROCESS: Drilling  Completion  Production  Gathering Lines  Non-Exempt E&P waste must be analyzed and be below the threshold limits for toxicity (TCLP), ignition, corrosiveness, and reactivity)  Non-Exempt Other:  Please select from Non-Exempt Waste List on back  BANTITY:  B - Barrels  L - Liquid  Y - Yards  E - Each  C-138  hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above lescribed waste load is (Check the appropriate classification)  RCRA EXEMPT:  Oil field waste segmented from oil and gas exploration and production operations and are not mixed with non-exempt waste. (Gandy Marley, Inc. accepts certifications on a per month only basis.)  RCRA NON-EXEMPT:  Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCR, regulations, 40 CFR, 261-21-261-24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous list atched. (Check the appropriate letters as provided.)  MSDS Information  RCRA Hazardous Waste Analysis  CHINT) AUTHORIZED AGENTS SIGNATURE  DATE  DATE  NAME (PRINT) AUTHORIZED AGENTS SIGNATURE  DATE  NAME (PRINT) AUTHORIZED AGENTS SIGNATURE  DATE  NAME (PRINT) AUTHORIZED AGENTS SIGNATURE	Tank Bottoms				
Non-Exempt E&P Waste/Service Identification and Amount (All non-exempt E&P waste must be analyzed and be below the threshold limits for toxicity (TCLP), ignition, corrosiveness, and reactivity.)  Non-Exempt Other:    Please select from Non-Exempt Waste List on back	E&P Contaminated Soil	Truck Wa	shout (Exempt Waste)		
Non-Exempt E&P Waste/Service Identification and Amount (All non-exempt E&P waste must be analyzed and be below the threshold limits for toxicity (TCLP), ignition, corrosiveness, and reactivity.)  Non-Exempt Other:  Please select from Non-Exempt Waste List on back  Please select from Non-Exempt Waste List on back  C-138  L - Liquid Y - Yards E - Each  C-138  hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above lescribed waste load is (Check the appropriate classification)  RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. (Gandy Marley, Inc. accepts certifications on a per month only basis.)  Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided.)  MSDS Information RCRA Hazardous Waste Analysis Other (Provide Description Below)  EMERGENCY NON-OILFIELD: Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety. (The order, documentation of non-hazardous waste determination and a description of the waste must accompany this form.)  PATE SIGNATURE  RMMI  NAME (PRINT) AUTHORIZED AGENTS SIGNATURE  DATE  NAME (PRINT) AUTHORIZED AGENTS SIGNATURE					
(All non-exempt E&P waste must be analyzed and be below the threshold limits for toxicity (TCLP), ignition, corrosiveness, and reactivity.)  Non-Exempt Other:    Please select from Non-Exempt Waste List on back	WASTE GENERATION PROCES	S: U Drilling	☐ Completion	□ Pro	duction
(All non-exempt E&P waste must be analyzed and be below the threshold limits for toxicity (TCLP), ignition, corrosiveness, and reactivity.)  Non-Exempt Other:    Please select from Non-Exempt Waste List on back		Non-F	xempt F&P Waste/Service Id	entification and	1 Amount
C-138  hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above secribed waste load is (Check the appropriate classification)  RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. (Gandy Marley, Incaccepts certifications on a per month only basis.)  RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCR, regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided.)  MSDS Information RCRA Hazardous Waste Analysis Other (Provide Description Below)  EMERGENCY NON-OILFIELD: Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety. (The order, documentation of non-hazardous waste determination and a description of the waste must accompany this form.)  RCRA MILITARIES SIGNATURE  DATE  NAME (PRINT) AUTHORIZED AGENTS SIGNATURE  DATE  NAME (PRINT) AUTHORIZED AGENTS SIGNATURE  DATE  NAME (PRINT) AUTHORIZED AGENTS SIGNATURE	(All non-ex	xempt E&P waste must be ana	lyzed and be below the threshold li	mits for toxicity (To	CLP), ignition, corrosiveness, and reactivity.)
C-138  hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above secribed waste load is (Check the appropriate classification)  RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. (Gandy Marley, Incaccepts certifications on a per month only basis.)  RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCR, regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided.)  MSDS Information RCRA Hazardous Waste Analysis Other (Provide Description Below)  EMERGENCY NON-OILFIELD: Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety. (The order, documentation of non-hazardous waste determination and a description of the waste must accompany this form.)  RCRA MILITARIES SIGNATURE  DATE  NAME (PRINT) AUTHORIZED AGENTS SIGNATURE  DATE  NAME (PRINT) AUTHORIZED AGENTS SIGNATURE  DATE  NAME (PRINT) AUTHORIZED AGENTS SIGNATURE	Non-Exempt Other:			*Please select fr	rom Non-Exempt Waste List on back
C-138  hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above escribed waste load is (Check the appropriate classification)  RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. (Gandy Marley, Incaccepts certifications on a per month only basis.)  RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCR, regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided.)  MSDS Information RCRA Hazardous Waste Analysis Other (Provide Description Below)  EMERGENCY NON-OILFIELD: Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety. (The order, documentation of non-hazardous waste determination and a description of the waste must accompany this form.)  (PRINT) AUTHORIZED AGENTS SIGNATURE  DATE  SIGNATURE			s La Liqui		
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accepts certifications on a per month only basis.)  RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided.)  MSDS Information RCRA Hazardous Waste Analysis Other (Provide Description Below)  EMERGENCY NON-OILFIELD: Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety. (The order, documentation of non-hazardous waste determination and a description of the waste must accompany this form.)  (PRINT) AUTHORIZED AGENTS SIGNATURE DATE SIGNATURE  NAME (PRINT)	described waste load is (Check th	e appropriate classification)	id necovery Act (NCHA) and the C	S Environmental I	Protection Agency's July 1988 regulatory determination, the abov
accepts certifications on a per month only basis.)  RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided.)  MSDS Information RCRA Hazardous Waste Analysis Other (Provide Description Below)  EMERGENCY NON-OILFIELD: Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety. (The order, documentation of non-hazardous waste determination and a description of the waste must accompany this form.)  (PRINT) AUTHORIZED AGENTS SIGNATURE DATE SIGNATURE  NAME (PRINT)	RCRA EXEMPT:	Oil field wastes generated	from oil and gas exploration and p	roduction operatio	ons and are not mixed with non-exempt waste. (Gandy Marley, Inc
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demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided.)    MSDS Information	RCRA NON-EXEMPT:	Oil field waste which is nor	n-hazardous that does not exceed	the minimum stan	dards for waste hazardous by characteristics established in RCR/
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EMERGENCY NON-OILFIELD: Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety. (The order, documentation of non-hazardous waste determination and a description of the waste must accompany this form.)  (PRINT) AUTHORIZED AGENTS SIGNATURE  DATE  SIGNATURE  NAME (PRINT)  NAME (PRINT)	☐ MSDS Info				
(PRINT) AUTHORIZED AGENTS SIGNATURE  DATE  SIGNATURE  NAME (PRINT)  NAME (PRINT)  DATE  SIGNATURE					
(PRINT) AUTHORIZED AGENTS SIGNATURE  DATE  SIGNATURE  NAME (PRINT)  NAME (PRINT)  DATE  SIGNATURE	■ EMERGENCY NON-OILFIELD	: Emergency non-hazardous,	non-oilfield waste that has been o	dered by the Dep	artment of Public Safety. (The order, documentation of non-hazard
NAME (PRINT)  DATE  THE SCONE OF		ous waste determination an	d a description of the waste must a	accompany this for	rm.)
NAME (PRINT)  DATE  THE SCONE OF					
NAME (PRINT)  DATE  THE SCONE OF					
NAME (PRINT) DATE TITLE	(PRINT) AUTHORIZED AG	ENTS SIGNATURE	DATE		SIGNATURE
NAME (PRINT) DATE TITLE					
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NAME (PRINT) DATE TITLE SIGNATURE	14917-11-1		15 34/27	GN	MI - A solver for the same
	NAME (PRINT)	(15/0000 1 10 11 5 1	DATE	TIT	LE SIGNATURE

