Site Characterization Report and Remediation Workplan

July 8, 2024

West Eumont Unit #410
API No. 30-025-04387
Incident No. nAPP2404472013
Lea County, New Mexico

Prepared For:

Forty Acres Energy, LLC
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Crain Environmental

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1.0 Introduction

Crain Environmental (CE), on behalf of Forty Acres Energy, LLC (FAE), has prepared this *Site Characterization Report and Remediation Workplan* for the produced water and crude oil release at West Eumont Unit #410 (Site), located approximately 13 miles northwest of Eunice and approximately 15 miles southwest of Hobbs, in Lea County, New Mexico. The global positioning system (GPS) coordinates for the release point are 32.534475, -103.353035. The property surface rights are privately owned. Land use in the Site vicinity is primarily oil and gas production activity and cattle grazing. The location of the Site is depicted on Figure 1.

2.0 Background

On February 1, 2024, a release was discovered at a flow line located approximately 210 feet (') south of the West Eumont Unit #411 well, and approximately 1,075 feet north of the West Eumont Unit #410. As a result of corrosion of the flow line, approximately 15 barrels (bbls) of produced water and 15 bbls of crude oil were released. Immediately following the release, the area was secured, and the flow line was repaired. The released fluid flowed on the ground approximately 110 feet south from the release point, and surface impacts covered approximately 14,500 square feet. No free-standing fluid was recovered. The release point and the surface extent of the release are depicted on Figure 2.

A Notification of Release (NOR) was submitted to the New Mexico Oil Conservation Division (NMOCD) on February 13, 2024, and Incident #nAPP2404472013 was assigned. An Initial Form C-141 (Release Notification Report) was submitted on February 20, 2024. Appendix A provides a copy of the C-141.

This *Site Characterization Report and Remediation Workplan* has been prepared prior to the due date of August 30, 2024, in accordance with 19.15.29.11 New Mexico Administrative Code (NMAC). Appendix B provides a copy of the NMOCD correspondence.

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.

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- 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

A review of the New Mexico Office of the State Engineer (NMOSE) records indicated there are no water wells located within 1 mile of the Site. Based on the absence of water well data, the most stringent NMOCD Closure Criteria will apply to the Site.

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 1, 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 freshwater 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, 5, and 6 depict the USFWS map, the FEMA floodplain map, and the karst potential map, respectively.

3.4 Closure Criteria Currently Assumed Applicable to the Site

The Closure Criteria applicable to the Site will be based on the estimated depth to groundwater, which dictates the most stringent regulatory guidelines typically associated with groundwater depths of less than fifty (50) feet below ground surface (bgs). A summary of the Closure Criteria is provided in the table below and in Table 1.

NMOCD Closure Criteria

Constituent of Concern		Closure Criteria Based on Depth to Groundwater (mg/kg)		
		≤ 50 feet bgs	51 feet to 100 feet bgs	> 100 feet bgs
Chloride (EPA 300)		600	10,000	20,000
TPH (EPA 8015M)	GRO + DRO + MRO	100	2,500	2,500
	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, the exact depth to groundwater beneath the Site is unknown. During investigation activities, a maximum depth of 4.2 feet bgs was reached, at which groundwater was not encountered.

4.3 Wellhead Protection Area

The 0.5-mile wellhead protection area is shown on Figure 3. No known water wells are located within 0.5 mile of the Site. There were no other water sources, springs, or other sources of freshwater 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.

4.5 Summary of May 2024 Analytical Results

All visibly impacted soil has been excavated, and approximately 680 cubic yards (cy) has been hauled to disposal at Cooper Landfarm and J&L Landfarm.

On May 2, 2024, confirmation soil samples (S-1 through S-12) were collected from the bottom and sides of the excavation. Soil samples were placed in clean glass sample jars, properly labeled, immediately placed on ice and hand delivered to Eurofins Environmental Testing (Eurofins) in Midland, Texas under proper chain-of-custody control. All samples were analyzed for 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 are provided on Figure 2. The laboratory report and chain-of-custody documentation is provided in Appendix C. Photographic documentation is provided in Appendix D.

Referring to Table 1, concentrations of BTEX were reported below the test method detection limits or Closure Criteria in all samples. Concentrations of TPH exceeded the Closure Criteria in four samples collected from the bottom of the excavation:

- S-3 (3') 3,280 milligrams per kilogram (mg/kg)
- S-4 (1') 177 mgk/g
- S-8 (4.2') 439 mg/kg
- S-12 (2.5') 2,870 mg/kg

With the exception of sample S-3 (3') [4,150 mg/kg], chloride concentrations were reported below the Closure Criteria in all samples. Soils with TPH and chloride exceedances will be addressed in accordance with the Proposed Remediation Workplan discussed in Section 5.0.

4.6 Laboratory Analytical Data Quality Assurance/Quality Control Results

Data reported in Job Number 880-43053-1 generated by Eurofins in Midland, Texas, was reviewed to ensure that reported analytical results met data quality objectives. It was determined by quality control data associated with analytical results that reported concentrations of target analytes are defensible and that measurement data reliability is within the expected limits of sampling and analytical error. All analytical results are usable for characterization of soil at the Site. The laboratory analytical results are provided as Appendix C.

5.0 Proposed Remediation Workplan

Benzene and BTEX concentrations were reported below the test method detection or Closure Criteria limits in all samples. Concentrations of TPH were reported above the Closure Criteria in four bottom samples as listed in Section 4.5. Concentrations of chlorides were reported above the Closure Criteria in one bottom sample (S-3 [3']).

FAE proposes to continue excavation until confirmation samples collected from the bottom and sidewalls of the excavation report TPH and chloride concentrations below the NMOCD Closure Criteria. As initial BTEX concentrations were below the test method detection limits, each confirmation sample will be analyzed only for TPH and chlorides. Pursuant to 19.15.29.12(D) NMAC, confirmation samples will consist of five-point composite samples, and discrete grab samples will be collected from any wet or discolored areas. The excavated material will be transported under manifest to a NMOCD approved disposal facility.

Upon receipt of laboratory results that all TPH and chloride concentrations are below the Closure Criteria, the excavation will be backfilled to grade with non-impacted similar material obtained from a landowner pit. Pursuant to 19.15.29.13 NMAC, the impacted surface areas will be restored to pre-release conditions. Surface grading will be performed to near original conditions and contoured to prevent erosion and ponding, promote stability, and preserve storm water flow patterns.

FAE respectfully requests a remediation schedule of 90 days from the date of NMOCD approval of this Remediation Workplan to complete the proposed remediation activities and submit a *Remediation Summary and Closure Report* for NMOCD approval. The closure report will summarize remedial activities and confirmation sampling results, and will include the final Form C-141.

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6.0 Distribution

Copy 1: Mike Bratcher
New Mexico Energy, Minerals, and Natural Resources Department
Oil Conservation Division, District 2
811 S. First Street
Artesia, New Mexico 88210

Copy 2: Ryan Swift
Forty Acres Energy, LLC
11757 Katy Freeway, Suite 725
Houston, Texas 77079

TABLE

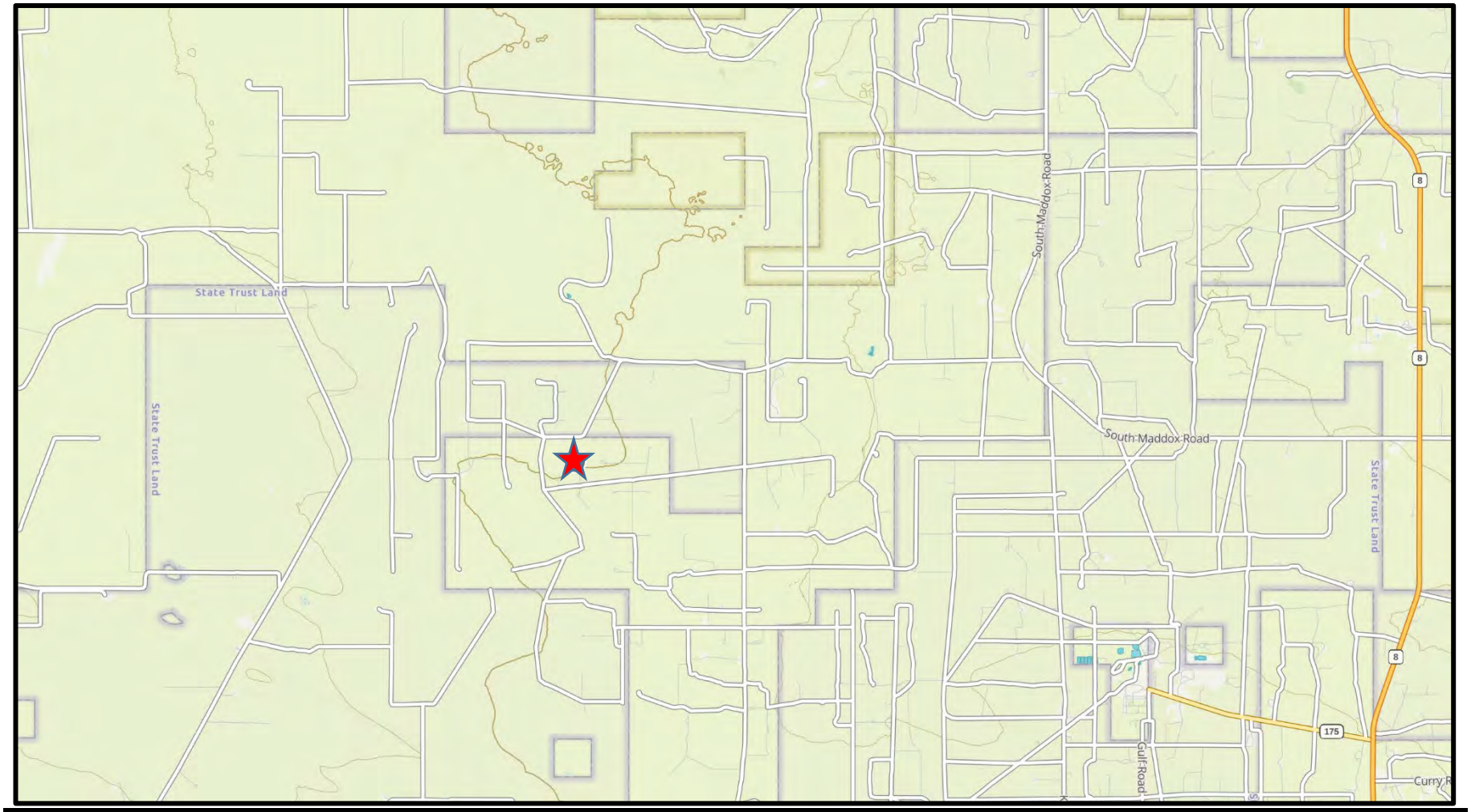
TABLE 1
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
FORTY ACRES ENERGY, LLC
WEST EUMONT #410 (30-025-04387)
NMOCD INCIDENT # nAPP2404472013

Sample ID	Sample Date	Sample Depth	Soil Status	TPH (GRO)	TPH (DRO)	TPH (MRO)	Total TPH	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	Chloride
				milligrams per kilogram (mg/kg)									
NMOCD Closure Criteria							**100**	**10**	**-**	**-**	**-**	**50**	**600**
State Land 76 #001 - 30-025-00376 - Well Pad													
S-1 (0-1')	05/02/24	0-1'	In Situ	<50.5	<50.5	<50.5	<50.5	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	<4.97
S-2 (1')	05/02/24	1'	In Situ	<49.7	**62.1**	<49.7	**62.1**	<0.00200	<0.00200	<0.00200	<0.00401	<0.00401	**23.8**
S-3 (3')	05/02/24	3'	In Situ	<50.0	**3,280**	<50.0	**3,280**	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	**4,150**
S-4 (1')	05/02/24	1'	In Situ	<49.9	**177**	<49.9	**177**	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	**46.0**
S-5 (0-1')	05/02/24	0-1'	In Situ	<49.7	<49.7	<49.7	<49.7	<0.00199	<0.00199	<0.00199	**0.00603**	**0.00603**	**11.8**
S-6 (0-1')	05/02/24	0-1'	In Situ	<50.1	<50.1	<50.1	<50.1	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	**32.3**
S-7 (2')	05/02/24	2'	In Situ	<50.5	<50.5	<50.5	<50.5	<0.00202	<0.00202	<0.00202	<0.00404	<0.00404	**6.67**
S-8 (4.2')	05/02/24	4.2'	In Situ	<50.0	**439**	<50.0	**439**	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	**487 F1**
S-9 (0-1')	05/02/24	0-1'	In Situ	<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	<0.00200	<0.00400	<0.00400	<4.97
S-10 (2')	05/02/24	2'	In Situ	<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<5.03
S-11 (0-1')	05/02/24	0-1'	In Situ	<49.7	<49.7	<49.7	<49.7	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	<4.98
S-12 (2.5')	05/02/24	2.5'	In Situ	<49.7	**2,870**	<49.7	**2,870**	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	**525**

