Released Volume Calculation

Length	52 feet
Width	40 feet
Thickness	0.5 in

1,040 gal = 24.76 Est. Total Bbls Released

Volume = L*W*T

Total Released Volume =	1,040 gallons (US, dry)
	24.76 Bbls

Remediation Summary and Closure Report

December 4, 2024

Chem State #003
API No. 30-025-22747
Incident No. nDEV5072 (1RP-62)
Lea County, New Mexico

Prepared For:

Octane Energy
(For Cambrian Management Ltd.)
310 West Wall Street, Suite 300
Midland, Texas 79701

Prepared By:

Crain Environmental
2925 East 17th Street
Odessa, Texas 79761

Cynthia K. Crain, P.G.

Crain Environmental

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TABLES

FIGURES

APPENDICES

1.0 Introduction

Crain Environmental (CE), on behalf of Octane Energy (Octane) for Cambrian Management Ltd., has prepared this *Remediation Summary and Closure Report* for the produced water release at Chem State #003 (Site), located approximately 23 miles northwest of Lovington, in Lea County, New Mexico. The global positioning system (GPS) coordinates for the release point are 33.0484161, -103.7249222. The property surface rights are owned by the State of New Mexico. 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 22, 1999, a release was discovered at a flow line at the Chem State #003 while under the operation of Coastal Management Corporation. The Initial Form C-141 (Release Notification Report) was submitted to the New Mexico Oil Conservation Division (NMOCD) on March 3, 1999, and reported a release of 25 barrels (bbls) of produced water, with a recovery of 0 bbls.

The well was purchased by Cambrian Management Ltd (Cambrian) on August 6, 2001, and was plugged and abandoned (P&A) on May 6, 2008. Upon completion of P&A activities, all equipment, junk, trash, flow lines, and caliche were removed from the Site, and the surface was contoured to original surface conditions. The Site was inspected by the New Mexico Oil Conservation Division (OCD) on July 21, 2009, and release of the Site was approved by the OCD on August 6, 2001.

On October 25, 2023, CE conducted a site inspection. No visible evidence of hydrocarbon staining or salt crystallization was observed in the soil. Vegetation was present around the former well and well pad, even though tire tracks were observed crossing through the former well pad, and cattle were congregated at the edge of the former pad. Topsoil was not observed in the area around the Site, and vegetation is very sparse throughout the area.

On December 14, 2023, Octane received a letter from the ECO that provided notification of this open NMOCD Incident (nDEV5072).

Soil investigation and remediation activities have been conducted, and this Remediation Summary and Closure Report is being submitted in accordance with 19.15.29.11 New Mexico Administrative Code (NMAC) for this historical release. As a record of the Initial C-141 dated March 3, 1999, is not available in the NMOCD on-line records, a C-141v will be provided with the submittal of this Report to the NMOCD portal.

3.0 NMOCD Closure Criteria

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

- Within 300 feet of any continuously flowing watercourse or any other significant watercourse.

- Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary highwater mark).
- Within 300 feet from an occupied permanent residence, school, hospital, institution or church.
- Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes.
- Within 1,000 feet of any fresh water well or spring.
- Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended.
- Within 300 feet of a wetland.
- Within the area overlying a subsurface mine.
- Within an unstable area such as a karst formation.
- Within a 100-year floodplain.

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

3.1 Groundwater Evaluation

A review of the New Mexico Office of the State Engineer (NMOSE) records indicated there are no water wells located within 0.5 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. A freshwater pond is located approximately 1,300 feet northwest of the Site.

- 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. A freshwater emergent wetland is located approximately 830 feet northwest of the Site, and a freshwater pond is located approximately 1,300 feet northwest of the Site.
- 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; however, a freshwater emergent wetland is located approximately 830 feet northwest of the Site, and a freshwater pond is located approximately 1,300 feet northwest of the Site. 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 4.1 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. A review of the USFWS wetlands map indicated a freshwater emergent wetland is located approximately 830 feet northwest of the Site, and a freshwater pond is located approximately 1,300 feet northwest 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 Remediation Activities

On March 12, 2024, soil samples were collected at three locations (S-1, S-2, and S-3) using a backhoe. Samples collected at depths of 1’ and 2’ bgs from each location were placed in laboratory prepared containers, properly labeled, immediately placed on ice, and hand delivered to Eurofins Environment Testing (Eurofins) in Midland, Texas for analysis of total petroleum hydrocarbons (TPH) by EPA Method SW846 8015 Modified, benzene, toluene, ethylbenzene, and xylenes (collectively referred to as BTEX) by EPA Method SW 846 8021B, and chlorides by EPA Method 300.0.

Table 1 provides a summary of the laboratory results. Figure 2 shows the sample locations. The laboratory report and chain of custody documentation are provided in Appendix A. Photographic documentation is provided in Appendix B.

Referring to Table 1, concentrations of BTEX were reported below the test method detection limits in each sample. Concentrations of TPH were reported below the Closure Criteria in all samples except sample S-1 at a depth of 1' bgs (237 mg/kg). Concentrations of chlorides were reported above the Closure Criteria at a depth of 2' bgs at sample point S-1 (708 mg/kg), at depths of 1' and 2' bgs at sample point S-2 (1,690 mg/kg and 643 mg/kg, respectively), and at depth of 1' and 2' bgs at sample point S-3 (692 mg/kg and 890 mg/kg, respectively).

Excavation was conducted until confirmation samples were collected from the bottom and sidewalls of the excavation on September 26, 2024. All confirmation samples were collected pursuant to 19.15.29.12(D) NMAC, and were placed in clean glass sample jars, properly labeled, immediately placed on ice and hand delivered to Eurofins under proper chain-of-custody control for analysis of TPH, BTEX, and chlorides.

Table 1 provides a summary of the laboratory results, and sample locations are provided on Figure 2. The laboratory report and chain-of-custody documentation are provided in Appendix A. Photographic documentation is provided in Appendix B.

Referring to Table 1, concentrations of TPH, BTEX, and chlorides were reported below the NMOCD Closure Criteria in all confirmation samples.

From September 26 to September 28, 2024, 180 cubic yards (cy) of excavated soil were hauled to disposal at GM Inc. Waste Manifests are provided in Appendix C.

Upon NMOCD approval of this Closure Report, the excavation will be backfilled to grade with non-impacted similar material obtained from a nearby 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.

4.6 Laboratory Analytical Data Quality Assurance/Quality Control Results

Data reported in Job Numbers 880-40943-1 and 880-49106-1 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 in Appendix A.

5.0 Request for Closure

A total of 180 cubic yards of soil was excavated and hauled to disposal at GM Inc. All confirmation samples collected from the bottom and sidewalls of the excavation reported TPH, Benzene, BTEX, and chloride concentrations below the NMOCD Closure Criteria.

Upon NMOCD approval of this Closure Report, the excavation will be backfilled to grade with non-impacted similar material obtained from a nearby 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.

On behalf of Cambrian Management Ltd, Octane respectfully requests the closure of Incident #nDEV5072 (1RP-62).