Received by OCD: 8/4	1/2022 11:04:38 XXXCO NON		E MANIFEST / DIS	SPOSAL TICKET	Company Page 306 of 315 or
Minc.	3978	6			Name
		GENERAT	OR		Phone No.
Operator No.			Location of Or		
Operators Name	cultivest Mo	12/1/25			
City, State, Zip					
				MARKET	HINESON DE LA CONTRACTOR DEL CONTRACTOR DE LA CONTRACTOR
TRUCK	TIME STAMP	DISPOSAL FA	CILITY	RE	CEIVING AREA
IN:/_/////	OUT:			Name/No. LANDE	FILL
CONTROL OF CONTROL OF					
	mmercial Landfarm (NM-711-1	1-0020)	Phone No. 57	5-347-0434	
Address P.O. Box 1658 R	Taken? (Circle One) YES	NO	If VEO	W 68 1	
	Iter Test? (Circle One) YES	NO NO	If YES, was rea	ading > 50 micro roentgo	ens? (Circle One) YES NO
rado alo ramerii	tor react (Girale One) 120	TRANSPOR	TER		
Transporter's Name	12 Marso Her				
Phone No.			Truck No.	TO SEA MEDICAL CONTRACTOR OF THE PERSON OF T	
	named material(s) was/were pic	ked up at the Generator's site			ent to the disposal facility listed below.
			1/1.50	- d/ 30/	
SHIPMENT DATE	DRIVER'S SIGNATU	IRE	DELIVERY	DATE	DRIVER'S SIGNATURE
Exemp	t E&P Waste/Service Identific	ation and Amount (Place v	olume next to	waste type in barrels	or cubic yards)
Oil Based Muds		TABLE WATERS		INJECTABLE WATER	
Oil Based Cuttings	Washout Wa	ter (Non-Injectable)		The second secon	
Water Based Muds		Fluid/Flowback (Non-Injectable)			
Water Based Cuttings Produced Formation Solids		ater (Non-Injectable) ne Water/Waste (Non-Injectable)		Produced Water (Inje Gathering Line Wate	
Tank Bottoms	INTERNAL U			OTHER EXEMPT WA	ASTES
E&P Contaminated Soil	Truck Washo	out (Exempt Waste)		(Types and generation	on process of the waste)
Gas Plant Waste WASTE GENERATION PROCE	CO. D Drilling	□ Completies	□ n	- divalian	Cathorina Linca
WASTE GENERATION PROCE	SS. G Dilling	☐ Completion	u ric	oduction	☐ Gathering Lines
	Non-Exe	mpt E&P Waste/Service Id	entification and	d Amount	
(All non-	exempt E&P waste must be analyze	ed and be below the threshold li	mits for toxicity (T	CLP), ignition, corrosivenes	ss, and reactivity.)
Non-Exempt Other:			*Please select fi	from Non-Exempt Waste Lis	st on back
QUANTITY:	B - Barrels	L - Liqui	d	Y - Yards	E - Each
		<u>C-138</u>			
I hereby certify that according t described waste load is (Check		Recovery Act (RCRA) and the U	S Environmental	Protection Agency's July 1	1988 regulatory determination, the above
RCRA EXEMPT:		n oil and gas exploration and p	roduction operation	ons and are not mixed with	h non-exempt waste, (Gandy Marley, Inc.
A NONA EXEMPT.	accepts certifications on a per		oudeller operation		
RCRA NON-EXEMPT:	Oil field waste which is non-h	azardous that does not exceed	the minimum star	ndards for waste hazardou	s by characteristics established in RCRA
		i1.24, or listed hazardous waste on-hazardous is attached. (Chec			s amended. The following documentation
☐ MSDS II	nformation	RCRA Hazardous Wa	ste Analysis	☐ Othe	er (Provide Description Below)
☐ EMERGENCY NON-OILFIE					The order, documentation of non-hazard-
	ous waste determination and a	a description of the waste must a	accompany this to	orm.)	
(PRINT) AUTHORIZED A	AGENTS SIGNATURE	DATE			SIGNATURE
, , , , , , , , , , , , , , , , , , , ,		PAIC			Javajane
			GI	MI	
NAME (PRINT	) DA	TE		TLE	SIGNATURE
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YV_inc.	3977			NamePhone No
			ERATOR	
			Location of Ori Lease/Well	Igin Flything II
	<u> Marie De Marie de La Prima del Prima del Prima de la Prima del Prima de la Prima del Prima de la Prima de la Prima de la Prima de la Prima del Prima de la Prima de la Prima del Prima d</u>		Name & No	
Address				
			API No	
City, State, Zip				5,
Phone No				
TRUCK	TIME STAMP	DISPOSA	AL FACILITY	
A CONTRACTOR OF THE PARTY OF TH				RECEIVING AREA
IN: 10 10(0)///	OUT:			Name/No. LANDFILL
Site Name / Permit No. Co	mmercial Landfarm (NM-711-	1-0020)	Phone No. 57	5-347-0434