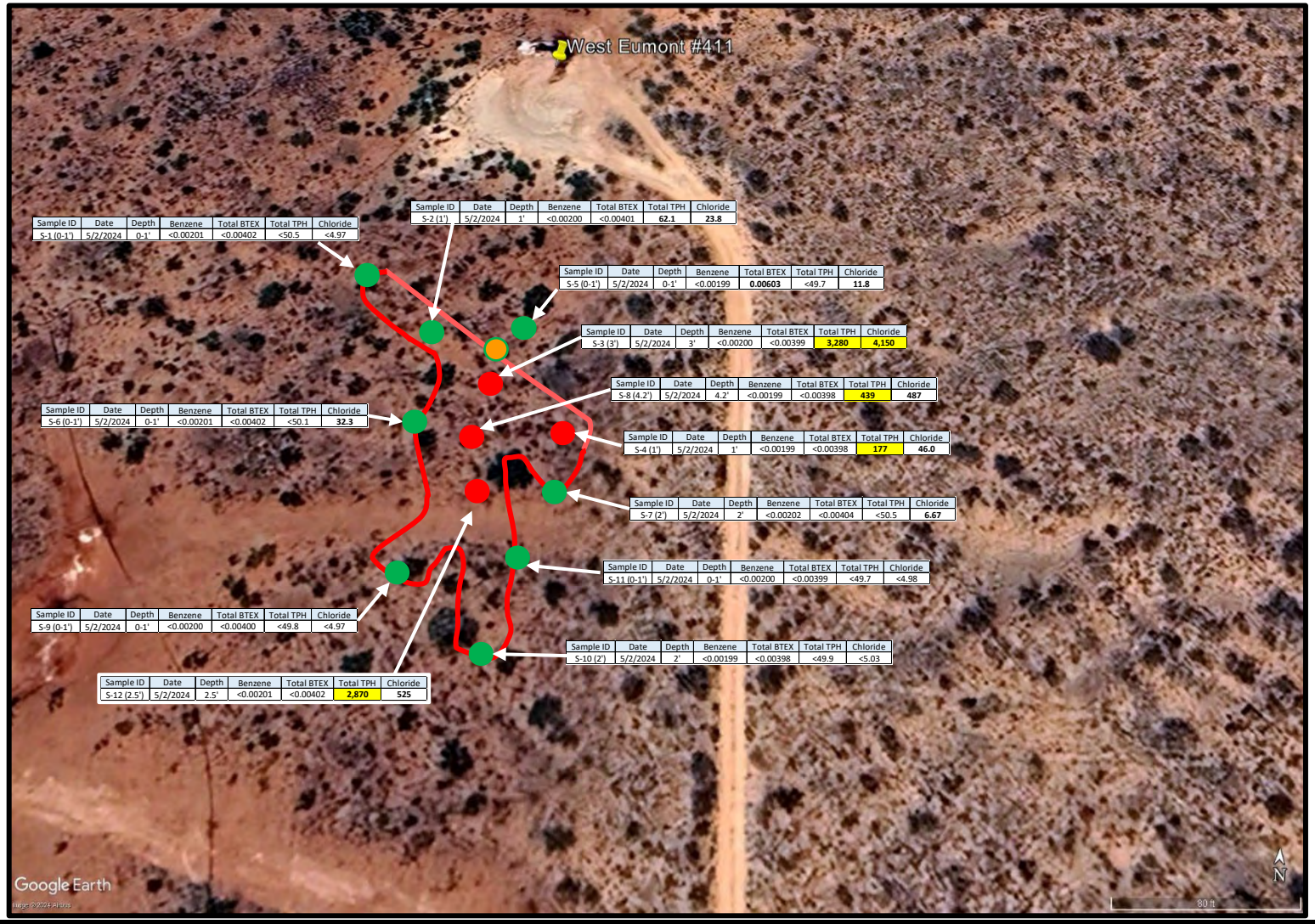
Notes:

1. GRO: Gasoline Range Organics
2. DRO: Diesel Range Organics
3. MRO: Motor Oil Range Organics
4. -: No NMOCD Closure Criteria established.
5. bgs: Below Ground Surface
6. Bold indicates the COC was above the appropriate laboratory method/sample detection limit.
7. < indicates the COC was below the appropriate laboratory method/sample detection limit.
8. Bold and yellow highlighting indicates the COC was above the appropriate NMOCD Closure Criteria.
9. F1: MS and/or MSD recovery exceeds control limits.

FIGURES



LEGEND: Site Location Base Map From GAIA GPS	**Figure 1** **Site Location Map** Forty Acres Energy, LLC West Eumont #410 Lea County, New Mexico	Drafted by: CC | Checked by: CC Draft: June 23, 2024 GPS: 32.534475° -103.353035°	Grain Environmental



LEGEND:

- Release Point.
- Soil Sample Location With Concentrations (mg/kg). No Excavation Needed.
- Soil Sample Location With Concentrations (mg/kg). Additional Excavation Needed.
- Excavation Boundary
- Highlighting Indicates Concentration Above the Closure Criteria