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: New Mexico State Land Office
Environmental Compliance Office
Via email: eco@nmslo.gov

Grain Environmental

TABLE

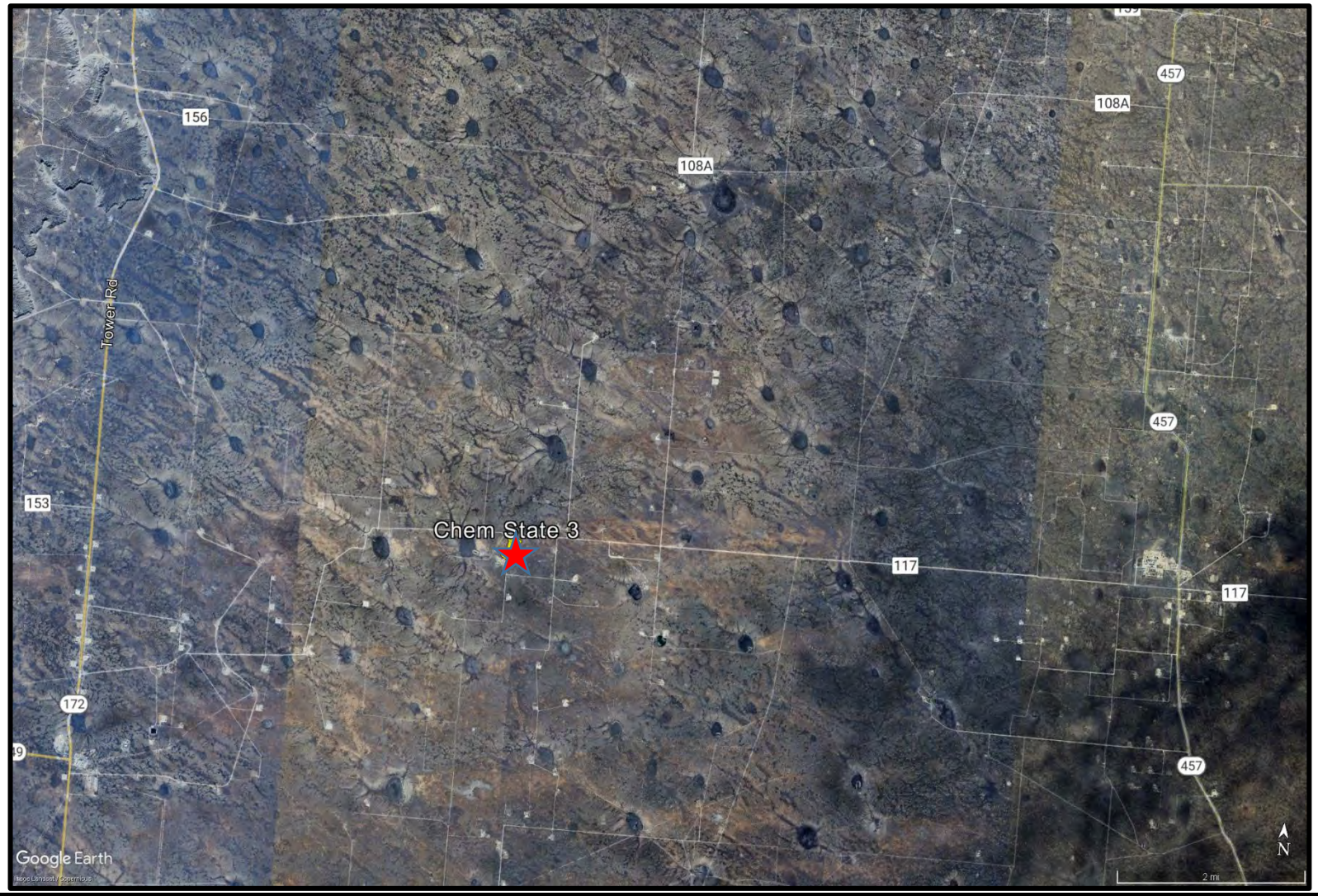
TABLE 1
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
CAMBRIAN MANAGEMENT, LTD.
CHEM STATE #003

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 (Surface to 4' bgs)							**100**	**10**	**-**	**-**	**-**	**50**	**600**
S-1 (1')	03/12/24	1'	Excavated	<49.8	**237**	<49.8	**237**	<0.00198	<0.00198	<0.00198	<0.00396	<0.00396	**201**
S-1 (2')	03/12/24	2'	Excavated	<49.5	**70.0**	<49.5	**70.0**	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	**708**
S-1 (4.1')	09/26/24	4.1'	In Situ	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<4.99
S-2 (1')	03/12/24	1'	Excavated	<49.6	<49.6	<49.6	<49.6	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	**1,690**
S-2 (2')	03/12/24	2'	Excavated	<50.0	<50.0	<50.0	<50.0	<0.00202	<0.00202	<0.00202	<0.00404	<0.00404	**643**
S-2 (4.1')	09/26/24	4.1'	In Situ	<49.7	<49.7	<49.7	<49.7	<0.00200	<0.00200	<0.00200	<0.00400	<0.00400	<4.98
S-3 (1')	03/12/24	1'	Excavated	<49.9	<49.9	<49.9	<49.9	<0.00202	<0.00202	<0.00202	<0.00403	<0.00403	**692**
S-3 (2')	03/12/24	2'	Excavated	<49.8	<49.8	<49.8	<49.8	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	**890**
S-3 (4.1')	09/26/24	4.1'	In Situ	<49.8	<49.8	<49.8	<49.8	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<4.99
S-4 (0-4')	09/26/24	0-4'	In Situ	<49.8	<49.8	<49.8	<49.8	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	**23.5**
S-5 (0-4')	09/26/24	0-4'	In Situ	<50.0	<50.0	<50.0	<50.0	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	<4.97
S-6 (0-4')	09/26/24	0-4'	In Situ	<49.9	<49.9	<49.9	<49.9	<0.00202	<0.00202	<0.00202	<0.00404	<0.00404	<5.05
S-7 (0-4')	09/26/24	0-4'	In Situ	<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	**82.5**
S-8 (0-4')	09/26/24	0-4'	In Situ	<49.7	<49.7	<49.7	<49.7	<0.00200	<0.00200	<0.00200	<0.00400	<0.00400	<5.02
S-9 (0-4')	09/26/24	0-4'	In Situ	<50.0	<50.0	<50.0	<50.0	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	<5.01