Address P.O. Box 1658 R				
	Taken? (Circle One) YES	NO	If YES, was rea	ding > 50 micro roentgens? (Circle One) YES NO
Pass the Paint Fil	Iter Test? (Circle One) YES	NO		
Tronopostovio Nesso			SPORTER	
			Phone No	10-
hereby certify that the above	e named material(s) was/were nic	ked up at the Genera	Truck No	d delivered without incident to the disposal facility listed below
	manifer material (5) was were pic	red up at the Genera	tor's site listed above and	i delivered without incident to the disposal facility listed below
SHIPMENT DATE	DRIVER'S SIGNATU	RE	DELIVERY	DATE DRIVER'S SIGNATURE
Exemp	t E&P Waste/Service Identific	ation and Amount		waste type in barrels or cubic yards)
Oil Based Muds		ABLE WATERS	( lace volume next to	INJECTABLE WATERS
Oil Based Cuttings	Washout Wa	ter (Non-Injectable)		Washout Water (Injectable)
Vater Based Muds		Fluid/Flowback (Non-In	jectable)	Completion Fluid/Flowback (Injectable)
Vater Based Cuttings Produced Formation Solids		ater (Non-Injectable)	1-7-1-1	Produced Water (Injectable)
ank Bottoms	Gathering Lin	ne Water/Waste (Non-Ir SE ONLY	njectable)	Gathering Line Water/Waste (Injectable)  OTHER EXEMPT WASTES
E&P Contaminated Soil		ut (Exempt Waste)		(Types and generation process of the waste)
Gas Plant Waste				
VASTE GENERATION PROCE	SS: Drilling	□ Completion	□ Pro	duction   Gathering Lines
	Non-Exer	nnt F&P Waste/Sei	rvice Identification and	Amount
(All non-	exempt E&P waste must be analyze	d and be below the thr	reshold limits for toxicity (TC	CLP), ignition, corrosiveness, and reactivity.)
Non-Exempt Other:			*Please select fro	om Non-Exempt Waste List on back
QUANTITY:	B - Barrels			Y - Yards E - Each
			<u>-138</u>	
hereby certify that according to escribed waste load is (Check	the Resource Conservation and F	Recovery Act (RCRA) a	nd the US Environmental F	Protection Agency's July 1988 regulatory determination, the above
RCRA EXEMPT:		oil and gas evoloration	on and production operation	ns and are not mixed with non-exempt waste. (Gandy Marley, Inc.
BONA EXEMPT:	accepts certifications on a per	month only basis.)	on and production operation	ns and are not mixed with non-exempt waste. (Gandy Marley, Inc
RCRA NON-EXEMPT:	Oil field waste which is non-ha	zardous that does not	exceed the minimum stand	dards for waste hazardous by characteristics established in RCRA
	demonstrating the waste as no	n-hazardous is attache	s waste as defined by 40 Cl d. (Check the appropriate it	FR, part 261, subpart D, as amended. The following documentation tems as provided.)
☐ MSDS In	nformation		dous Waste Analysis	Other (Provide Description Below)
EMERGENCY NON-OILFIEL	D: Emergency non-hazardous, nor	n-oilfield waste that has	s been ordered by the Depa	artment of Public Safety. (The order, documentation of non-hazard-
	ous waste determination and a	description of the was	te must accompany this for	m.)
(PRINT) AUTHORIZED A	GENTS SIGNATURE		ATE	NO. WELLOW
,, TOTHELD A	CELLIO SIGNATURE	The state of the s	ATE	SIGNATURE
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			GM	AL SECTION OF THE SEC
NAME (PRINT)	DAY	/ / / / ·		
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Received by OCD: 8/4/2	022 11:04:38 A	EXICO NON-HAZ	ARDOUS OILFIELD WAS	TE MANIFEST / DIS	POSAL TICKET	Company Page 308	
V inc.	3	9787				Name	
			GENERAT			Phone No	
Operator No.				Location of Ori	igin /	14 19	
Operators Name			1/1/125			777	
Address		11/					
		A CONTRACTOR					
City, State, Zip							
Phone No							
TRUCK TII	ME STAMP		DISPOSAL FA	CILITY		RECEIVING AREA	
IN:O	UT:				NI(NI-		
					Name/No.	LANDFILL	
Site Name / Permit No. Comi		(NM-711-1-002	20)	Phone No. 575	5-347-0434		
Address P.O. Box 1658 Ros							
NORM Readings Ta Pass the Paint Filter	r Test? (Circle One)		TRANSPOR	TER		roentgens? (Circle One) YES	
Transporter's Name				Driver's Name _			