Figure 2

Soil Sample Location Map

Forty Acres Energy, LLC

West Eumont #410

Lea County, New Mexico

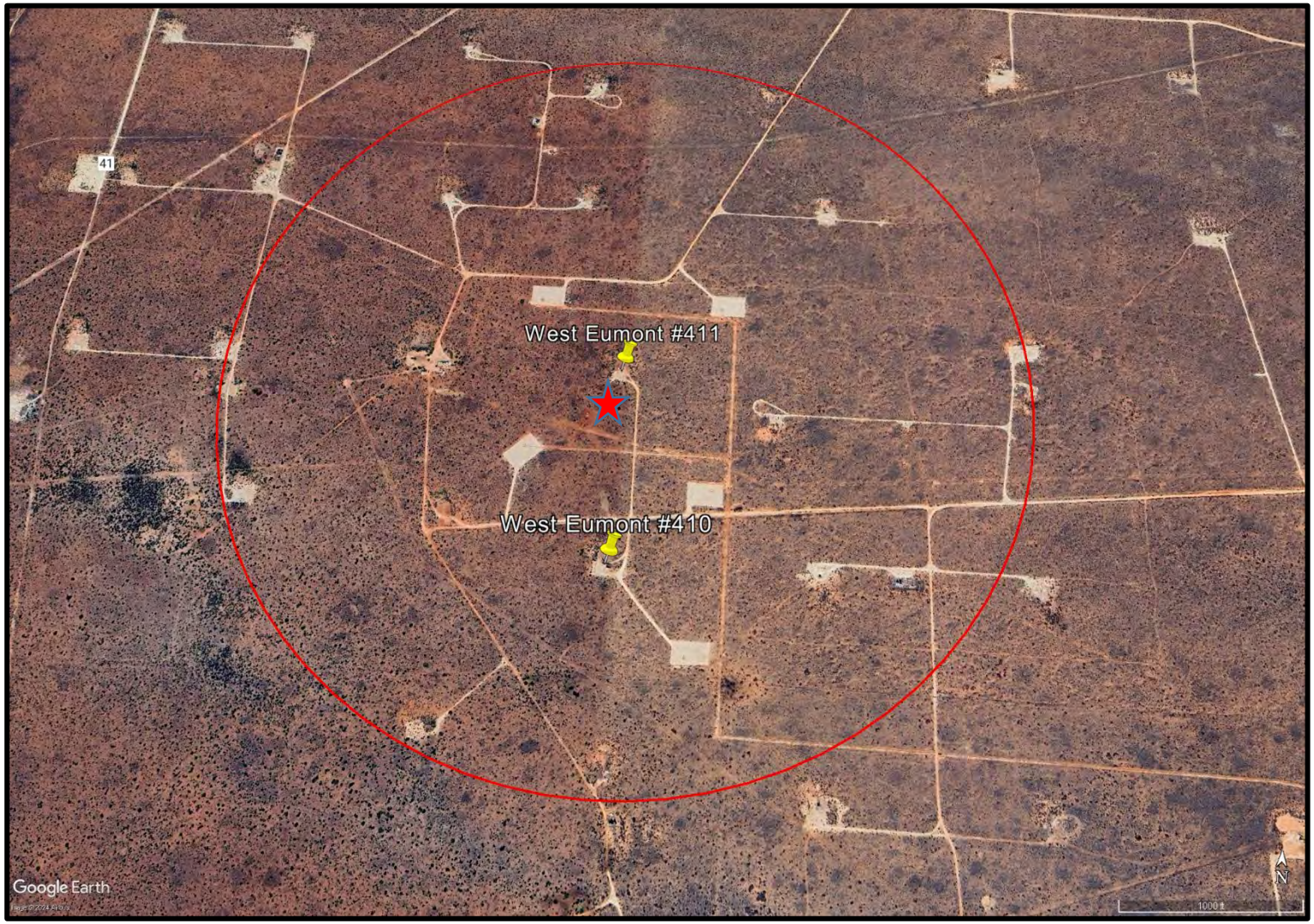
Drafted by: CC | Checked by: CC

Draft: June 23, 2024

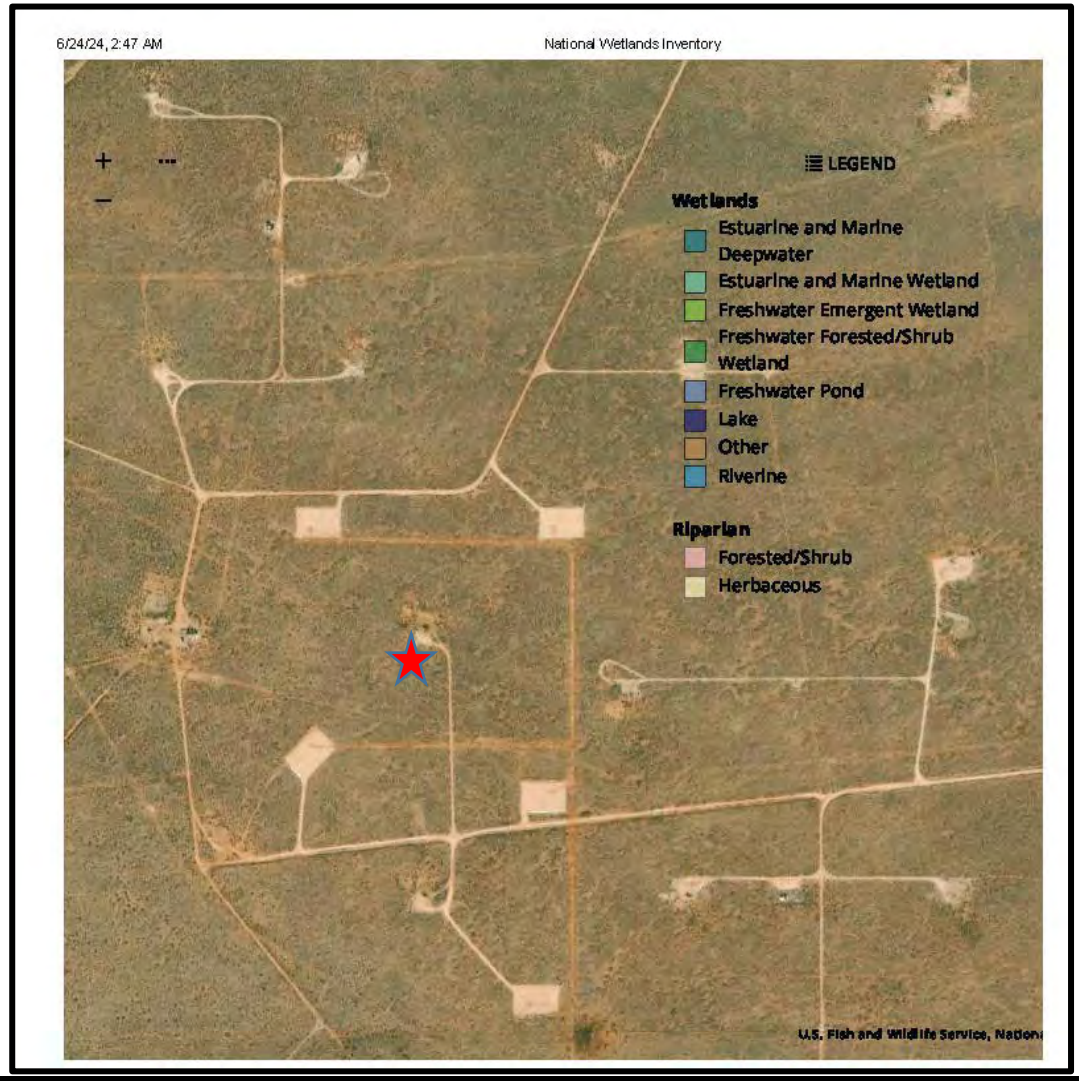
GPS: 32.534475° -103.353035°

Base Map from Google Earth Pro

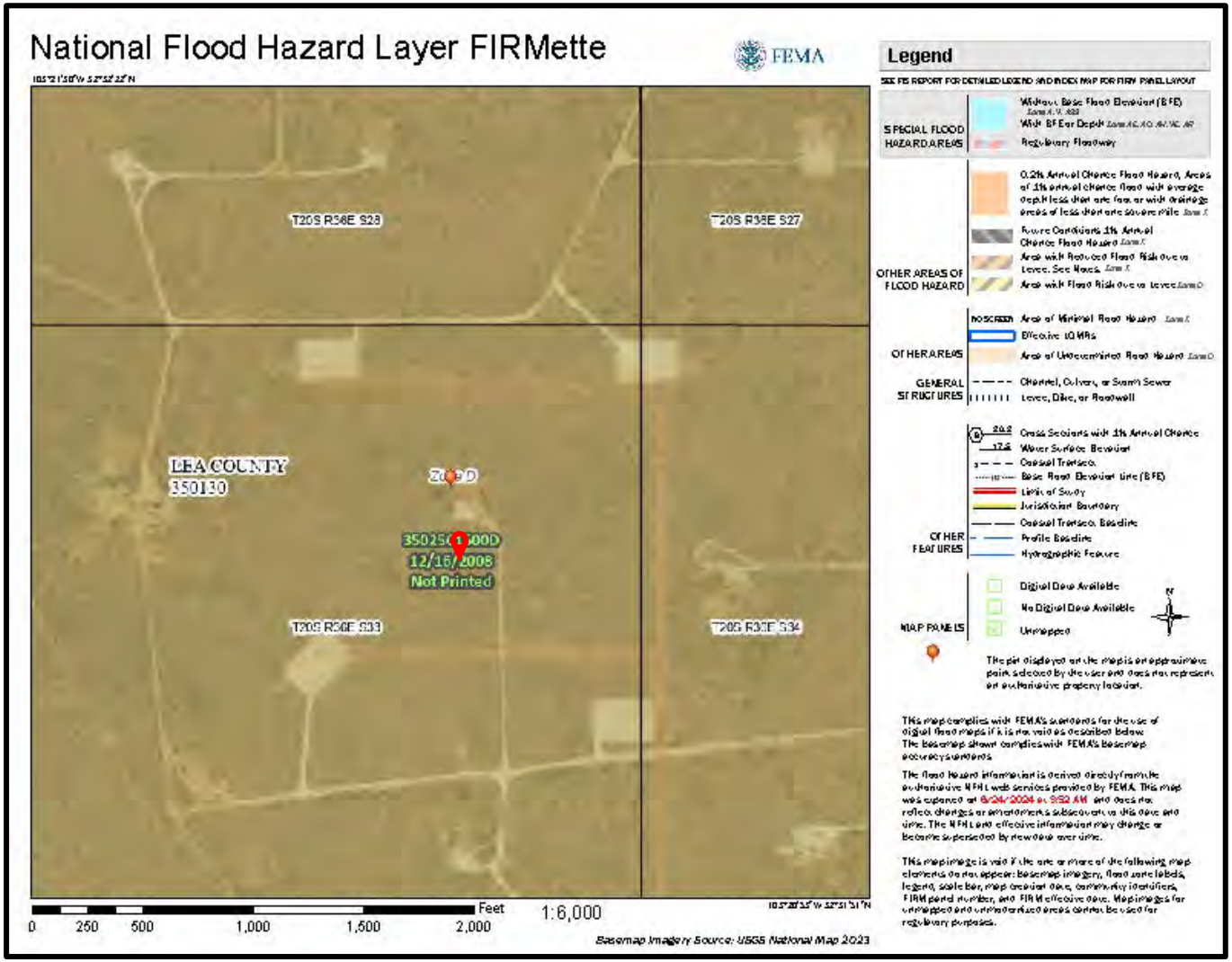
Grain Environmental



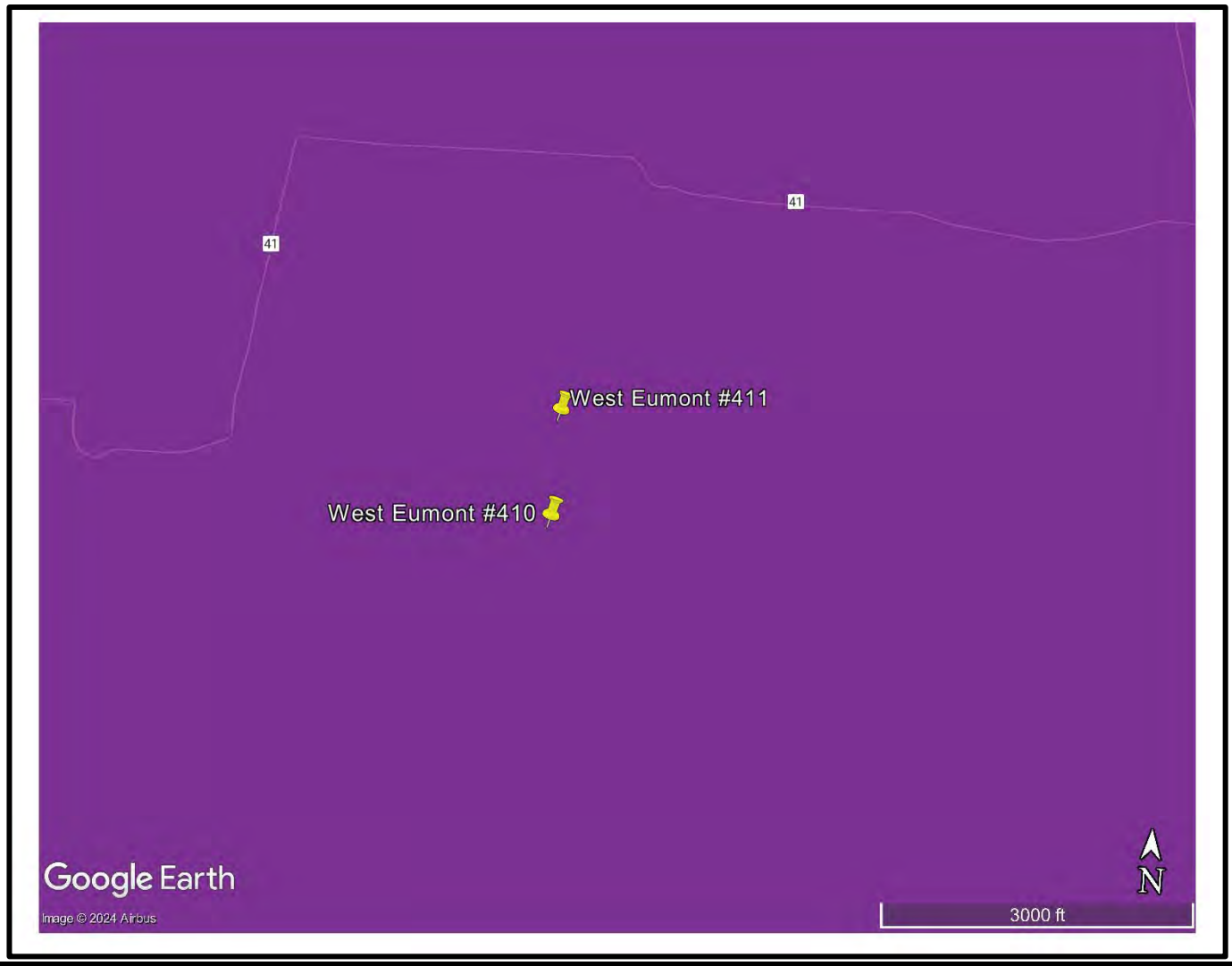
LEGEND: Site Location Base Map From Google Earth Pro	**Figure 3** **Wellhead Protection Area Map** Forty Acres Energy, LLC West Eumont #410 Lea County, New Mexico	Drafted by: CC | Checked by: CC Draft: June 23, 2024 GPS: 32.534475° -103.353035°	Grain Environmental



LEGEND: Site Location Base Map From US Fish & Wildlife Service	**Figure 4** **National Wetlands Inventory Map** Forty Acres Energy, LLC West Eumont #410 Lea County, New Mexico	Drafted by: CC | Checked by: CC Draft: June 23, 2024 GPS: 32.534475° -103.353035°	Grain Environmental



LEGEND: Site Location Base Map From FEMA	**Figure 5** **FEMA Floodplain Map** Forty Acres Energy, LLC West Eumont #410 Lea County, New Mexico		Grain Environmental
		Drafted by: CC | Checked by: CC	
		Draft: June 23, 2024	
		GPS: 32.534475° -103.353035°	



LEGEND: Low Karst Potential Medium Karst Potential High Karst Potential Base Map From Google Earth Pro and BLM	**Figure 6** **Karst Potential Map** Forty Acres Energy, LLC West Eumont #410 Lea County, New Mexico	 Drafted by: CC | Checked by: CC Draft: June 23, 2024 GPS: 32.534475° -103.353035° 	Grain Environmental

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

Released Volume Calculation

Length	20	feet	
Width	10	feet	
Thickness	3	in	
Gals		Bbls	
600	14.28571		Est. Total Bbls Released

Volume = L*W*T

Total Released Volume =	600	gallons (US, dry)
	14.29	bbls

District I
1625 N. French Dr., Hobbs, NM 88240
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District II
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1000 Rio Brazos Rd., Aztec, NM 87410
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District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS

Action 316126

QUESTIONS

Operator: FORTY ACRES ENERGY, LLC 11757 KATY FWY HOUSTON, TX 77079173	OGRID: 371416
	Action Number: 316126
	Action Type: [C-141] Initial C-141 (C-141-v-Initial)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2404472013**
Incident Name	**NAPP2404472013 WEST EUMONT UNIT #410 @ 30-025-04387**
Incident Type	**Produced Water Release**
Incident Status	**Initial C-141 Received**
Incident Well	**[30-025-04387] WEST EUMONT UNIT #410**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	WEST EUMONT UNIT #410
Date Release Discovered	02/01/2024
Surface Owner	Private

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Corrosion | Flow Line - Production | Crude Oil | Released: 15 BBL | Recovered: 0 BBL | Lost: 15 BBL.
Produced Water Released (bbls) Details	Cause: Equipment Failure | Flow Line - Production | Produced Water | Released: 15 BBL | Recovered: 0 BBL | Lost: 15 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS (continued)

Operator: FORTY ACRES ENERGY, LLC 11757 KATY FWY HOUSTON, TX 77079173	OGRID: 371416
	Action Number: 316126
	Action Type: [C-141] Initial C-141 (C-141-v-Initial)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**Yes**
Reasons why this would be considered a submission for a notification of a major release	**From paragraph A. "Major release" determine using:** **(1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.**
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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.