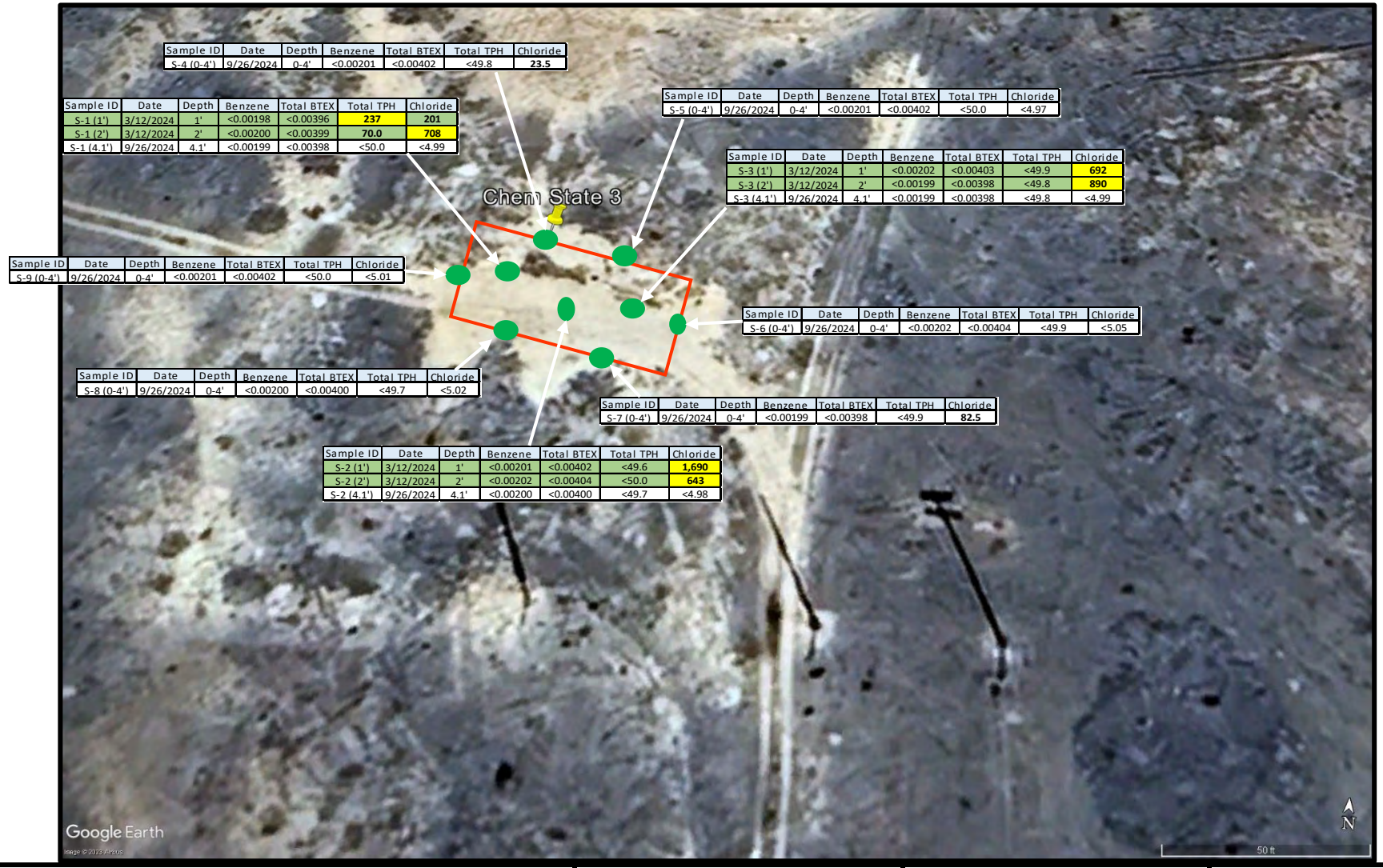
Notes:

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. Green highlighting and italic font indicates soil was excavated and disposed.

FIGURES



LEGEND: Site Location Base Map From Google Earth Pro	**Figure 1** **Site Location Map** Cambrian Management Ltd. Chem State #003 Lea County, New Mexico		Grain Environmental
		Drafted by: CC | Checked by: CC	
		Draft: December 3, 2024	
		GPS: 33.0484161° -103.7249222°	



Sample ID	Date	Depth	Benzene	Total BTEX	Total TPH	Chloride
S-4 (0-4')	9/26/2024	0-4'	<0.00201	<0.00402	<49.8	**23.5**

Sample ID	Date	Depth	Benzene	Total BTEX	Total TPH	Chloride
S-1 (1')	3/12/2024	1'	<0.00198	<0.00396	**237**	**201**
S-1 (2')	3/12/2024	2'	<0.00200	<0.00399	**70.0**	**708**
S-1 (4.1')	9/26/2024	4.1'	<0.00199	<0.00398	<50.0	<4.99

Sample ID	Date	Depth	Benzene	Total BTEX	Total TPH	Chloride
S-5 (0-4')	9/26/2024	0-4'	<0.00201	<0.00402	<50.0	<4.97

Sample ID	Date	Depth	Benzene	Total BTEX	Total TPH	Chloride
S-3 (1')	3/12/2024	1'	<0.00202	<0.00403	<49.9	**692**
S-3 (2')	3/12/2024	2'	<0.00199	<0.00398	<49.8	**890**
S-3 (4.1')	9/26/2024	4.1'	<0.00199	<0.00398	<49.8	<4.99

Sample ID	Date	Depth	Benzene	Total BTEX	Total TPH	Chloride
S-9 (0-4')	9/26/2024	0-4'	<0.00201	<0.00402	<50.0	<5.01

Sample ID	Date	Depth	Benzene	Total BTEX	Total TPH	Chloride
S-6 (0-4')	9/26/2024	0-4'	<0.00202	<0.00404	<49.9	<5.05

Sample ID	Date	Depth	Benzene	Total BTEX	Total TPH	Chloride
S-8 (0-4')	9/26/2024	0-4'	<0.00200	<0.00400	<49.7	<5.02

Sample ID	Date	Depth	Benzene	Total BTEX	Total TPH	Chloride
S-7 (0-4')	9/26/2024	0-4'	<0.00199	<0.00398	<49.9	**82.5**

Sample ID	Date	Depth	Benzene	Total BTEX	Total TPH	Chloride
S-2 (1')	3/12/2024	1'	<0.00201	<0.00402	<49.6	**1,690**
S-2 (2')	3/12/2024	2'	<0.00202	<0.00404	<50.0	**643**
S-2 (4.1')	9/26/2024	4.1'	<0.00200	<0.00400	<49.7	<4.98

LEGEND:

Sample Location with Concentration (mg/kg).

Excavation Boundary

Highlighting Indicates Concentrations Above the Closure Criteria

Highlighting Indicates Soil was Excavated and Disposed

Base Map From Google Earth Pro (2023 Aerial)

Figure 2

Soil Sample Analytical Results Map

Cambrian Management Ltd.