Address				Print Name			
				Phone No			
Phone No.				Truck No	100		
hereby certify that the above n	amed material(s) wa	as/were picked u	p at the Generator's site	e listed above and	delivered witho	ut incident to the disposal facility list	ted below.
	alting the second			1/- 10/4	24 X	April Wilons	dq.
SHIPMENT DATE		'S SIGNATURE		DELIVERY		DRIVER'S SIGNATURE parrels or cubic yards)	
Water Based Cuttings Produced Formation Solids	F	Produced Water (N	ter/Waste (Non-Injectable NLY		Produced W Gathering L OTHER EXE	/ater (Injectable)	
WASTE GENERATION PROCESS	i: Drilling		☐ Completion	□ Proc	duction	☐ Gathering Lines	
(All man ov	omet EPR weets mus	Non-Exempt I	E&P Waste/Service Id	entification and	Amount		
	empt car waste mus	a be analyzed and	be below the threshold if			rosiveness, and reactivity.)	
Non-Exempt Other:					om Non-Exempt \	Waste List on back	
QUANTITY:	В	- Barrels	L - Liqu	id	Y - Yard	ds E - Each	
			C-138				
hereby certify that according to t	the Passurae Conser	votion and Dane		10 = 1			
described waste load is (Check the	appropriate classific	ation)	ery Act (HCHA) and the t	JS Environmental P	rotection Agency	s's July 1988 regulatory determination,	the above
RCRA EXEMPT:	Oil field wastes ger accepts certification	nerated from oil a	and gas exploration and p n only basis.)	roduction operation	ns and are not mi	ixed with non-exempt waste. (Gandy M	Marley, Inc.
RCRA NON-EXEMPT:	regulations, 40 CFF	3 261.21-261.24,	ous that does not exceed or listed hazardous waste ardous is attached. (Chec	as defined by 40 Cf	FR, part 261, subt	azardous by characteristics established part D, as amended. The following docu )	d in RCRA imentation
☐ MSDS Infor			RCRA Hazardous Wa			Other (Provide Description Below)	
EMERGENCY NON-OILFIELD:	Emergency non-ha ous waste determin	zardous, non-oilfi nation and a desc	eld waste that has been c ription of the waste must	rdered by the Depa accompany this for	artment of Public : m.)	Safety. (The order, documentation of no	on-hazard-
(PRINT) AUTHORIZED AGE	ENTS SIGNATURE		DATE			SIGNATURE	
Durygeries 1	188 Mast	1/130		GN	Al .	Frankylder - Leek	
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Received by OCD. 0/ 4/2022 11:04:30	MEXICO NON-HAZARDOUS OILFIELD WAST	E MANIFEST / DIS	1 uge 307 0/313
4V inc.	39780		NamePhone No
	GENERAT	OR Location of Ori	
Operator No.		Lease/Well	gin Peldana ()
Operators Name		Name & No	
Address			
City, State, Zip	Planting of the state of the st		
Phone No			
TRUCK TIME STAMP	DISPOSAL FA	CILITY	RECEIVING AREA
IN: //dest Juli OUT:			Name/No. LANDFILL
Site Name / Permit No. Commercial Landfar		Phone No. 575	i-347-0434
Address P.O. Box 1658 Roswell, NM 88202			
NORM Readings Taken? (Circle One Pass the Paint Filter Test? (Circle One		If YES, was read	ding > 50 micro roentgens? (Circle One) YES NO
Fass the Paint Filter Test? (Circle Of	ne) YES NO <u>TRANSPOR</u>	TER	
Transporter's Name			
Address			
Phone No		Truck No.	There is a second of the secon
Thereby certify that the above named material(s)	was/were picked up at the Generator's site	listed above and	delivered without incident to the disposal facility listed below
SHIPMENT DATE DRIVE	TOTO OLONATIVES	_// × 7	28/ Landon la tratamente
	ER'S SIGNATURE	DELIVERY I	
	rice Identification and Amount (Place v	olume next to v	vaste type in barrels or cubic yards)
Oil Based Muds Oil Based Cuttings	NON-INJECTABLE WATERS		INJECTABLE WATERS
Oil Based Cuttings Water Based Muds	Washout Water (Non-Injectable) Completion Fluid/Flowback (Non-Injectable)		Washout Water (Injectable)  Completion Fluid/Flowback (Injectable)
Water Based Cuttings	Produced Water (Non-Injectable)		Produced Water (Injectable)
Produced Formation Solids	Gathering Line Water/Waste (Non-Injectable)		Gathering Line Water/Waste (Injectable)