I hereby agree and sign off to the above statement	Name: Alexis Bolanos Title: Production & Regulatory Analyst Email: alex@faenergyus.com Date: 02/20/2024

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS (continued)

Operator: FORTY ACRES ENERGY, LLC 11757 KATY FWY HOUSTON, TX 77079173	OGRID: 371416
	Action Number: 316126
	Action Type: [C-141] Initial C-141 (C-141-v-Initial)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	*Not answered.*
What method was used to determine the depth to ground water	*Not answered.*
Did this release impact groundwater or surface water	*Not answered.*
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	*Not answered.*
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	*Not answered.*
An occupied permanent residence, school, hospital, institution, or church	*Not answered.*
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	*Not answered.*
Any other fresh water well or spring	*Not answered.*
Incorporated municipal boundaries or a defined municipal fresh water well field	*Not answered.*
A wetland	*Not answered.*
A subsurface mine	*Not answered.*
An (non-karst) unstable area	*Not answered.*
Categorize the risk of this well / site being in a karst geology	*Not answered.*
A 100-year floodplain	*Not answered.*
Did the release impact areas not on an exploration, development, production, or storage site	*Not answered.*

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	No
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
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District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Operator: FORTY ACRES ENERGY, LLC 11757 KATY FWY HOUSTON, TX 77079173	OGRID: 371416
	Action Number: 316126
	Action Type: [C-141] Initial C-141 (C-141-v-Initial)

CONDITIONS

Created By	Condition	Condition Date
scwells	None	2/20/2024

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	nAPP2404472013
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Forty Acres Energy, LLC	OGRID 371416
Contact Name Ryan Swift	Contact Telephone (346) 254-9544
Contact email ryan@faenergyus.com	Incident # *(assigned by OCD)* nAPP2404472013
Contact mailing address 11757 Katy Freeway, Suite 725, Houston, Texas 77079	

Location of Release Source

Latitude 32.5314178 Longitude -103.3529358
(NAD 83 in decimal degrees to 5 decimal places)

Site Name West Eumont Unit #410	Site Type Flowline
Date Release Discovered 2/1/24	API# *(if applicable)* 30-025-04387

Unit Letter	Section	Township	Range	County
A	33	20S	36E	Lea

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 15 bbl	Volume Recovered (bbls) 0 bbl
☒ Produced Water	Volume Released (bbls) 15 bbl	Volume Recovered (bbls) 0 bbl
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
Corrosion of flow line

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2404472013
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Greater than 25 bbl were released

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

Notice to Mike Bratcher by James Martinez by phone

Initial Response

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

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

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

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

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

Printed Name: Cindy Crain Title: Agent for Forty Acres Energy, LLC

Signature: Cindy Crain Date: 7/8/24

email: cindy.crain@gmail.com Telephone: (575) 441-7244

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2404472013
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	< 50 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2404472013
District RP	
Facility ID	
Application ID	

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

Printed Name: Cindy Crain Title: Agent for Forty Acres Energy, LLC

Signature: Cindy Crain Date: 7/8/24

email: cindy.crain@gmail.com Telephone: (575) 441-7244

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2404472013
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

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

Printed Name: Cindy Crain Title: Agent for Forty Acres Energy, LLC

Signature: Cindy Crain Date: 7/8/24

email: cindy.crain@gmail.com Telephone: (575) 441-7244

OCD Only

Received by: _____ Date: _____

- [ ] Approved
- [ ] Approved with Attached Conditions of Approval
- [ ] Denied
- [ ] Deferral Approved

Signature: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☐ Description of remediation activities

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

Appendix B: NMOCD Correspondence

Gmail

Cindy Crain <cindy.crain@gmail.com>

FW: [EXTERNAL] Forty Acres Energy C-141 Extension Request

1 message

Ryan Swift <ryan@faenergyus.com> Wed, Jul 3, 2024 at 9:06 AM
To: Cindy Crain <cindy.crain@gmail.com>

From: Alex Bolanos <alex@faenergyus.com>
Sent: Wednesday, July 3, 2024 8:49 AM
To: Ryan Swift <ryan@faenergyus.com>
Subject: RE: [EXTERNAL] Forty Acres Energy C-141 Extension Request

FYI

From: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Sent: Tuesday, July 2, 2024 3:11 PM
To: Alex Bolanos <alex@faenergyus.com>
Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>
Subject: Re: [EXTERNAL] Forty Acres Energy C-141 Extension Request

Hi Alex,

Thanks for the correspondence. The following table shows the approved extension dates.

Incident Number	Location	Remed. Due
nAPP2405454076	West Eumont Unit #405-RR BELL	08/02/2024
nAPP2404472013	West Eumont Unit #410	08/30/2024
nAPP2404471333	West Eumont Unit #210	10/07/2024

Please keep a copy of this communication for inclusion within the appropriate report submittal.

Regards,

Nelson Velez ● Environmental Specialist - Adv

Environmental Bureau | EMNRD - Oil Conservation Division

1000 Rio Brazos Road | Aztec, NM 87410

(505) 469-6146 | nelson.velez@emnrd.nm.gov

http://www.emnrd.nm.gov/ocd

Grain Environmental

Appendix C: Laboratory Report and Chain-of-Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 5/28/2024 2:10:47 PM Revision 1

JOB DESCRIPTION

W. Eument #410
Lea Co., NM

JOB NUMBER

880-43053-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

Released to Imaging: 7/16/2024 11:03:21 AM

my EOL

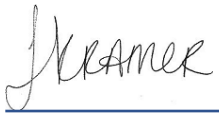
Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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5/28/2024 2:10:47 PM
Revision 1

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Crain Environmental
Project/Site: W. Eument #410

Laboratory Job ID: 880-43053-1
SDG: Lea Co., NM

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Definitions/Glossary

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

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
Project: W. Eument #410

Job ID: 880-43053-1

Job ID: 880-43053-1 Eurofins Midland

Job Narrative
880-43053-1

REVISION

The report being provided is a revision of the original report sent on 5/14/2024. The report (revision 1) is being revised due to Reanalysis needed for sample 1 and 3 RL is too high.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 5/3/2024 2:16 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 5.2°C.

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: (LCS 880-79944/1-A). Evidence of matrix interferences is not obvious.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-79896 recovered above the upper control limit for o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-79896/2).

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-79944 and analytical batch 880-79896 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

Diesel Range Organics
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-79963 and analytical batch 880-80312 was outside the upper control limits.

Method 8015MOD_NM: An incorrect volume of surrogate spiking solution was inadvertently added the following samples: S-1 (0-1') (880-43053-1). Percent recoveries are based on the amount spiked.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: S-3 (3') (880-43053-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Reanalysis of the following sample(s) was performed outside of the analytical holding time due to <Notification for reanalysis occurred after hold time window. Sample reanalysis due to original analysis being below the reportable limit with a dilution> : S-1 (0-1') (880-43053-1) and S-3 (3') (880-43053-3).

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

HPLC/IC
Method 300_ORGFM_28D - Soluble: The Chloride matrix spike (MS) recoveries for preparation batch 880-79992 and analytical batch 880-80070 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Eurofins Midland

Case Narrative

Client: Crain Environmental
Project: W. Eument #410

Job ID: 880-43053-1

Job ID: 880-43053-1 (Continued)

Eurofins Midland

S-8 (4.2') (880-43053-8), S-9 (0-1') (880-43053-9), S-10 (2') (880-43053-10), S-11 (0-1') (880-43053-11), S-12 (2.5') (880-43053-12) and (880-43053-A-8-C MS)

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

Client Sample Results

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

Client Sample ID: S-1 (0-1')

Date Collected: 05/02/24 10:55
Date Received: 05/03/24 14:16
Sample Depth: 0-1'

Lab Sample ID: 880-43053-1

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/06/24 09:24	05/06/24 12:12	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/06/24 09:24	05/06/24 12:12	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/06/24 09:24	05/06/24 12:12	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/06/24 09:24	05/06/24 12:12	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/06/24 09:24	05/06/24 12:12	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/06/24 09:24	05/06/24 12:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*05/06/24 09:24*	*05/06/24 12:12*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*05/06/24 09:24*	*05/06/24 12:12*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			05/06/24 12:12	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**221**		49.8		mg/Kg			05/23/24 13:48	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U H	49.8		mg/Kg		05/03/24 17:48	05/23/24 13:48	1
Diesel Range Organics (Over C10-C28)	**221**	**H**	49.8		mg/Kg		05/03/24 17:48	05/23/24 13:48	1
Oil Range Organics (Over C28-C36)	<49.8	U H	49.8		mg/Kg		05/03/24 17:48	05/23/24 13:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*78*		*70 - 130*	*05/03/24 17:48*	*05/23/24 13:48*	*1*
o-Terphenyl	*67*	*S1-*	*70 - 130*	*05/03/24 17:48*	*05/23/24 13:48*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.97	U	4.97		mg/Kg			05/06/24 20:35	1

Client Sample ID: S-2 (1')

Date Collected: 05/02/24 10:50
Date Received: 05/03/24 14:16
Sample Depth: 1'

Lab Sample ID: 880-43053-2

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/06/24 09:24	05/06/24 12:32	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/06/24 09:24	05/06/24 12:32	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/06/24 09:24	05/06/24 12:32	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/06/24 09:24	05/06/24 12:32	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/06/24 09:24	05/06/24 12:32	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/06/24 09:24	05/06/24 12:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*05/06/24 09:24*	*05/06/24 12:32*	*1*

Client Sample Results

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

Client Sample ID: S-2 (1')

Date Collected: 05/02/24 10:50
Date Received: 05/03/24 14:16
Sample Depth: 1'

Lab Sample ID: 880-43053-2

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*05/06/24 09:24*	*05/06/24 12:32*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			05/06/24 12:32	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**62.1**		49.7		mg/Kg			05/09/24 22:01	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		05/03/24 17:48	05/09/24 22:01	1
Diesel Range Organics (Over C10-C28)	**62.1**		49.7		mg/Kg		05/03/24 17:48	05/09/24 22:01	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		05/03/24 17:48	05/09/24 22:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*05/03/24 17:48*	*05/09/24 22:01*	*1*
o-Terphenyl	*118*		*70 - 130*	*05/03/24 17:48*	*05/09/24 22:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**23.8**		4.98		mg/Kg			05/06/24 20:40	1

Client Sample ID: S-3 (3')

Date Collected: 05/02/24 10:45
Date Received: 05/03/24 14:16
Sample Depth: 3'

Lab Sample ID: 880-43053-3

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/06/24 09:24	05/06/24 12:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/06/24 09:24	05/06/24 12:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/06/24 09:24	05/06/24 12:53	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/06/24 09:24	05/06/24 12:53	1
o-Xylene	**0.00308**		0.00200		mg/Kg		05/06/24 09:24	05/06/24 12:53	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/06/24 09:24	05/06/24 12:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*05/06/24 09:24*	*05/06/24 12:53*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*05/06/24 09:24*	*05/06/24 12:53*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			05/06/24 12:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**4130**		49.8		mg/Kg			05/23/24 14:07	1

Client Sample Results

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

Client Sample ID: S-3 (3')

Date Collected: 05/02/24 10:45
Date Received: 05/03/24 14:16
Sample Depth: 3'

Lab Sample ID: 880-43053-3

Matrix: Solid

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U H	49.8		mg/Kg		05/03/24 17:48	05/23/24 14:07	1
Diesel Range Organics (Over C10-C28)	**4130**	**H**	49.8		mg/Kg		05/03/24 17:48	05/23/24 14:07	1
Oil Range Organics (Over C28-C36)	<49.8	U H	49.8		mg/Kg		05/03/24 17:48	05/23/24 14:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*05/03/24 17:48*	*05/23/24 14:07*	*1*
o-Terphenyl	*153*	*S1+*	*70 - 130*	*05/03/24 17:48*	*05/23/24 14:07*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4150**		25.2		mg/Kg			05/06/24 20:45	5

Client Sample ID: S-4 (1')

Date Collected: 05/02/24 10:40
Date Received: 05/03/24 14:16
Sample Depth: 1'

Lab Sample ID: 880-43053-4

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/06/24 09:24	05/06/24 13:13	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/06/24 09:24	05/06/24 13:13	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/06/24 09:24	05/06/24 13:13	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/06/24 09:24	05/06/24 13:13	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/06/24 09:24	05/06/24 13:13	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/06/24 09:24	05/06/24 13:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*05/06/24 09:24*	*05/06/24 13:13*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*05/06/24 09:24*	*05/06/24 13:13*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/06/24 13:13	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**177**		49.9		mg/Kg			05/09/24 21:40	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/03/24 17:48	05/09/24 21:40	1
Diesel Range Organics (Over C10-C28)	**177**		49.9		mg/Kg		05/03/24 17:48	05/09/24 21:40	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/03/24 17:48	05/09/24 21:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*05/03/24 17:48*	*05/09/24 21:40*	*1*
o-Terphenyl	*101*		*70 - 130*	*05/03/24 17:48*	*05/09/24 21:40*	*1*