Chem State #003

Lea County, New Mexico

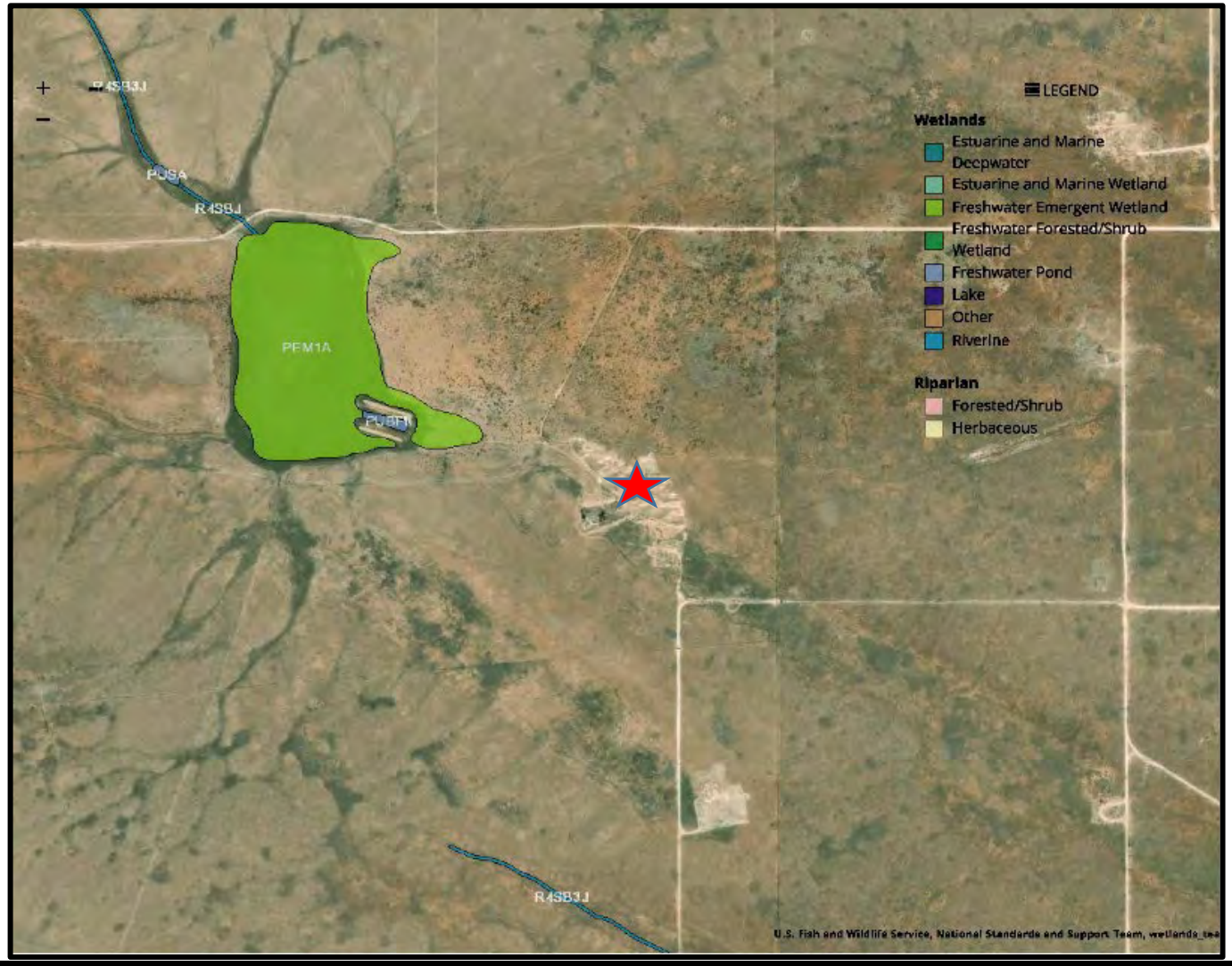
Drafted by: CC | Checked by: CC

Draft: Dec. 3, 2024

GPS: 33.0484161° -103.7249222°

Grain Environmental

LEGEND: Site Location Base Map From Google Earth Pro	**Figure 3** **Wellhead Protection Area Map** Cambrian Management Ltd. Chem State #003 Lea County, New Mexico	Drafted by: CC | Checked by: CC Draft: December 3, 2024 GPS: 33.0484161° -103.7249222°	Grain Environmental



LEGEND:

Site Location

Base Map From US Fish & Wildlife Service

Figure 4

National Wetlands Inventory Map

Cambrian Management Ltd.