Tank Bottoms  E&P Contaminated Soil	INTERNAL USE ONLY Truck Washout (Exempt Waste)	( <del></del>	OTHER EXEMPT WASTES (Types and generation process of the waste)
Gas Plant Waste	ndok vydshodi (Excilipt vydste)		(r) pas and generation process of the Matter
WASTE GENERATION PROCESS:   Drilling	☐ Completion	□ Proc	duction
	Non-Exempt E&P Waste/Service Id	entification and	Amount
(All non-exempt E&P waste m	nust be analyzed and be below the threshold li	mits for toxicity (TC	LP), ignition, corrosiveness, and reactivity.)
Non-Exempt Other:		*Please select fro	om Non-Exempt Waste List on back
QUANTITY:	B - Barrels L - Liqui	d	Y - Yards E - Each
	<u>C-138</u>		
I hereby certify that according to the Resource Cons	servation and Recovery Act (RCRA) and the U	IS Environmental P	rotection Agency's July 1988 regulatory determination, the above
described waste load is (Check the appropriate class	ification)		
RCRA EXEMPT: Oil field wastes accepts certifica	generated from oil and gas exploration and putions on a per month only basis.)	roduction operation	ns and are not mixed with non-exempt waste. (Gandy Marley, Inc.
regulations, 40 C	CFR 261.21-261.24, or listed hazardous waste a	as defined by 40 CF	lards for waste hazardous by characteristics established in RCR/ FR, part 261, subpart D, as amended. The following documentation
demonstrating tr	ne waste as non-hazardous is attached. (Checi	k the appropriate it	ems as provided.)
MSDS Information	RCRA Hazardous Wa	ste Analysis	Other (Provide Description Below)
■ EMERGENCY NON-OILFIELD: Emergency non- ous waste determined to the control of	hazardous, non-oilfield waste that has been or mination and a description of the waste must a	rdered by the Depa	rtment of Public Safety. (The order, documentation of non-hazard
		ossempan, and is,	***
(PRINT) AUTHORIZED AGENTS SIGNATURE	DATE		SIGNATURE
			Old Wilding
		GN	
NAME (PRINT)	DATE		
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Received by OCD: 8/4/2022 11:04:38 AM	RDOUS OILFIELD WASTE MANIFEST / D	Tuge 510 of 510
Winc. 39831		Name
	GENERATOR	Phone No.
Operator No.	Location of (	Origin Francis P
Operators Name		77
Address	Traine a rve.	
City, State, Zip		Na.
Phone No.		Vo
TRUCK TIME STAMP	DISPOSAL FACILITY	RECEIVING AREA
IN: 101991111 OUT:		
		Name/No. LANDFILL
Site Name / Permit No. Commercial Landfarm (NM-711-1-0020	) Phone No5	75-347-0434
Address P.O. Box 1658 Roswell, NM 88202		
NORM Readings Taken? (Circle One) YES NO Pass the Paint Filter Test? (Circle One) YES NO	If YES, was re	eading > 50 micro roentgens? (Circle One) YES NO
	TRANSPORTER	
Transporter's Name		
Address		
Phone No.		M & I
I hereby certify that the above named material(s) was/were picked up	at the Generator's site listed above a	nd delivered without incident to the disposal facility listed below
	1/4_290	to delivered without modern to the disposar facility listed below.
SHIPMENT DATE DRIVER'S SIGNATURE	DELIVER	Y DATE DRIVER'S SIGNATURE
Exempt E&P Waste/Service Identification a		21112113 01011110112
Oil Based Muds NON-INJECTABLE V		
Oil Based Cuttings Washout Water (Nor	Harrist Committee Committe	INJECTABLE WATERS  Washout Water (Injectable)
Water Based Muds Completion Fluid/Flo	owback (Non-Injectable)	
Water Based Cuttings Produced Water (No Produced Formation Solids Gathering Line Water		
Tank Bottoms INTERNAL LISE ONL	r/Waste (Non-Injectable)	Gathering Line Water/Waste (Injectable) OTHER EXEMPT WASTES
E&P Contaminated Soil Truck Washout (Exer		(Types and generation process of the waste)
Gas Plant Waste		
WASTE GENERATION PROCESS: Drilling	1 Completion P	roduction
Non-Exempt ESB wests must be applied	RP Waste/Service Identification a	nd Amount
(All non-exempt E&P waste must be analyzed and b	be below the threshold limits for toxicity (	TGLP), Ignition, corrosiveness, and reactivity.)