Client Sample Results

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

Client Sample ID: S-4 (1')

Lab Sample ID: 880-43053-4
Matrix: Solid
Date Collected: 05/02/24 10:40
Date Received: 05/03/24 14:16
Sample Depth: 1'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**46.0**		5.00		mg/Kg			05/06/24 20:50	1

Client Sample ID: S-5 (0-1')

Lab Sample ID: 880-43053-5
Matrix: Solid
Date Collected: 05/02/24 10:35
Date Received: 05/03/24 14:16
Sample Depth: 0-1'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/06/24 09:24	05/06/24 16:49	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/06/24 09:24	05/06/24 16:49	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/06/24 09:24	05/06/24 16:49	1
m-Xylene & p-Xylene	**0.00399**		0.00398		mg/Kg		05/06/24 09:24	05/06/24 16:49	1
o-Xylene	**0.00204**		0.00199		mg/Kg		05/06/24 09:24	05/06/24 16:49	1
Xylenes, Total	**0.00603**		0.00398		mg/Kg		05/06/24 09:24	05/06/24 16:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*05/06/24 09:24*	*05/06/24 16:49*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*05/06/24 09:24*	*05/06/24 16:49*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.00603**		0.00398		mg/Kg			05/06/24 16:49	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			05/09/24 22:21	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		05/03/24 17:48	05/09/24 22:21	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		05/03/24 17:48	05/09/24 22:21	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		05/03/24 17:48	05/09/24 22:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*05/03/24 17:48*	*05/09/24 22:21*	*1*
o-Terphenyl	*116*		*70 - 130*	*05/03/24 17:48*	*05/09/24 22:21*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11.8**		4.99		mg/Kg			05/06/24 20:54	1

Client Sample Results

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

Client Sample ID: S-6 (0-1')

Date Collected: 05/02/24 10:30
Date Received: 05/03/24 14:16
Sample Depth: 0-1'

Lab Sample ID: 880-43053-6

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/06/24 09:24	05/06/24 17:10	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/06/24 09:24	05/06/24 17:10	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/06/24 09:24	05/06/24 17:10	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/06/24 09:24	05/06/24 17:10	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/06/24 09:24	05/06/24 17:10	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/06/24 09:24	05/06/24 17:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*05/06/24 09:24*	*05/06/24 17:10*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*05/06/24 09:24*	*05/06/24 17:10*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			05/06/24 17:10	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			05/09/24 22:41	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		05/03/24 17:48	05/09/24 22:41	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		05/03/24 17:48	05/09/24 22:41	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		05/03/24 17:48	05/09/24 22:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*05/03/24 17:48*	*05/09/24 22:41*	*1*
o-Terphenyl	*112*		*70 - 130*	*05/03/24 17:48*	*05/09/24 22:41*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**32.3**		5.00		mg/Kg			05/06/24 20:59	1

Client Sample ID: S-7 (2')

Date Collected: 05/02/24 10:25
Date Received: 05/03/24 14:16
Sample Depth: 2'

Lab Sample ID: 880-43053-7

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		05/06/24 09:24	05/06/24 17:30	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/06/24 09:24	05/06/24 17:30	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/06/24 09:24	05/06/24 17:30	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		05/06/24 09:24	05/06/24 17:30	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/06/24 09:24	05/06/24 17:30	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		05/06/24 09:24	05/06/24 17:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*05/06/24 09:24*	*05/06/24 17:30*	*1*

Eurofins Midland

Client Sample Results

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

Client Sample ID: S-7 (2')

Date Collected: 05/02/24 10:25
Date Received: 05/03/24 14:16
Sample Depth: 2'

Lab Sample ID: 880-43053-7
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*05/06/24 09:24*	*05/06/24 17:30*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			05/06/24 17:30	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			05/09/24 23:01	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		05/03/24 17:48	05/09/24 23:01	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		05/03/24 17:48	05/09/24 23:01	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		05/03/24 17:48	05/09/24 23:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*05/03/24 17:48*	*05/09/24 23:01*	*1*
o-Terphenyl	*101*		*70 - 130*	*05/03/24 17:48*	*05/09/24 23:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.67**		4.95		mg/Kg			05/06/24 21:04	1

Client Sample ID: S-8 (4.2')

Date Collected: 05/02/24 10:20
Date Received: 05/03/24 14:16
Sample Depth: 4.2'

Lab Sample ID: 880-43053-8
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/06/24 09:24	05/06/24 17:51	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/06/24 09:24	05/06/24 17:51	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/06/24 09:24	05/06/24 17:51	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/06/24 09:24	05/06/24 17:51	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/06/24 09:24	05/06/24 17:51	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/06/24 09:24	05/06/24 17:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*05/06/24 09:24*	*05/06/24 17:51*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*05/06/24 09:24*	*05/06/24 17:51*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/06/24 17:51	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**439**		50.0		mg/Kg			05/09/24 21:20	1

Eurofins Midland

Client Sample Results

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

Client Sample ID: S-8 (4.2')

Lab Sample ID: 880-43053-8
Matrix: Solid
Date Collected: 05/02/24 10:20
Date Received: 05/03/24 14:16
Sample Depth: 4.2'

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/03/24 17:48	05/09/24 21:20	1
Diesel Range Organics (Over C10-C28)	**439**		50.0		mg/Kg		05/03/24 17:48	05/09/24 21:20	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/03/24 17:48	05/09/24 21:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*05/03/24 17:48*	*05/09/24 21:20*	*1*
o-Terphenyl	*99*		*70 - 130*	*05/03/24 17:48*	*05/09/24 21:20*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**487**	**F1**	5.04		mg/Kg			05/06/24 21:01	1

Client Sample ID: S-9 (0-1')

Lab Sample ID: 880-43053-9
Matrix: Solid
Date Collected: 05/02/24 10:15
Date Received: 05/03/24 14:16
Sample Depth: 0-1'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/06/24 09:24	05/06/24 18:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/06/24 09:24	05/06/24 18:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/06/24 09:24	05/06/24 18:11	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/06/24 09:24	05/06/24 18:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/06/24 09:24	05/06/24 18:11	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/06/24 09:24	05/06/24 18:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*05/06/24 09:24*	*05/06/24 18:11*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*05/06/24 09:24*	*05/06/24 18:11*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			05/06/24 18:11	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			05/09/24 23:42	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/03/24 17:48	05/09/24 23:42	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/03/24 17:48	05/09/24 23:42	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/03/24 17:48	05/09/24 23:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*05/03/24 17:48*	*05/09/24 23:42*	*1*
o-Terphenyl	*106*		*70 - 130*	*05/03/24 17:48*	*05/09/24 23:42*	*1*

Client Sample Results

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

Client Sample ID: S-9 (0-1')

Lab Sample ID: 880-43053-9
Matrix: Solid
Date Collected: 05/02/24 10:15
Date Received: 05/03/24 14:16
Sample Depth: 0-1'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.97	U	4.97		mg/Kg			05/06/24 21:19	1

Client Sample ID: S-10 (2')

Lab Sample ID: 880-43053-10
Matrix: Solid
Date Collected: 05/02/24 10:10
Date Received: 05/03/24 14:16
Sample Depth: 2'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/06/24 09:24	05/06/24 18:31	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/06/24 09:24	05/06/24 18:31	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/06/24 09:24	05/06/24 18:31	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/06/24 09:24	05/06/24 18:31	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/06/24 09:24	05/06/24 18:31	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/06/24 09:24	05/06/24 18:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*05/06/24 09:24*	*05/06/24 18:31*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*05/06/24 09:24*	*05/06/24 18:31*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/06/24 18:31	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/10/24 00:02	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/03/24 17:48	05/10/24 00:02	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/03/24 17:48	05/10/24 00:02	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/03/24 17:48	05/10/24 00:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*05/03/24 17:48*	*05/10/24 00:02*	*1*
o-Terphenyl	*109*		*70 - 130*	*05/03/24 17:48*	*05/10/24 00:02*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.03	U	5.03		mg/Kg			05/06/24 21:26	1

Client Sample Results

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

Client Sample ID: S-11 (0-1')

Date Collected: 05/02/24 10:05
Date Received: 05/03/24 14:16
Sample Depth: 0-1'

Lab Sample ID: 880-43053-11

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *1 *+	0.00200		mg/Kg		05/03/24 15:35	05/03/24 23:09	1
Toluene	<0.00200	U *1 *+	0.00200		mg/Kg		05/03/24 15:35	05/03/24 23:09	1
Ethylbenzene	<0.00200	U *1 *+	0.00200		mg/Kg		05/03/24 15:35	05/03/24 23:09	1
m-Xylene & p-Xylene	<0.00399	U *1 *+	0.00399		mg/Kg		05/03/24 15:35	05/03/24 23:09	1
o-Xylene	<0.00200	U *1 *+	0.00200		mg/Kg		05/03/24 15:35	05/03/24 23:09	1
Xylenes, Total	<0.00399	U *1 *+	0.00399		mg/Kg		05/03/24 15:35	05/03/24 23:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*05/03/24 15:35*	*05/03/24 23:09*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*05/03/24 15:35*	*05/03/24 23:09*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			05/03/24 23:09	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			05/10/24 00:22	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		05/03/24 17:48	05/10/24 00:22	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		05/03/24 17:48	05/10/24 00:22	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		05/03/24 17:48	05/10/24 00:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*05/03/24 17:48*	*05/10/24 00:22*	*1*
o-Terphenyl	*94*		*70 - 130*	*05/03/24 17:48*	*05/10/24 00:22*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.98	U	4.98		mg/Kg			05/06/24 21:32	1

Client Sample ID: S-12 (2.5')

Date Collected: 05/02/24 11:10
Date Received: 05/03/24 14:16
Sample Depth: 2.5'

Lab Sample ID: 880-43053-12

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *1 *+	0.00201		mg/Kg		05/03/24 15:35	05/03/24 23:30	1
Toluene	<0.00201	U *1 *+	0.00201		mg/Kg		05/03/24 15:35	05/03/24 23:30	1
Ethylbenzene	<0.00201	U *1 *+	0.00201		mg/Kg		05/03/24 15:35	05/03/24 23:30	1
m-Xylene & p-Xylene	<0.00402	U *1 *+	0.00402		mg/Kg		05/03/24 15:35	05/03/24 23:30	1
o-Xylene	<0.00201	U *1 *+	0.00201		mg/Kg		05/03/24 15:35	05/03/24 23:30	1
Xylenes, Total	<0.00402	U *1 *+	0.00402		mg/Kg		05/03/24 15:35	05/03/24 23:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*05/03/24 15:35*	*05/03/24 23:30*	*1*

Client Sample Results

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

Client Sample ID: S-12 (2.5')

Date Collected: 05/02/24 11:10
Date Received: 05/03/24 14:16
Sample Depth: 2.5'

Lab Sample ID: 880-43053-12

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*05/03/24 15:35*	*05/03/24 23:30*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			05/03/24 23:30	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**2870**		49.7		mg/Kg			05/10/24 00:44	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		05/03/24 17:48	05/10/24 00:44	1
Diesel Range Organics (Over C10-C28)	**2870**		49.7		mg/Kg		05/03/24 17:48	05/10/24 00:44	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		05/03/24 17:48	05/10/24 00:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*106*		*70 - 130*	*05/03/24 17:48*	*05/10/24 00:44*	*1*
1-Chlorooctane	*102*		*70 - 130*	*05/03/24 17:48*	*05/10/24 01:04*	*5*
o-Terphenyl	*89*		*70 - 130*	*05/03/24 17:48*	*05/10/24 00:44*	*1*
o-Terphenyl	*106*		*70 - 130*	*05/03/24 17:48*	*05/10/24 01:04*	*5*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**525**		5.04		mg/Kg			05/06/24 21:38	1