Chem State #003

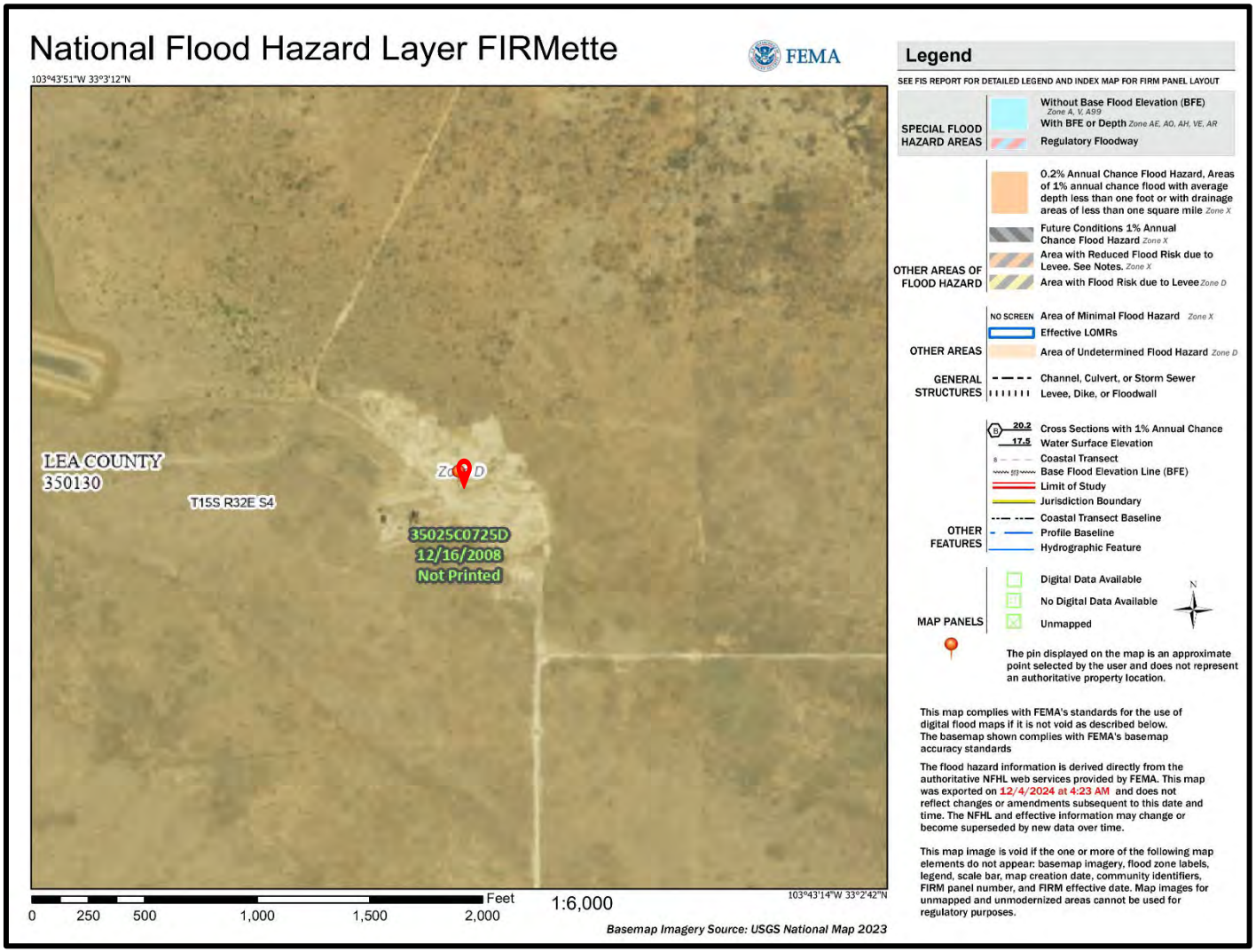
Lea County, New Mexico

Drafted by: CC | Checked by: CC

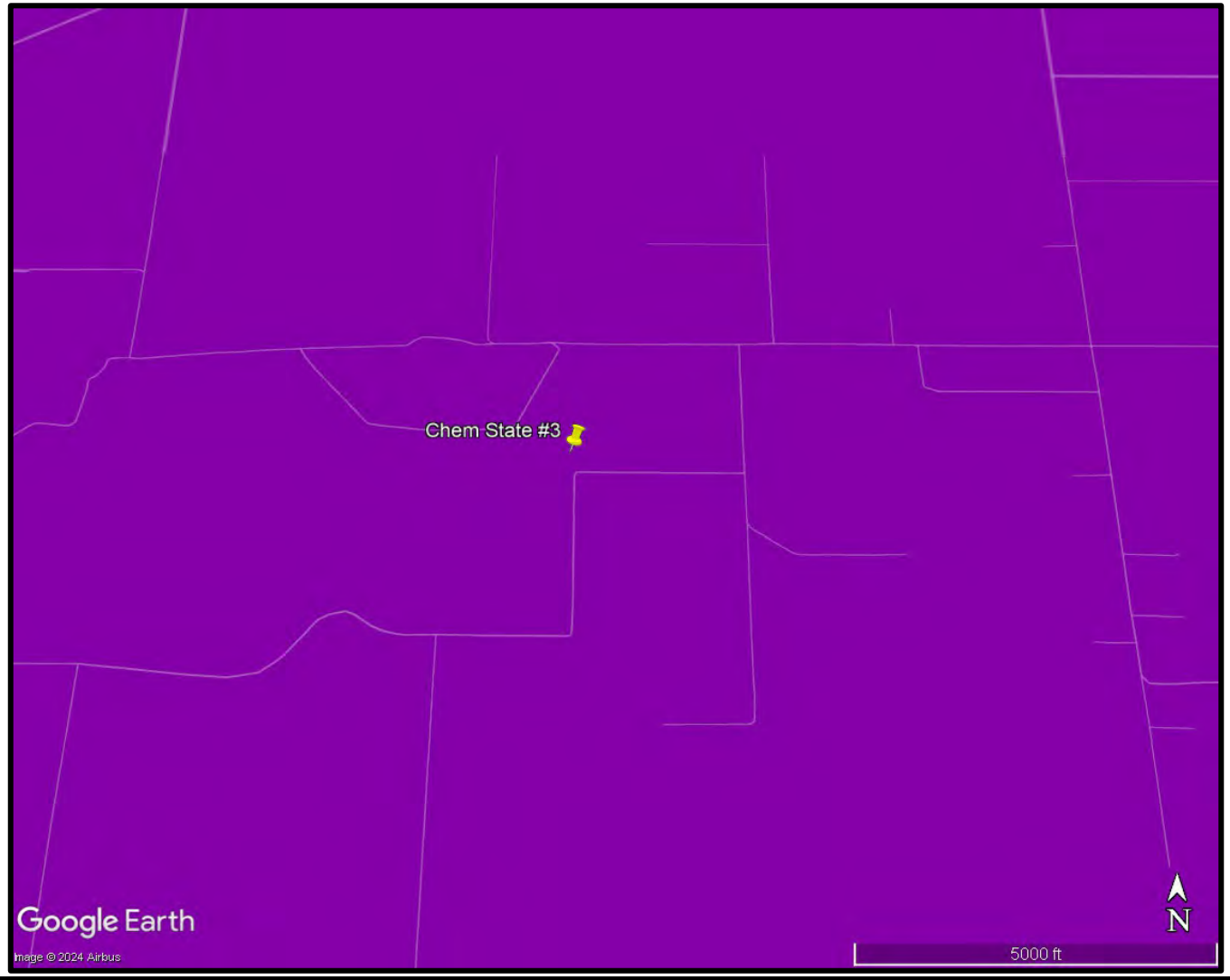
Draft: December 3, 2024

GPS: 33.0484161° -103.7249222°

Grain Environmental



LEGEND: Site Location Base Map From FEMA	**Figure 5** **FEMA Floodplain Map** Cambrian Management Ltd. Chem State #003 Lea County, New Mexico	Drafted by: CC | Checked by: CC Draft: December 3, 2024 GPS: 33.0484161° -103.7249222°



LEGEND: Low Karst Potential Medium Karst Potential High Karst Potential Base Map From Google Earth Pro and BLM	**Figure 6** **Karst Potential Map** Cambrian Management Ltd. Chem State #003 Lea County, New Mexico	Drafted by: CC | Checked by: CC Draft: December 3, 2024 GPS: 33.0484161° -103.7249222°

Grain Environmental

Appendix A: Laboratory Reports 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 3/22/2024 12:49:12 PM

JOB DESCRIPTION

Chem State #3
Lea Co., NM

JOB NUMBER

880-40943-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

my EOL

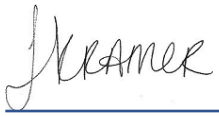
Eurofins Midland

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

Client: Crain Environmental
Project/Site: Chem State #3

Laboratory Job ID: 880-40943-1
SDG: Lea Co., NM

Table of Contents

Definitions/Glossary

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-40943-1
SDG: Lea Co., NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

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: Chem State #3

Job ID: 880-40943-1

Job ID: 880-40943-1 Eurofins Midland

Job Narrative
880-40943-1

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 3/15/2024 2:51 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 3.7°C.

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: S-1 (1') (880-40943-1), S-1 (2') (880-40943-2), S-2 (1') (880-40943-3), S-2 (2') (880-40943-4), S-3 (1') (880-40943-5) and S-3 (2') (880-40943-6).

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: S-2 (1') (880-40943-3) and S-3 (2') (880-40943-6). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The method blank for preparation batch 880-75930 and analytical batch 880-76141 contained Gasoline Range Organics (GRO)-C6-C10 and Diesel Range Organics (Over C10-C28) above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

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

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

Client Sample Results

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-40943-1
SDG: Lea Co., NM

Client Sample ID: S-1 (1')

Lab Sample ID: 880-40943-1
Matrix: Solid
Date Collected: 03/12/24 16:00
Date Received: 03/15/24 14:51
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		03/18/24 09:35	03/18/24 23:20	1
Toluene	<0.00198	U	0.00198		mg/Kg		03/18/24 09:35	03/18/24 23:20	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		03/18/24 09:35	03/18/24 23:20	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		03/18/24 09:35	03/18/24 23:20	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		03/18/24 09:35	03/18/24 23:20	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		03/18/24 09:35	03/18/24 23:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*03/18/24 09:35*	*03/18/24 23:20*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*03/18/24 09:35*	*03/18/24 23:20*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			03/18/24 23:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**237**		49.8		mg/Kg			03/22/24 01:41	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	<49.8	U	49.8		mg/Kg		03/18/24 16:28	03/22/24 01:41	1
Diesel Range Organics (Over C10-C28)	**237**		49.8		mg/Kg		03/18/24 16:28	03/22/24 01:41	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		03/18/24 16:28	03/22/24 01:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*128*		*70 - 130*	*03/18/24 16:28*	*03/22/24 01:41*	*1*
o-Terphenyl	*110*		*70 - 130*	*03/18/24 16:28*	*03/22/24 01:41*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**201**		5.00		mg/Kg			03/20/24 00:29	1

Client Sample ID: S-1 (2')

Lab Sample ID: 880-40943-2
Matrix: Solid
Date Collected: 03/12/24 16:02
Date Received: 03/15/24 14:51
Sample Depth: 2'

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		03/18/24 09:35	03/18/24 23:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/18/24 09:35	03/18/24 23:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/18/24 09:35	03/18/24 23:40	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		03/18/24 09:35	03/18/24 23:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/18/24 09:35	03/18/24 23:40	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		03/18/24 09:35	03/18/24 23:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*03/18/24 09:35*	*03/18/24 23:40*	*1*

Eurofins Midland

Client Sample Results

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-40943-1
SDG: Lea Co., NM

Client Sample ID: S-1 (2')

Date Collected: 03/12/24 16:02
Date Received: 03/15/24 14:51
Sample Depth: 2'

Lab Sample ID: 880-40943-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*	*03/18/24 09:35*	*03/18/24 23:40*	*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			03/18/24 23:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**70.0**		49.5		mg/Kg			03/22/24 02:02	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	<49.5	U	49.5		mg/Kg		03/18/24 16:28	03/22/24 02:02	1
Diesel Range Organics (Over C10-C28)	**70.0**		49.5		mg/Kg		03/18/24 16:28	03/22/24 02:02	1
OII Range Organics (Over C28-C36)	<49.5	U	49.5		mg/Kg		03/18/24 16:28	03/22/24 02:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*03/18/24 16:28*	*03/22/24 02:02*	*1*
o-Terphenyl	*84*		*70 - 130*	*03/18/24 16:28*	*03/22/24 02:02*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**708**		5.05		mg/Kg			03/20/24 00:51	1

Client Sample ID: S-2 (1')