Non-Exempt Other:	*Please select	from Non-Exempt Waste List on back
QUANTITY: B - Barrels	L - Liquid	Y - Yards E - Each
	<u>C-138</u>	
hereby certify that according to the Resource Conservation and Recover described waste load is (Check the appropriate classification)	y Act (RCRA) and the US Environmenta	Protection Agency's July 1988 regulatory determination, the above
	d gas exploration and production operationly basis	ions and are not mixed with non-exempt waste. (Gandy Marley, Inc.
☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous	s that does not exceed the minimum sta	andards for waste hazardous by characteristics established in RCRA
regulations, 40 CFH 261.21-261.24, or demonstrating the waste as non-hazar	listed hazardous waste as defined by 40 dous is attached. (Check the appropriate	CFR, part 261, subpart D, as amended. The following documentation terms as provided.)
	RCRA Hazardous Waste Analysis	Other (Provide Description Below)
■ EMERGENCY NON-OILFIELD: Emergency non-hazardous, non-oilfield ous waste determination and a descrip	d waste that has been ordered by the De otion of the waste must accompany this	partment of Public Safety. (The order, documentation of non-hazard-orm.)
(PRINT) AUTHORIZED AGENTS SIGNATURE	DATE	SIGNATURE
BUNETH HUBBUT 1129	G	MI The Roll of the Control of the Co
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Received by OCD: 8/4/	/2022 11:04:38 AM	-HAZARDOUS OILFIELD WAS	STE MANIFEST / DI	SPOSAL TICKET	Company Parge 311 of 314
V inc.	3983	0			Name
		GENERA			Phone No.
Operator No.			Location of O Lease/Well _	rigin A	4.19
	Outhwest Ro				
Address					
			Rig Name & N	0	
Phone No.			AFE/PO No		
TRUCKT	TIME STAMP	DISPOSAL F	ACILITY	PE	ECEIVING AREA
IN: 1015 4419	OUT:				
				Name/No. LAND	)FILL
Address P.O. Box 1658 R	mmercial Landfarm (NM-711-	1-0020)	Phone No. 57	75-347-0434	
	Taken? (Circle One) YES	NO -	If VEC was re-	adina v E0 miava vasuti	0 (Oinda On ) 1/50 11
	ter Test? (Circle One) YES	NO	II TES, Was lea	ading > 50 micro roento	gens? (Circle One) YES N
		TRANSPO	RTER		
Transporter's Name	1751) H. P.W	+2001 <u>4                                   </u>	Driver's Name		
Address					
Phone No.			Truck No.	237 3	
I hereby certify that the above	named material(s) was/were pic	ked up at the Generator's s	ite listed above an	d delivered without incid	dent to the disposal facility listed belo
SHIPMENT DATE	DRIVER'S SIGNATU	IDC.			
	t E&P Waste/Service Identific		DELIVERY		DRIVER'S SIGNATURE
Oil Based Muds		TABLE WATERS	volume next to		
Oil Based Cuttings		ter (Non-Injectable)		Washout Water (Inje	
Water Based Muds Water Based Cuttings		Fluid/Flowback (Non-Injectable			lowback (Injectable)
Produced Formation Solids		ater (Non-Injectable) ne Water/Waste (Non-Injectab	le)		njectable)ter/Waste (Injectable)
Tank Bottoms	INTERNAL U			OTHER EXEMPT W	VASTES ion process of the waste)
E&P Contaminated Soil Gas Plant Waste	Iruck Washo	out (Exempt Waste)		(Types and general	ion process of the waste)
WASTE GENERATION PROCES	SS: Drilling	☐ Completion	□ Pro	oduction	☐ Gathering Lines
(All non-	Non-Exe exempt E&P waste must be analyze	mpt E&P Waste/Service I and be below the threshold			ess, and reactivity.)
Non-Exempt Other:				from Non-Exempt Waste L	
QUANTITY:	B - Barrels	L - Liq		Y - Yards	E - Each
				, raido	L-Lacii
		<u>C-138</u>			
I hereby certify that according to described waste load is (Check to	o the Resource Conservation and	Recovery Act (RCRA) and the	US Environmental	Protection Agency's July	1988 regulatory determination, the above
RCRA EXEMPT:		m oil and gas exploration and	production operation	ons and are not mixed wit	th non-exempt waste. (Gandy Marley, In
A ROBA EXEMPT.	accepts certifications on a per	month only basis.)	production operation	ons and die not mixed wi	arrion exempt waste, (dailey maney, m