Surrogate Summary

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-43053-1	S-1 (0-1')	114	92
880-43053-1 MS	S-1 (0-1')	114	100
880-43053-1 MSD	S-1 (0-1')	117	103
880-43053-2	S-2 (1')	117	93
880-43053-3	S-3 (3')	125	102
880-43053-4	S-4 (1')	120	93
880-43053-5	S-5 (0-1')	117	86
880-43053-6	S-6 (0-1')	118	91
880-43053-7	S-7 (2')	118	92
880-43053-8	S-8 (4.2')	116	91
880-43053-9	S-9 (0-1')	117	91
880-43053-10	S-10 (2')	118	92
880-43053-11	S-11 (0-1')	116	92
880-43053-12	S-12 (2.5')	117	93
LCS 880-79944/1-A	Lab Control Sample	174 S1+	155 S1+
LCS 880-80004/1-A	Lab Control Sample	116	103
LCSD 880-79944/2-A	Lab Control Sample Dup	115	104
LCSD 880-80004/2-A	Lab Control Sample Dup	114	101
MB 880-79944/5-A	Method Blank	116	91
MB 880-80004/5-A	Method Blank	115	90

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-43053-1	S-1 (0-1')	78	67 S1-
880-43053-2	S-2 (1')	103	118
880-43053-3	S-3 (3')	88	153 S1+
880-43053-4	S-4 (1')	95	101
880-43053-5	S-5 (0-1')	111	116
880-43053-6	S-6 (0-1')	108	112
880-43053-7	S-7 (2')	98	101
880-43053-8	S-8 (4.2')	96	99
880-43053-9	S-9 (0-1')	100	106
880-43053-10	S-10 (2')	100	109
880-43053-11	S-11 (0-1')	88	94
880-43053-12	S-12 (2.5')	106	89
880-43053-12	S-12 (2.5')	102	106
LCS 880-79963/2-A	Lab Control Sample	99	93
LCS 880-81364/2-A	Lab Control Sample	100	105
LCSD 880-79963/3-A	Lab Control Sample Dup	95	91
LCSD 880-81364/3-A	Lab Control Sample Dup	98	102
MB 880-79963/1-A	Method Blank	121	142 S1+
MB 880-81364/1-A	Method Blank	118	119

Surrogate Summary

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-79944/5-A
Matrix: Solid
Analysis Batch: 79896

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 79944

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/03/24 15:35	05/03/24 17:09	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/03/24 15:35	05/03/24 17:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/03/24 15:35	05/03/24 17:09	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/03/24 15:35	05/03/24 17:09	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/03/24 15:35	05/03/24 17:09	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/03/24 15:35	05/03/24 17:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*05/03/24 15:35*	*05/03/24 17:09*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*05/03/24 15:35*	*05/03/24 17:09*	*1*

Lab Sample ID: LCS 880-79944/1-A
Matrix: Solid
Analysis Batch: 79896

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 79944

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1882	*+	mg/Kg		188	70 - 130
Toluene	0.100	0.1847	*+	mg/Kg		185	70 - 130
Ethylbenzene	0.100	0.1833	*+	mg/Kg		183	70 - 130
m-Xylene & p-Xylene	0.200	0.3757	*+	mg/Kg		188	70 - 130
o-Xylene	0.100	0.1848	*+	mg/Kg		185	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*174*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*155*	*S1+*	*70 - 130*

Lab Sample ID: LCSD 880-79944/2-A
Matrix: Solid
Analysis Batch: 79896

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 79944

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1213	*1	mg/Kg		121	70 - 130	43	35
Toluene	0.100	0.1172	*1	mg/Kg		117	70 - 130	45	35
Ethylbenzene	0.100	0.1162	*1	mg/Kg		116	70 - 130	45	35
m-Xylene & p-Xylene	0.200	0.2386	*1	mg/Kg		119	70 - 130	45	35
o-Xylene	0.100	0.1180	*1	mg/Kg		118	70 - 130	44	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: MB 880-80004/5-A
Matrix: Solid
Analysis Batch: 79997

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 80004

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/06/24 09:24	05/06/24 11:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/06/24 09:24	05/06/24 11:50	1

QC Sample Results

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

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

Lab Sample ID: MB 880-80004/5-A
Matrix: Solid
Analysis Batch: 79997

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 80004

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/06/24 09:24	05/06/24 11:50	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/06/24 09:24	05/06/24 11:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/06/24 09:24	05/06/24 11:50	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/06/24 09:24	05/06/24 11:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*05/06/24 09:24*	*05/06/24 11:50*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*05/06/24 09:24*	*05/06/24 11:50*	*1*

Lab Sample ID: LCS 880-80004/1-A
Matrix: Solid
Analysis Batch: 79997

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 80004

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1210		mg/Kg		121	70 - 130
Toluene	0.100	0.1166		mg/Kg		117	70 - 130
Ethylbenzene	0.100	0.1157		mg/Kg		116	70 - 130
m-Xylene & p-Xylene	0.200	0.2385		mg/Kg		119	70 - 130
o-Xylene	0.100	0.1186		mg/Kg		119	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-80004/2-A
Matrix: Solid
Analysis Batch: 79997

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 80004

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1119		mg/Kg		112	70 - 130	8	35
Toluene	0.100	0.1076		mg/Kg		108	70 - 130	8	35
Ethylbenzene	0.100	0.1056		mg/Kg		106	70 - 130	9	35
m-Xylene & p-Xylene	0.200	0.2180		mg/Kg		109	70 - 130	9	35
o-Xylene	0.100	0.1085		mg/Kg		108	70 - 130	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 880-43053-1 MS
Matrix: Solid
Analysis Batch: 79997

Client Sample ID: S-1 (0-1')
Prep Type: Total/NA
Prep Batch: 80004

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U	0.100	0.1004		mg/Kg		100	70 - 130
Toluene	<0.00201	U	0.100	0.09677		mg/Kg		97	70 - 130
Ethylbenzene	<0.00201	U	0.100	0.09601		mg/Kg		96	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1982		mg/Kg		99	70 - 130

QC Sample Results

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

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

Lab Sample ID: 880-43053-1 MS
Matrix: Solid
Analysis Batch: 79997

Client Sample ID: S-1 (0-1')
Prep Type: Total/NA
Prep Batch: 80004

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
o-Xylene	<0.00201	U	0.100	0.09861		mg/Kg		99	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 880-43053-1 MSD
Matrix: Solid
Analysis Batch: 79997

Client Sample ID: S-1 (0-1')
Prep Type: Total/NA
Prep Batch: 80004

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.100	0.1201		mg/Kg		120	70 - 130	18	35
Toluene	<0.00201	U	0.100	0.1163		mg/Kg		116	70 - 130	18	35
Ethylbenzene	<0.00201	U	0.100	0.1161		mg/Kg		116	70 - 130	19	35
m-Xylene & p-Xylene	<0.00402	U	0.200	0.2383		mg/Kg		119	70 - 130	18	35
o-Xylene	<0.00201	U	0.100	0.1180		mg/Kg		118	70 - 130	18	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

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

Lab Sample ID: MB 880-79963/1-A
Matrix: Solid
Analysis Batch: 80312

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 79963

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/03/24 17:48	05/09/24 18:15	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/03/24 17:48	05/09/24 18:15	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/03/24 17:48	05/09/24 18:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*121*		*70 - 130*	*05/03/24 17:48*	*05/09/24 18:15*	*1*
o-Terphenyl	*142*	*S1+*	*70 - 130*	*05/03/24 17:48*	*05/09/24 18:15*	*1*

Lab Sample ID: LCS 880-79963/2-A
Matrix: Solid
Analysis Batch: 80312

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 79963

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	929.4		mg/Kg		93	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1014		mg/Kg		101	70 - 130

QC Sample Results

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

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

Lab Sample ID: LCS 880-79963/2-A
Matrix: Solid
Analysis Batch: 80312

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 79963

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	93		70 - 130

Lab Sample ID: LCSD 880-79963/3-A
Matrix: Solid
Analysis Batch: 80312

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 79963

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	946.2		mg/Kg		95	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	989.6		mg/Kg		99	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	95		70 - 130
o-Terphenyl	91		70 - 130

Lab Sample ID: MB 880-81364/1-A
Matrix: Solid
Analysis Batch: 81417

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 81364

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/22/24 19:24	05/23/24 09:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/22/24 19:24	05/23/24 09:55	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/22/24 19:24	05/23/24 09:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	118		70 - 130	05/22/24 19:24	05/23/24 09:55	1
o-Terphenyl	119		70 - 130	05/22/24 19:24	05/23/24 09:55	1

Lab Sample ID: LCS 880-81364/2-A
Matrix: Solid
Analysis Batch: 81417

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 81364

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1103		mg/Kg		110	70 - 130
Diesel Range Organics (Over C10-C28)			1000	978.1		mg/Kg		98	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	105		70 - 130

QC Sample Results

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

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

Lab Sample ID: LCSD 880-81364/3-A
Matrix: Solid
Analysis Batch: 81417

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 81364

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1057		mg/Kg		106	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	936.6		mg/Kg		94	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*98*		*70 - 130*
o-Terphenyl	*102*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-79991/1-A
Matrix: Solid
Analysis Batch: 80069

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/06/24 18:39	1

Lab Sample ID: LCS 880-79991/2-A
Matrix: Solid
Analysis Batch: 80069

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	255.0		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-79991/3-A
Matrix: Solid
Analysis Batch: 80069

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	269.2		mg/Kg		108	90 - 110	5	20

Lab Sample ID: MB 880-79992/1-A
Matrix: Solid
Analysis Batch: 80070

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/06/24 20:42	1

Lab Sample ID: LCS 880-79992/2-A
Matrix: Solid
Analysis Batch: 80070

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	235.8		mg/Kg		94	90 - 110		

QC Sample Results

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-79992/3-A
Matrix: Solid
Analysis Batch: 80070

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	233.3		mg/Kg		93	90 - 110	1	20

Lab Sample ID: 880-43053-8 MS
Matrix: Solid
Analysis Batch: 80070

Client Sample ID: S-8 (4.2')
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	487	F1	252	710.6	F1	mg/Kg		89	90 - 110		

Lab Sample ID: 880-43053-8 MSD
Matrix: Solid
Analysis Batch: 80070

Client Sample ID: S-8 (4.2')
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	487	F1	252	713.0		mg/Kg		90	90 - 110	0	20

QC Association Summary

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

GC VOA

Analysis Batch: 79896

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43053-11	S-11 (0-1')	Total/NA	Solid	8021B	79944
880-43053-12	S-12 (2.5')	Total/NA	Solid	8021B	79944
MB 880-79944/5-A	Method Blank	Total/NA	Solid	8021B	79944
LCS 880-79944/1-A	Lab Control Sample	Total/NA	Solid	8021B	79944
LCSD 880-79944/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	79944

Prep Batch: 79944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43053-11	S-11 (0-1')	Total/NA	Solid	5035	
880-43053-12	S-12 (2.5')	Total/NA	Solid	5035	
MB 880-79944/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-79944/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-79944/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 79997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43053-1	S-1 (0-1')	Total/NA	Solid	8021B	80004
880-43053-2	S-2 (1')	Total/NA	Solid	8021B	80004
880-43053-3	S-3 (3')	Total/NA	Solid	8021B	80004
880-43053-4	S-4 (1')	Total/NA	Solid	8021B	80004
880-43053-5	S-5 (0-1')	Total/NA	Solid	8021B	80004
880-43053-6	S-6 (0-1')	Total/NA	Solid	8021B	80004
880-43053-7	S-7 (2')	Total/NA	Solid	8021B	80004
880-43053-8	S-8 (4.2')	Total/NA	Solid	8021B	80004
880-43053-9	S-9 (0-1')	Total/NA	Solid	8021B	80004
880-43053-10	S-10 (2')	Total/NA	Solid	8021B	80004
MB 880-80004/5-A	Method Blank	Total/NA	Solid	8021B	80004
LCS 880-80004/1-A	Lab Control Sample	Total/NA	Solid	8021B	80004
LCSD 880-80004/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	80004
880-43053-1 MS	S-1 (0-1')	Total/NA	Solid	8021B	80004
880-43053-1 MSD	S-1 (0-1')	Total/NA	Solid	8021B	80004

Prep Batch: 80004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43053-1	S-1 (0-1')	Total/NA	Solid	5035	
880-43053-2	S-2 (1')	Total/NA	Solid	5035	
880-43053-3	S-3 (3')	Total/NA	Solid	5035	
880-43053-4	S-4 (1')	Total/NA	Solid	5035	
880-43053-5	S-5 (0-1')	Total/NA	Solid	5035	
880-43053-6	S-6 (0-1')	Total/NA	Solid	5035	
880-43053-7	S-7 (2')	Total/NA	Solid	5035	
880-43053-8	S-8 (4.2')	Total/NA	Solid	5035	
880-43053-9	S-9 (0-1')	Total/NA	Solid	5035	
880-43053-10	S-10 (2')	Total/NA	Solid	5035	
MB 880-80004/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-80004/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-80004/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-43053-1 MS	S-1 (0-1')	Total/NA	Solid	5035	
880-43053-1 MSD	S-1 (0-1')	Total/NA	Solid	5035	