Date Collected: 03/12/24 16:10
Date Received: 03/15/24 14:51
Sample Depth: 1'

Lab Sample ID: 880-40943-3
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		03/18/24 09:35	03/19/24 00:01	1
Toluene	<0.00201	U	0.00201		mg/Kg		03/18/24 09:35	03/19/24 00:01	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		03/18/24 09:35	03/19/24 00:01	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		03/18/24 09:35	03/19/24 00:01	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		03/18/24 09:35	03/19/24 00:01	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		03/18/24 09:35	03/19/24 00:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*03/18/24 09:35*	*03/19/24 00:01*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*03/18/24 09:35*	*03/19/24 00:01*	*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			03/19/24 00:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			03/22/24 02:24	1

Eurofins Midland

Client Sample Results

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-40943-1
SDG: Lea Co., NM

Client Sample ID: S-2 (1')

Date Collected: 03/12/24 16:10
Date Received: 03/15/24 14:51
Sample Depth: 1'

Lab Sample ID: 880-40943-3
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	<49.6	U	49.6		mg/Kg		03/18/24 16:28	03/22/24 02:24	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		03/18/24 16:28	03/22/24 02:24	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		03/18/24 16:28	03/22/24 02:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*1*	*S1-*	*70 - 130*	*03/18/24 16:28*	*03/22/24 02:24*	*1*
o-Terphenyl	*1*	*S1-*	*70 - 130*	*03/18/24 16:28*	*03/22/24 02:24*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1690**		25.1		mg/Kg			03/20/24 00:58	5

Client Sample ID: S-2 (2')

Date Collected: 03/12/24 16:14
Date Received: 03/15/24 14:51
Sample Depth: 2'

Lab Sample ID: 880-40943-4
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		03/18/24 09:35	03/19/24 00:21	1
Toluene	<0.00202	U	0.00202		mg/Kg		03/18/24 09:35	03/19/24 00:21	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		03/18/24 09:35	03/19/24 00:21	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		03/18/24 09:35	03/19/24 00:21	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		03/18/24 09:35	03/19/24 00:21	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		03/18/24 09:35	03/19/24 00:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*03/18/24 09:35*	*03/19/24 00:21*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*03/18/24 09:35*	*03/19/24 00:21*	*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			03/19/24 00:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/22/24 02:45	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	<50.0	U	50.0		mg/Kg		03/18/24 16:28	03/22/24 02:45	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/18/24 16:28	03/22/24 02:45	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/18/24 16:28	03/22/24 02:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*03/18/24 16:28*	*03/22/24 02:45*	*1*
o-Terphenyl	*87*		*70 - 130*	*03/18/24 16:28*	*03/22/24 02:45*	*1*

Client Sample Results

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-40943-1
SDG: Lea Co., NM

Client Sample ID: S-2 (2')

Lab Sample ID: 880-40943-4
Matrix: Solid
Date Collected: 03/12/24 16:14
Date Received: 03/15/24 14:51
Sample Depth: 2'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	643		5.01		mg/Kg			03/20/24 01:06	1

Client Sample ID: S-3 (1')

Lab Sample ID: 880-40943-5
Matrix: Solid
Date Collected: 03/12/24 16:22
Date Received: 03/15/24 14:51
Sample Depth: 1'

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		03/18/24 09:35	03/19/24 00:42	1
Toluene	<0.00202	U	0.00202		mg/Kg		03/18/24 09:35	03/19/24 00:42	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		03/18/24 09:35	03/19/24 00:42	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		03/18/24 09:35	03/19/24 00:42	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		03/18/24 09:35	03/19/24 00:42	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		03/18/24 09:35	03/19/24 00:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*03/18/24 09:35*	*03/19/24 00:42*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*03/18/24 09:35*	*03/19/24 00:42*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			03/19/24 00:42	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			03/22/24 03:06	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		03/18/24 16:28	03/22/24 03:06	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/18/24 16:28	03/22/24 03:06	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/18/24 16:28	03/22/24 03:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*03/18/24 16:28*	*03/22/24 03:06*	*1*
o-Terphenyl	*86*		*70 - 130*	*03/18/24 16:28*	*03/22/24 03:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	692		4.99		mg/Kg			03/20/24 01:13	1

Client Sample Results

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-40943-1
SDG: Lea Co., NM

Client Sample ID: S-3 (2')

Date Collected: 03/12/24 16:25
Date Received: 03/15/24 14:51
Sample Depth: 2'

Lab Sample ID: 880-40943-6

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		03/18/24 09:35	03/19/24 01:02	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/18/24 09:35	03/19/24 01:02	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/18/24 09:35	03/19/24 01:02	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/18/24 09:35	03/19/24 01:02	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/18/24 09:35	03/19/24 01:02	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/18/24 09:35	03/19/24 01:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*03/18/24 09:35*	*03/19/24 01:02*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*03/18/24 09:35*	*03/19/24 01:02*	*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			03/19/24 01:02	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			03/22/24 03:28	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		03/18/24 16:28	03/22/24 03:28	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		03/18/24 16:28	03/22/24 03:28	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		03/18/24 16:28	03/22/24 03:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*69*	*S1-*	*70 - 130*	*03/18/24 16:28*	*03/22/24 03:28*	*1*
o-Terphenyl	*56*	*S1-*	*70 - 130*	*03/18/24 16:28*	*03/22/24 03:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**890**		4.97		mg/Kg			03/20/24 01:21	1

Surrogate Summary

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-40943-1
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)
880-40943-1	S-1 (1')	90	98
880-40943-2	S-1 (2')	91	74
880-40943-3	S-2 (1')	81	85
880-40943-4	S-2 (2')	81	84
880-40943-5	S-3 (1')	80	88
880-40943-6	S-3 (2')	96	78
LCS 880-75811/1-A	Lab Control Sample	107	114
LCSD 880-75811/2-A	Lab Control Sample Dup	112	121
MB 880-75811/5-A	Method Blank	72	87

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)
880-40943-1	S-1 (1')	128	110
880-40943-2	S-1 (2')	94	84
880-40943-3	S-2 (1')	1 S1-	1 S1-
880-40943-4	S-2 (2')	104	87
880-40943-5	S-3 (1')	96	86
880-40943-6	S-3 (2')	69 S1-	56 S1-
LCS 880-75930/2-A	Lab Control Sample	123	126
LCSD 880-75930/3-A	Lab Control Sample Dup	85	87
MB 880-75930/1-A	Method Blank	88	79

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-40943-1
SDG: Lea Co., NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-75811/5-A
Matrix: Solid
Analysis Batch: 75918

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 75811

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/18/24 09:35	03/18/24 18:10	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/18/24 09:35	03/18/24 18:10	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/18/24 09:35	03/18/24 18:10	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/18/24 09:35	03/18/24 18:10	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/18/24 09:35	03/18/24 18:10	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/18/24 09:35	03/18/24 18:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*72*		*70 - 130*	*03/18/24 09:35*	*03/18/24 18:10*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*03/18/24 09:35*	*03/18/24 18:10*	*1*

Lab Sample ID: LCS 880-75811/1-A
Matrix: Solid
Analysis Batch: 75918

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 75811

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1020		mg/Kg		102	70 - 130
Toluene	0.100	0.09891		mg/Kg		99	70 - 130
Ethylbenzene	0.100	0.1152		mg/Kg		115	70 - 130
m-Xylene & p-Xylene	0.200	0.2295		mg/Kg		115	70 - 130
o-Xylene	0.100	0.1141		mg/Kg		114	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