☐ RCRA NON-EXEMPT:	Oil field waste which is non-haregulations, 40 CFR 261.21-26 demonstrating the waste as no	1.24, or listed hazardous wast	e as defined by 40 (	CFR, part 261, subpart D, a	us by characteristics established in RCF as amended. The following documentation
☐ MSDS In		RCRA Hazardous V			ner (Provide Description Below)
☐ EMERGENCY NON-OILFIEL	<ul> <li>Emergency non-hazardous, no ous waste determination and a</li> </ul>	n-oilfield waste that has been	ordered by the Dep	partment of Public Safety.	(The order, documentation of non-hazard
	and the second s	description of the waste mus	t accompany this ic	янт,	
(PRINT) AUTHORIZED A	GENTS SIGNATURE	DATE			SIGNATURE
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M inc.	3985	3		Name
		GENERA	TOR	Phone No
Operator No.			Location of Or	rigin Plattone 19
Operators Name	authorst y	From 1/2-05		
Address				
				TO BE SEED OF THE PERSON OF TH
City, State, Zip				0
Phone No.				
TRUCK TIM	IE STAMP	DISPOSAL FA	ACILITY	RECEIVING AREA
IN: ////// OU	IT:			Name/No. LANDFILL
		1.0000\	=	
Site Name / Permit No. Comm		1-0020)	Phone No. 57	5-347-0434
Address P.O. Box 1658 Rosw NORM Readings Tak		NO	If VES was roo	ading > 50 micro roentgens? (Circle One) YES NO
	Test? (Circle One) YES	NO	II TES, was rea	admig > 50 fillero foertigens? (Officie Offe) PES NO
, ass the american		TRANSPOR	RTER	
Transporter's Name	AND PATTAN	415	Driver's Name	
Address				
Phone No.				783
		cked up at the Generator's si		d delivered without incident to the disposal facility listed below.
				Late Marie and the second
SHIPMENT DATE	DRIVER'S SIGNATU	JRE	DELIVERY	DATE DRIVER'S SIGNATURE
Exempt E	&P Waste/Service Identific	cation and Amount (Place	volume next to	waste type in barrels or cubic yards)
Oil Based Muds		TABLE WATERS		INJECTABLE WATERS
		ater (Non-Injectable)		
		Fluid/Flowback (Non-Injectable)		
		/ater (Non-Injectable) ine Water/Waste (Non-Injectab	le)	
	INTERNAL L	The state of the s		OTHER EXEMPT WASTES
E&P Contaminated Soil	Truck Wash	out (Exempt Waste)		(Types and generation process of the waste)
Gas Plant Waste	D. Danies	D. Commission	D De	oduction   Gathering Lines
WASTE GENERATION PROCESS:	u Drilling	☐ Completion		oddetion a dathering times
	Non-Exe	empt E&P Waste/Service	Identification an	nd Amount
(All non-exe	mpt E&P waste must be analyz	ed and be below the threshold	l limits for toxicity (1	TCLP), ignition, corrosiveness, and reactivity.)
Non-Exempt Other:			*Please select	from Non-Exempt Waste List on back
QUANTITY:	B - Barrels	L - Lic	juid	Y - Yards E - Each
		<u>C-138</u>		
		Recovery Act (RCRA) and the	US Environmental	Protection Agency's July 1988 regulatory determination, the above
described waste load is (Check the			l usu di sellari a sasset	ions and are not mixed with non-exempt waste. (Gandy Marley, Inc.
RCRA EXEMPT:	accepts certifications on a pe		production operati	ions and are not mixed with non-exempt waste. (dailidy maney, inc.
RCRA NON-EXEMPT:	Oil field waste which is non-h	nazardous that does not excee	ed the minimum sta	andards for waste hazardous by characteristics established in RCRA
	regulations, 40 CFR 261.21-26	61.24, or listed hazardous was on-hazardous is attached. (Ch	te as defined by 40	CFR, part 261, subpart D, as amended. The following documentation
☐ MSDS Infor		RCRA Hazardous \	and the second s	Other (Provide Description Below)
■ WISDS IIIIOI	mation	THOMA Mazardous	rvaste Analysis	
☐ EMERGENCY NON-OIL FIELD:	Emergency non-hazardous n	on-oilfield waste that has been	ordered by the De	epartment of Public Safety. (The order, documentation of non-hazard-
- LINE HOLINGT HON GIEF IEED.	ous waste determination and	a description of the waste mu-	st accompany this f	form.)
(PRINT) AUTHORIZED AGE	ENTS SIGNATURE	DATE		SIGNATURE
Linberta 19	white The	79.37	G	MI MANGERY CONTRACTOR