QC Association Summary

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

GC VOA

Analysis Batch: 80110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43053-1	S-1 (0-1')	Total/NA	Solid	Total BTEX	
880-43053-2	S-2 (1')	Total/NA	Solid	Total BTEX	
880-43053-3	S-3 (3')	Total/NA	Solid	Total BTEX	
880-43053-4	S-4 (1')	Total/NA	Solid	Total BTEX	
880-43053-5	S-5 (0-1')	Total/NA	Solid	Total BTEX	
880-43053-6	S-6 (0-1')	Total/NA	Solid	Total BTEX	
880-43053-7	S-7 (2')	Total/NA	Solid	Total BTEX	
880-43053-8	S-8 (4.2')	Total/NA	Solid	Total BTEX	
880-43053-9	S-9 (0-1')	Total/NA	Solid	Total BTEX	
880-43053-10	S-10 (2')	Total/NA	Solid	Total BTEX	
880-43053-11	S-11 (0-1')	Total/NA	Solid	Total BTEX	
880-43053-12	S-12 (2.5')	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 79963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43053-2	S-2 (1')	Total/NA	Solid	8015NM Prep	
880-43053-4	S-4 (1')	Total/NA	Solid	8015NM Prep	
880-43053-5	S-5 (0-1')	Total/NA	Solid	8015NM Prep	
880-43053-6	S-6 (0-1')	Total/NA	Solid	8015NM Prep	
880-43053-7	S-7 (2')	Total/NA	Solid	8015NM Prep	
880-43053-8	S-8 (4.2')	Total/NA	Solid	8015NM Prep	
880-43053-9	S-9 (0-1')	Total/NA	Solid	8015NM Prep	
880-43053-10	S-10 (2')	Total/NA	Solid	8015NM Prep	
880-43053-11	S-11 (0-1')	Total/NA	Solid	8015NM Prep	
880-43053-12	S-12 (2.5')	Total/NA	Solid	8015NM Prep	
MB 880-79963/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-79963/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-79963/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 80312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43053-2	S-2 (1')	Total/NA	Solid	8015B NM	79963
880-43053-4	S-4 (1')	Total/NA	Solid	8015B NM	79963
880-43053-5	S-5 (0-1')	Total/NA	Solid	8015B NM	79963
880-43053-6	S-6 (0-1')	Total/NA	Solid	8015B NM	79963
880-43053-7	S-7 (2')	Total/NA	Solid	8015B NM	79963
880-43053-8	S-8 (4.2')	Total/NA	Solid	8015B NM	79963
880-43053-9	S-9 (0-1')	Total/NA	Solid	8015B NM	79963
880-43053-10	S-10 (2')	Total/NA	Solid	8015B NM	79963
880-43053-11	S-11 (0-1')	Total/NA	Solid	8015B NM	79963
880-43053-12	S-12 (2.5')	Total/NA	Solid	8015B NM	79963
880-43053-12	S-12 (2.5')	Total/NA	Solid	8015B NM	79963
MB 880-79963/1-A	Method Blank	Total/NA	Solid	8015B NM	79963
LCS 880-79963/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	79963
LCSD 880-79963/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	79963

Analysis Batch: 80448

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43053-1	S-1 (0-1')	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

GC Semi VOA (Continued)

Analysis Batch: 80448 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43053-2	S-2 (1')	Total/NA	Solid	8015 NM	
880-43053-3	S-3 (3')	Total/NA	Solid	8015 NM	
880-43053-4	S-4 (1')	Total/NA	Solid	8015 NM	
880-43053-5	S-5 (0-1')	Total/NA	Solid	8015 NM	
880-43053-6	S-6 (0-1')	Total/NA	Solid	8015 NM	
880-43053-7	S-7 (2')	Total/NA	Solid	8015 NM	
880-43053-8	S-8 (4.2')	Total/NA	Solid	8015 NM	
880-43053-9	S-9 (0-1')	Total/NA	Solid	8015 NM	
880-43053-10	S-10 (2')	Total/NA	Solid	8015 NM	
880-43053-11	S-11 (0-1')	Total/NA	Solid	8015 NM	
880-43053-12	S-12 (2.5')	Total/NA	Solid	8015 NM	

Prep Batch: 81364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43053-1	S-1 (0-1')	Total/NA	Solid	8015NM Prep	
880-43053-3	S-3 (3')	Total/NA	Solid	8015NM Prep	
MB 880-81364/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-81364/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-81364/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 81417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43053-1	S-1 (0-1')	Total/NA	Solid	8015B NM	81364
880-43053-3	S-3 (3')	Total/NA	Solid	8015B NM	81364
MB 880-81364/1-A	Method Blank	Total/NA	Solid	8015B NM	81364
LCS 880-81364/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	81364
LCSD 880-81364/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	81364

HPLC/IC

Leach Batch: 79991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43053-1	S-1 (0-1')	Soluble	Solid	DI Leach	
880-43053-2	S-2 (1')	Soluble	Solid	DI Leach	
880-43053-3	S-3 (3')	Soluble	Solid	DI Leach	
880-43053-4	S-4 (1')	Soluble	Solid	DI Leach	
880-43053-5	S-5 (0-1')	Soluble	Solid	DI Leach	
880-43053-6	S-6 (0-1')	Soluble	Solid	DI Leach	
880-43053-7	S-7 (2')	Soluble	Solid	DI Leach	
MB 880-79991/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-79991/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-79991/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Leach Batch: 79992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43053-8	S-8 (4.2')	Soluble	Solid	DI Leach	
880-43053-9	S-9 (0-1')	Soluble	Solid	DI Leach	
880-43053-10	S-10 (2')	Soluble	Solid	DI Leach	
880-43053-11	S-11 (0-1')	Soluble	Solid	DI Leach	
880-43053-12	S-12 (2.5')	Soluble	Solid	DI Leach	
MB 880-79992/1-A	Method Blank	Soluble	Solid	DI Leach	

QC Association Summary

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

HPLC/IC (Continued)

Leach Batch: 79992 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-79992/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-79992/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-43053-8 MS	S-8 (4.2')	Soluble	Solid	DI Leach	
880-43053-8 MSD	S-8 (4.2')	Soluble	Solid	DI Leach	

Analysis Batch: 80069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43053-1	S-1 (0-1')	Soluble	Solid	300.0	79991
880-43053-2	S-2 (1')	Soluble	Solid	300.0	79991
880-43053-3	S-3 (3')	Soluble	Solid	300.0	79991
880-43053-4	S-4 (1')	Soluble	Solid	300.0	79991
880-43053-5	S-5 (0-1')	Soluble	Solid	300.0	79991
880-43053-6	S-6 (0-1')	Soluble	Solid	300.0	79991
880-43053-7	S-7 (2')	Soluble	Solid	300.0	79991
MB 880-79991/1-A	Method Blank	Soluble	Solid	300.0	79991
LCS 880-79991/2-A	Lab Control Sample	Soluble	Solid	300.0	79991
LCSD 880-79991/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	79991

Analysis Batch: 80070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43053-8	S-8 (4.2')	Soluble	Solid	300.0	79992
880-43053-9	S-9 (0-1')	Soluble	Solid	300.0	79992
880-43053-10	S-10 (2')	Soluble	Solid	300.0	79992
880-43053-11	S-11 (0-1')	Soluble	Solid	300.0	79992
880-43053-12	S-12 (2.5')	Soluble	Solid	300.0	79992
MB 880-79992/1-A	Method Blank	Soluble	Solid	300.0	79992
LCS 880-79992/2-A	Lab Control Sample	Soluble	Solid	300.0	79992
LCSD 880-79992/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	79992
880-43053-8 MS	S-8 (4.2')	Soluble	Solid	300.0	79992
880-43053-8 MSD	S-8 (4.2')	Soluble	Solid	300.0	79992

Lab Chronicle

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

Client Sample ID: S-1 (0-1')

Date Collected: 05/02/24 10:55
Date Received: 05/03/24 14:16

Lab Sample ID: 880-43053-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	80004	05/06/24 09:24	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	79997	05/06/24 12:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			80110	05/06/24 12:12	SM	EET MID
Total/NA	Analysis	8015 NM		1			80448	05/23/24 13:48	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	81364	05/03/24 17:48	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	81417	05/23/24 13:48	TKC	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	79991	05/06/24 08:26	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	80069	05/06/24 20:35	SMC	EET MID

Client Sample ID: S-2 (1')

Date Collected: 05/02/24 10:50
Date Received: 05/03/24 14:16

Lab Sample ID: 880-43053-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	80004	05/06/24 09:24	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	79997	05/06/24 12:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			80110	05/06/24 12:32	SM	EET MID
Total/NA	Analysis	8015 NM		1			80448	05/09/24 22:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	79963	05/03/24 17:48	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	80312	05/09/24 22:01	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	79991	05/06/24 08:26	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	80069	05/06/24 20:40	SMC	EET MID

Client Sample ID: S-3 (3')

Date Collected: 05/02/24 10:45
Date Received: 05/03/24 14:16

Lab Sample ID: 880-43053-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	80004	05/06/24 09:24	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	79997	05/06/24 12:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			80110	05/06/24 12:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			80448	05/23/24 14:07	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	81364	05/03/24 17:48	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	81417	05/23/24 14:07	TKC	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	79991	05/06/24 08:26	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	80069	05/06/24 20:45	SMC	EET MID

Client Sample ID: S-4 (1')

Date Collected: 05/02/24 10:40
Date Received: 05/03/24 14:16

Lab Sample ID: 880-43053-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	80004	05/06/24 09:24	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	79997	05/06/24 13:13	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			80110	05/06/24 13:13	SM	EET MID

Eurofins Midland

Lab Chronicle

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

Client Sample ID: S-4 (1')
Date Collected: 05/02/24 10:40
Date Received: 05/03/24 14:16

Lab Sample ID: 880-43053-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			80448	05/09/24 21:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	79963	05/03/24 17:48	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	80312	05/09/24 21:40	AJ	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	79991	05/06/24 08:26	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	80069	05/06/24 20:50	SMC	EET MID

Client Sample ID: S-5 (0-1')
Date Collected: 05/02/24 10:35
Date Received: 05/03/24 14:16

Lab Sample ID: 880-43053-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	80004	05/06/24 09:24	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	79997	05/06/24 16:49	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			80110	05/06/24 16:49	SM	EET MID
Total/NA	Analysis	8015 NM		1			80448	05/09/24 22:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	79963	05/03/24 17:48	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	80312	05/09/24 22:21	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	79991	05/06/24 08:26	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	80069	05/06/24 20:54	SMC	EET MID

Client Sample ID: S-6 (0-1')
Date Collected: 05/02/24 10:30
Date Received: 05/03/24 14:16

Lab Sample ID: 880-43053-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	80004	05/06/24 09:24	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	79997	05/06/24 17:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			80110	05/06/24 17:10	SM	EET MID
Total/NA	Analysis	8015 NM		1			80448	05/09/24 22:41	SM	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	79963	05/03/24 17:48	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	80312	05/09/24 22:41	AJ	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	79991	05/06/24 08:26	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	80069	05/06/24 20:59	SMC	EET MID

Client Sample ID: S-7 (2')
Date Collected: 05/02/24 10:25
Date Received: 05/03/24 14:16

Lab Sample ID: 880-43053-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	80004	05/06/24 09:24	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	79997	05/06/24 17:30	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			80110	05/06/24 17:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			80448	05/09/24 23:01	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	79963	05/03/24 17:48	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	80312	05/09/24 23:01	AJ	EET MID

Lab Chronicle

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

Client Sample ID: S-7 (2')
Date Collected: 05/02/24 10:25
Date Received: 05/03/24 14:16

Lab Sample ID: 880-43053-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.05 g	50 mL	79991	05/06/24 08:26	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	80069	05/06/24 21:04	SMC	EET MID

Client Sample ID: S-8 (4.2')
Date Collected: 05/02/24 10:20
Date Received: 05/03/24 14:16