Lab Sample ID: LCSD 880-75811/2-A
Matrix: Solid
Analysis Batch: 75918

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 75811

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1171		mg/Kg		117	70 - 130	14	35
Toluene	0.100	0.1100		mg/Kg		110	70 - 130	11	35
Ethylbenzene	0.100	0.1247		mg/Kg		125	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.2582		mg/Kg		129	70 - 130	12	35
o-Xylene	0.100	0.1283		mg/Kg		128	70 - 130	12	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*121*		*70 - 130*

QC Sample Results

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-40943-1
SDG: Lea Co., NM

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

Lab Sample ID: MB 880-75930/1-A
Matrix: Solid
Analysis Batch: 76141

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 75930

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		03/18/24 16:27	03/21/24 18:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/18/24 16:27	03/21/24 18:25	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/18/24 16:27	03/21/24 18:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*03/18/24 16:27*	*03/21/24 18:25*	*1*
o-Terphenyl	*79*		*70 - 130*	*03/18/24 16:27*	*03/21/24 18:25*	*1*

Lab Sample ID: LCS 880-75930/2-A
Matrix: Solid
Analysis Batch: 76141

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 75930

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	971.6		mg/Kg		97	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	949.1		mg/Kg		95	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*123*		*70 - 130*
o-Terphenyl	*126*		*70 - 130*

Lab Sample ID: LCSD 880-75930/3-A
Matrix: Solid
Analysis Batch: 76141

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 75930

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	992.1		mg/Kg		99	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	921.3		mg/Kg		92	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*85*		*70 - 130*
o-Terphenyl	*87*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-75948/1-A
Matrix: Solid
Analysis Batch: 76027

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			03/19/24 23:22	1

QC Sample Results

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-40943-1
SDG: Lea Co., NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-75948/2-A
Matrix: Solid
Analysis Batch: 76027

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	263.5		mg/Kg		105	90 - 110		

Lab Sample ID: LCSD 880-75948/3-A
Matrix: Solid
Analysis Batch: 76027

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	262.9		mg/Kg		105	90 - 110	0	20

QC Association Summary

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-40943-1
SDG: Lea Co., NM

GC VOA

Prep Batch: 75811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40943-1	S-1 (1')	Total/NA	Solid	5035	
880-40943-2	S-1 (2')	Total/NA	Solid	5035	
880-40943-3	S-2 (1')	Total/NA	Solid	5035	
880-40943-4	S-2 (2')	Total/NA	Solid	5035	
880-40943-5	S-3 (1')	Total/NA	Solid	5035	
880-40943-6	S-3 (2')	Total/NA	Solid	5035	
MB 880-75811/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-75811/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-75811/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 75918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40943-1	S-1 (1')	Total/NA	Solid	8021B	75811
880-40943-2	S-1 (2')	Total/NA	Solid	8021B	75811
880-40943-3	S-2 (1')	Total/NA	Solid	8021B	75811
880-40943-4	S-2 (2')	Total/NA	Solid	8021B	75811
880-40943-5	S-3 (1')	Total/NA	Solid	8021B	75811
880-40943-6	S-3 (2')	Total/NA	Solid	8021B	75811
MB 880-75811/5-A	Method Blank	Total/NA	Solid	8021B	75811
LCS 880-75811/1-A	Lab Control Sample	Total/NA	Solid	8021B	75811
LCSD 880-75811/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	75811

Analysis Batch: 75976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40943-1	S-1 (1')	Total/NA	Solid	Total BTEX	
880-40943-2	S-1 (2')	Total/NA	Solid	Total BTEX	
880-40943-3	S-2 (1')	Total/NA	Solid	Total BTEX	
880-40943-4	S-2 (2')	Total/NA	Solid	Total BTEX	
880-40943-5	S-3 (1')	Total/NA	Solid	Total BTEX	
880-40943-6	S-3 (2')	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 75930

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40943-1	S-1 (1')	Total/NA	Solid	8015NM Prep	
880-40943-2	S-1 (2')	Total/NA	Solid	8015NM Prep	
880-40943-3	S-2 (1')	Total/NA	Solid	8015NM Prep	
880-40943-4	S-2 (2')	Total/NA	Solid	8015NM Prep	
880-40943-5	S-3 (1')	Total/NA	Solid	8015NM Prep	
880-40943-6	S-3 (2')	Total/NA	Solid	8015NM Prep	
MB 880-75930/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-75930/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-75930/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 76141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40943-1	S-1 (1')	Total/NA	Solid	8015B NM	75930
880-40943-2	S-1 (2')	Total/NA	Solid	8015B NM	75930
880-40943-3	S-2 (1')	Total/NA	Solid	8015B NM	75930
880-40943-4	S-2 (2')	Total/NA	Solid	8015B NM	75930

QC Association Summary

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-40943-1
SDG: Lea Co., NM

GC Semi VOA (Continued)

Analysis Batch: 76141 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40943-5	S-3 (1')	Total/NA	Solid	8015B NM	75930
880-40943-6	S-3 (2')	Total/NA	Solid	8015B NM	75930
MB 880-75930/1-A	Method Blank	Total/NA	Solid	8015B NM	75930
LCS 880-75930/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	75930
LCSD 880-75930/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	75930

Analysis Batch: 76293

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40943-1	S-1 (1')	Total/NA	Solid	8015 NM	
880-40943-2	S-1 (2')	Total/NA	Solid	8015 NM	
880-40943-3	S-2 (1')	Total/NA	Solid	8015 NM	
880-40943-4	S-2 (2')	Total/NA	Solid	8015 NM	
880-40943-5	S-3 (1')	Total/NA	Solid	8015 NM	
880-40943-6	S-3 (2')	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 75948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40943-1	S-1 (1')	Soluble	Solid	DI Leach	
880-40943-2	S-1 (2')	Soluble	Solid	DI Leach	
880-40943-3	S-2 (1')	Soluble	Solid	DI Leach	
880-40943-4	S-2 (2')	Soluble	Solid	DI Leach	
880-40943-5	S-3 (1')	Soluble	Solid	DI Leach	
880-40943-6	S-3 (2')	Soluble	Solid	DI Leach	
MB 880-75948/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-75948/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-75948/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 76027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40943-1	S-1 (1')	Soluble	Solid	300.0	75948
880-40943-2	S-1 (2')	Soluble	Solid	300.0	75948
880-40943-3	S-2 (1')	Soluble	Solid	300.0	75948
880-40943-4	S-2 (2')	Soluble	Solid	300.0	75948
880-40943-5	S-3 (1')	Soluble	Solid	300.0	75948
880-40943-6	S-3 (2')	Soluble	Solid	300.0	75948
MB 880-75948/1-A	Method Blank	Soluble	Solid	300.0	75948
LCS 880-75948/2-A	Lab Control Sample	Soluble	Solid	300.0	75948
LCSD 880-75948/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	75948

Lab Chronicle

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-40943-1
SDG: Lea Co., NM

Client Sample ID: S-1 (1')
Date Collected: 03/12/24 16:00
Date Received: 03/15/24 14:51

Lab Sample ID: 880-40943-1
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			5.05 g	5 mL	75811	03/18/24 09:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	75918	03/18/24 23:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			75976	03/18/24 23:20	SM	EET MID
Total/NA	Analysis	8015 NM		1			76293	03/22/24 01:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	75930	03/18/24 16:28	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	76141	03/22/24 01:41	SM	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	75948	03/19/24 07:51	SA	EET MID
Soluble	Analysis	300.0		1			76027	03/20/24 00:29	CH	EET MID

Client Sample ID: S-1 (2')
Date Collected: 03/12/24 16:02
Date Received: 03/15/24 14:51