**Appendix F: Photographic Documentation** 

## Appendix C Southwest Royalties, Inc. Flying M SA Unit #4 Trunk Line



View from S to N of remediation area (2/23/21).



View from N to S of remediation area (2/23/21).



View to S of sample collection (3/10/21).



View to S of excavation (11/18/21).



View to N of excavation (11/18/21).



View to S of southern excavation (12/15/21).



View to S of backfilled northern excavation (12/15/21).



View to S of backfilled southern excavation (1/17/22).

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 123608

## **CONDITIONS**

Operator:	OGRID:
SOUTHWEST ROYALTIES INC	21355
P O BOX 53570	Action Number:
Midland, TX 79710	123608
	Action Type:
	[C-141] Release Corrective Action (C-141)

## CONDITIONS

C B		Condition	Condition Date
	jnobui	Remediation Plan Approved with Conditions. OCD does approve re-excavation and installation of a liner in the southern portion of the site. OCD requests the installation of two (2) additional groundwater monitoring wells at the site. However, before you proceed with this request, we ask that you provide us with a site plan depicting the 3 wells you installed (MW-1, MW-2, and MW—3) in relation to the excavation. We would like to see a groundwater monitoring well installed at last 150 feet NW of MW-3 and another well installed about 200 ft S-SE of MW-2 in Figure 6. Before you install these two wells, we request that you email OCD a figure with the proposed locations of these two new wells. Please contact OCD for further information.	8/17/2022