Lab Sample ID: 880-43053-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	80004	05/06/24 09:24	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	79997	05/06/24 17:51	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			80110	05/06/24 17:51	SM	EET MID
Total/NA	Analysis	8015 NM		1			80448	05/09/24 21:20	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	79963	05/03/24 17:48	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	80312	05/09/24 21:20	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	79992	05/06/24 08:29	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	80070	05/06/24 21:01	SMC	EET MID

Client Sample ID: S-9 (0-1')
Date Collected: 05/02/24 10:15
Date Received: 05/03/24 14:16

Lab Sample ID: 880-43053-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	80004	05/06/24 09:24	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	79997	05/06/24 18:11	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			80110	05/06/24 18:11	SM	EET MID
Total/NA	Analysis	8015 NM		1			80448	05/09/24 23:42	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	79963	05/03/24 17:48	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	80312	05/09/24 23:42	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	79992	05/06/24 08:29	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	80070	05/06/24 21:19	SMC	EET MID

Client Sample ID: S-10 (2')
Date Collected: 05/02/24 10:10
Date Received: 05/03/24 14:16

Lab Sample ID: 880-43053-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	80004	05/06/24 09:24	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	79997	05/06/24 18:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			80110	05/06/24 18:31	SM	EET MID
Total/NA	Analysis	8015 NM		1			80448	05/10/24 00:02	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	79963	05/03/24 17:48	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	80312	05/10/24 00:02	AJ	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	79992	05/06/24 08:29	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	80070	05/06/24 21:26	SMC	EET MID

Lab Chronicle

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

Client Sample ID: S-11 (0-1')

Date Collected: 05/02/24 10:05
Date Received: 05/03/24 14:16

Lab Sample ID: 880-43053-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	79944	05/03/24 15:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	79896	05/03/24 23:09	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			80110	05/03/24 23:09	SM	EET MID
Total/NA	Analysis	8015 NM		1			80448	05/10/24 00:22	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	79963	05/03/24 17:48	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	80312	05/10/24 00:22	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	79992	05/06/24 08:29	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	80070	05/06/24 21:32	SMC	EET MID

Client Sample ID: S-12 (2.5')

Date Collected: 05/02/24 11:10
Date Received: 05/03/24 14:16

Lab Sample ID: 880-43053-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	79944	05/03/24 15:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	79896	05/03/24 23:30	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			80110	05/03/24 23:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			80448	05/10/24 00:44	SM	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	79963	05/03/24 17:48	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	80312	05/10/24 00:44	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	79963	05/03/24 17:48	TKC	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	80312	05/10/24 01:04	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	79992	05/06/24 08:29	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	80070	05/06/24 21:38	SMC	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
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	T104704400-23-26	06-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International
EPA = US Environmental Protection Agency
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:

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

Sample Summary

Client: Crain Environmental
Project/Site: W. Eument #410

Job ID: 880-43053-1
SDG: Lea Co., NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-43053-1	S-1 (0-1')	Solid	05/02/24 10:55	05/03/24 14:16	0-1'
880-43053-2	S-2 (1')	Solid	05/02/24 10:50	05/03/24 14:16	1'
880-43053-3	S-3 (3')	Solid	05/02/24 10:45	05/03/24 14:16	3'
880-43053-4	S-4 (1')	Solid	05/02/24 10:40	05/03/24 14:16	1'
880-43053-5	S-5 (0-1')	Solid	05/02/24 10:35	05/03/24 14:16	0-1'
880-43053-6	S-6 (0-1')	Solid	05/02/24 10:30	05/03/24 14:16	0-1'
880-43053-7	S-7 (2')	Solid	05/02/24 10:25	05/03/24 14:16	2'
880-43053-8	S-8 (4.2')	Solid	05/02/24 10:20	05/03/24 14:16	4.2'
880-43053-9	S-9 (0-1')	Solid	05/02/24 10:15	05/03/24 14:16	0-1'
880-43053-10	S-10 (2')	Solid	05/02/24 10:10	05/03/24 14:16	2'
880-43053-11	S-11 (0-1')	Solid	05/02/24 10:05	05/03/24 14:16	0-1'
880-43053-12	S-12 (2.5')	Solid	05/02/24 11:10	05/03/24 14:16	2.5'

Released to Imaging: 7/16/2024 11:05:21 AM
Received by OCD: 7/8/2024 5:57:07 PM

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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

Work Ord 880-43053 Chain of Custody

www.xenco.com Page 1 of 2

Project Manager:	Cindy Crain	Bill to: (if different)	Ryan Swift (346)254-9544
Company Name:	Crain Environmental	Company Name:	Forty Acres
Address:	2925 E. 17th St.	Address:	11757 Katy Frwy, Ste. 725
City, State ZIP	Odessa, TX 79761	City, State ZIP:	Houston, TX 77079
Phone:	(575) 441-7244 Email:	Email:	Cindy.crain@gmail.com; ryan@faenergyus.com

Work Order Comments

Program UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project: NM
Reporting Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables. EDD ☐ ADaPT ☐ Other:

Project Name:	W. Eument #410	Turn Around	
Project Number:	—	☒ Routine ☐ Rush	
Project Location	Lea Co, NM	Due Date:	
Sampler's Name:	Cindy Crain	TAT starts the day received by the lab, if received by 4:30pm	
PO #:	—		

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	IR8
Cooler Custody Seals.	Yes No N/A	Correction Factor:	-.10
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	5.3
Total Containers.		Corrected Temperature:	5.2

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: TPH 8015M	BTEX	Chlorides
S-1 (0-1')	S	5/2/24	1055	0-1'	G	1		X	X	X
S-2 (1')			1050	1'						
S-3 (3')			1045	3'						
S-4 (1')			1040	1'						
S-5 (0-1')			1035	0-1'						
S-6 (0-1')			1030	0-1'						
S-7 (2')			1025	2'						
S-8 (4.2')			1020	4.2'						
S-9 (0-1')			1015	0-1'						
S-10 (2')	↓	↓	1010	2'	↓	↓		↓	↓	↓

Preservative Codes

None NO — DI Water H_2O
Cool Cool — MeOH Me
HCL. HC — HNO_3 HN
H_2S0_4. H_2 — NaOH Na
H_3PO_4. HP
NaHSO 4. NABIS
$Na_2S_2O_3$ NaSO 3
Zn Acetate+NaOH Zn
NaOH+Ascorbic Acid SAPC

Sample Comments

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 K Se Ag SiO_2 Na Sr Tl Sn U V Zn
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 Hg 1631 / 245 1 / 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 submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Cindy Crain		5/3/24 1416	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Released to Imaging: 7/16/2024 11:05:21 AM
Received by OCD: 7/8/2024 5:57:07 PM

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Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
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EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392 7550 Carlsbad, NM (575) 988-3199

Work Order No: 42053

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Project Manager:	Cindy Crain	Bill to: (if different)	Ryan Swift
Company Name:	Crain Environmental	Company Name:	Forty Acres
Address:	2925 E. 17th St.	Address:	11757 Katy Frwy, Ste. 725
City, State ZIP	Odessa, TX 79761	City, State ZIP:	Houston, TX 77079
Phone	(575) 441-7244 Email:	Email:	Cindy.crain@gmail.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project: NM
Reporting Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables EDD ☐ ADaPT ☐ Other:

Project Name:	W. Eumont #410	Turn Around	
Project Number:	—	☑ Routine ☐ Rush	
Project Location:	Lea Co., NM	Due Date:	
Sampler's Name:	Cindy Crain	TAT starts the day received by the lab, if received by 4:30pm	
PO #	—		

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:		
Cooler Custody Seals:	Yes No N/A	Correction Factor:		
Sample Custody Seals:	Yes No N/A	Temperature Reading:		
Total Containers:		Corrected Temperature:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: TPH 8015M	BTEX	Chlorides
S-11 (0-1')	S	5/2/24	1005	0-1'	G	1		X	X	X
S-12 (2.5')	S	5/2/24	1110	2.5'	G	1		X	X	X

Preservative Codes

None NO DI Water H_2O
Cool Cool MeOH Me
HCL HC HNO_3 HN
H_2SO_4 H_2 NaOH Na
H_3PO_4 HP
$NaHSO_4$ NABIS
$Na_2S_2O_3$ $NaSO_3$
Zn Acetate+NaOH Zn
NaOH+Ascorbic Acid SAPC

Sample Comments

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 K Se Ag SiO_2 Na Sr Tl Sn U V Zn
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 Hg 1631 / 245.1 / 7470 / 7471

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Cindy Crain		5/3/24 1416	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Crain Environmental

Job Number: 880-43053-1
SDG Number: Lea Co., NM

Login Number: 43053
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins Midland

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

Appendix D: Photographic Documentation

APPENDIX D
PHOTOGRAPHIC DOCUMENTATION
WEST EUMONT UNIT #410


View to SE of release point and excavation (5/2/24).


View to S of excavation (5/2/24).


View to E of excavation (5/2/24).


View to NW of excavation (5/2/24).


View to N of excavation at release point (5/2/24).

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1220 S. St Francis Dr.
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QUESTIONS

Action 361977

QUESTIONS

Operator: FORTY ACRES ENERGY, LLC 11757 KATY FWY HOUSTON, TX 77079173	OGRID: 371416
	Action Number: 361977
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2404472013**
Incident Name	**NAPP2404472013 WEST EUMONT UNIT #410 @ 30-025-04387**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Plan Received**
Incident Well	**[30-025-04387] WEST EUMONT UNIT #410**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	WEST EUMONT UNIT #410
Date Release Discovered	02/01/2024
Surface Owner	Private

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Corrosion | Flow Line - Production | Crude Oil | Released: 15 BBL | Recovered: 0 BBL | Lost: 15 BBL.
Produced Water Released (bbls) Details	Cause: Equipment Failure | Flow Line - Production | Produced Water | Released: 15 BBL | Recovered: 0 BBL | Lost: 15 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

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QUESTIONS (continued)

Operator: FORTY ACRES ENERGY, LLC 11757 KATY FWY HOUSTON, TX 77079173	OGRID: 371416
	Action Number: 361977
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**Yes**
Reasons why this would be considered a submission for a notification of a major release	**From paragraph A. "Major release" determine using:** **(1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.**
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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.

I hereby agree and sign off to the above statement	Name: Cindy Crain Email: cindy.crain@gmail.com Date: 07/08/2024

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QUESTIONS (continued)

Operator: FORTY ACRES ENERGY, LLC 11757 KATY FWY HOUSTON, TX 77079173	OGRID: 371416
	Action Number: 361977
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Greater than 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Greater than 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Greater than 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	None
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	4150
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	3280
GRO+DRO (EPA SW-846 Method 8015M)	3280
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	08/19/2024
On what date will (or did) the final sampling or liner inspection occur	09/16/2024
On what date will (or was) the remediation complete(d)	10/31/2024
What is the estimated surface area (in square feet) that will be reclaimed	14500
What is the estimated volume (in cubic yards) that will be reclaimed	1074
What is the estimated surface area (in square feet) that will be remediated	14500
What is the estimated volume (in cubic yards) that will be remediated	2148
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: FORTY ACRES ENERGY, LLC 11757 KATY FWY HOUSTON, TX 77079173	OGRID: 371416
	Action Number: 361977
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	TNM-95-54 [fAB0000000064]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
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.	
I hereby agree and sign off to the above statement	Name: Cindy Crain Email: cindy.crain@gmail.com Date: 07/08/2024
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: FORTY ACRES ENERGY, LLC 11757 KATY FWY HOUSTON, TX 77079173	OGRID: 371416
	Action Number: 361977
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS (continued)

Operator: FORTY ACRES ENERGY, LLC 11757 KATY FWY HOUSTON, TX 77079173	OGRID: 371416
	Action Number: 361977
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	***{Unavailable.}***

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	No

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CONDITIONS

Action 361977

CONDITIONS

Operator: FORTY ACRES ENERGY, LLC 11757 KATY FWY HOUSTON, TX 77079173	OGRID: 371416
	Action Number: 361977
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Remediation plan is approved under the following conditions; 1. Although delineation was not provided for the vertical extent at four (4) advanced borings, Forty Acres Energy must continue excavation until confirmation samples collected from the bottom and sidewalls of the excavation report TPH and chloride concentrations below the NMOCD Closure Criteria. 2. FAE has 90-days (October 15, 2024) to submit to OCD its appropriate or final remediation closure report.	7/16/2024