Lab Sample ID: 880-40943-2
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			5.01 g	5 mL	75811	03/18/24 09:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	75918	03/18/24 23:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			75976	03/18/24 23:40	SM	EET MID
Total/NA	Analysis	8015 NM		1			76293	03/22/24 02:02	SM	EET MID
Total/NA	Prep	8015NM Prep			10.10 g	10 mL	75930	03/18/24 16:28	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	76141	03/22/24 02:02	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	75948	03/19/24 07:51	SA	EET MID
Soluble	Analysis	300.0		1			76027	03/20/24 00:51	CH	EET MID

Client Sample ID: S-2 (1')
Date Collected: 03/12/24 16:10
Date Received: 03/15/24 14:51

Lab Sample ID: 880-40943-3
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			4.98 g	5 mL	75811	03/18/24 09:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	75918	03/19/24 00:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			75976	03/19/24 00:01	SM	EET MID
Total/NA	Analysis	8015 NM		1			76293	03/22/24 02:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	75930	03/18/24 16:28	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	76141	03/22/24 02:24	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	75948	03/19/24 07:51	SA	EET MID
Soluble	Analysis	300.0		5			76027	03/20/24 00:58	CH	EET MID

Client Sample ID: S-2 (2')
Date Collected: 03/12/24 16:14
Date Received: 03/15/24 14:51

Lab Sample ID: 880-40943-4
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			4.95 g	5 mL	75811	03/18/24 09:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	75918	03/19/24 00:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			75976	03/19/24 00:21	SM	EET MID

Eurofins Midland

Lab Chronicle

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-40943-1
SDG: Lea Co., NM

Client Sample ID: S-2 (2')

Lab Sample ID: 880-40943-4
Matrix: Solid
Date Collected: 03/12/24 16:14
Date Received: 03/15/24 14:51

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			76293	03/22/24 02:45	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	75930	03/18/24 16:28	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	76141	03/22/24 02:45	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	75948	03/19/24 07:51	SA	EET MID
Soluble	Analysis	300.0		1			76027	03/20/24 01:06	CH	EET MID

Client Sample ID: S-3 (1')

Lab Sample ID: 880-40943-5
Matrix: Solid
Date Collected: 03/12/24 16:22
Date Received: 03/15/24 14:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	75811	03/18/24 09:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	75918	03/19/24 00:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			75976	03/19/24 00:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			76293	03/22/24 03:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	75930	03/18/24 16:28	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	76141	03/22/24 03:06	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	75948	03/19/24 07:51	SA	EET MID
Soluble	Analysis	300.0		1			76027	03/20/24 01:13	CH	EET MID

Client Sample ID: S-3 (2')

Lab Sample ID: 880-40943-6
Matrix: Solid
Date Collected: 03/12/24 16:25
Date Received: 03/15/24 14:51

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	75811	03/18/24 09:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	75918	03/19/24 01:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			75976	03/19/24 01:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			76293	03/22/24 03:28	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	75930	03/18/24 16:28	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	76141	03/22/24 03:28	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	75948	03/19/24 07:51	SA	EET MID
Soluble	Analysis	300.0		1			76027	03/20/24 01:21	CH	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: Chem State #3

Job ID: 880-40943-1
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: Chem State #3

Job ID: 880-40943-1
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: Chem State #3

Job ID: 880-40943-1
SDG: Lea Co., NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-40943-1	S-1 (1')	Solid	03/12/24 16:00	03/15/24 14:51	1'
880-40943-2	S-1 (2')	Solid	03/12/24 16:02	03/15/24 14:51	2'
880-40943-3	S-2 (1')	Solid	03/12/24 16:10	03/15/24 14:51	1'
880-40943-4	S-2 (2')	Solid	03/12/24 16:14	03/15/24 14:51	2'
880-40943-5	S-3 (1')	Solid	03/12/24 16:22	03/15/24 14:51	1'
880-40943-6	S-3 (2')	Solid	03/12/24 16:25	03/15/24 14:51	2'

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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

880-40943 Chain of Custody

Project Manager:	Cindy Crain	Bill to: (if different)	Chris Goddy
Company Name:	Crain Environmental	Company Name:	Octane Energy
Address:	2925 E. 17th St.	Address:	310 W. Wall, Ste. 300
City, State ZIP:	Odessa, TX 79761	City, State ZIP:	Midland, TX 79701
Phone:	(575) 441-7244	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:	Chem State #3	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:	TM8	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-.10	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	3.8	
Total Containers:		Corrected Temperature:	3.7	

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 Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: TPH 8015M	BTEX	Chlorides	Sample Comments
S-1 (1')	S	3/12/24	1600	1'	C	1		X	X	X	
S-1 (2')			1602	2'							
S-2 (1')			1610	1'							
S-2 (2')			1614	2'							
S-3 (1')			1622	1'							
S-3 (2')	↓	↓	1625	2'	↓	↓		↓	↓	↓	

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Cindy Crain		3/15/24 1451	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Crain Environmental

Job Number: 880-40943-1
SDG Number: Lea Co., NM

Login Number: 40943
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	

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 10/3/2024 3:30:21 PM

JOB DESCRIPTION

Chem State #3
Lea Co., NM

JOB NUMBER

880-49106-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

my EOL

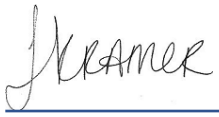
Eurofins Midland

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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10/3/2024 3:30:21 PM

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

Client: Crain Environmental
Project/Site: Chem State #3

Laboratory Job ID: 880-49106-1
SDG: Lea Co., NM

Table of Contents

Definitions/Glossary

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-49106-1
SDG: Lea Co., NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
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: Chem State #3

Job ID: 880-49106-1

Job ID: 880-49106-1 Eurofins Midland

Job Narrative
880-49106-1

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 and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided 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 9/27/2024 1:45 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 3.1°C.

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: S-1 (4.1') (880-49106-1), S-2 (4.1') (880-49106-2), S-3 (4.1') (880-49106-3), S-4 (0-4') (880-49106-4), S-5 (0-4') (880-49106-5), S-6 (0-4') (880-49106-6), S-7 (0-4') (880-49106-7), S-8 (0-4') (880-49106-8) and S-9 (0-4') (880-49106-9).

GC VOA
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-92059 recovered below the lower control limit for Toluene. An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-92059/2).

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 880-92041 and analytical batch 880-92279 was outside the upper control limits.

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

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

Client Sample Results

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-49106-1
SDG: Lea Co., NM

Client Sample ID: S-1 (4.1')

Lab Sample ID: 880-49106-1
Matrix: Solid
Date Collected: 09/26/24 14:25
Date Received: 09/27/24 13:45
Sample Depth: 4.1'

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		09/30/24 09:32	09/30/24 20:30	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/30/24 09:32	09/30/24 20:30	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/30/24 09:32	09/30/24 20:30	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/30/24 09:32	09/30/24 20:30	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/30/24 09:32	09/30/24 20:30	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/30/24 09:32	09/30/24 20:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*09/30/24 09:32*	*09/30/24 20:30*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*09/30/24 09:32*	*09/30/24 20:30*	*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			09/30/24 20:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/02/24 01:12	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	<50.0	U	50.0		mg/Kg		09/29/24 20:31	10/02/24 01:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/29/24 20:31	10/02/24 01:12	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/29/24 20:31	10/02/24 01:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*09/29/24 20:31*	*10/02/24 01:12*	*1*
o-Terphenyl	*92*		*70 - 130*	*09/29/24 20:31*	*10/02/24 01:12*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.99	U	4.99		mg/Kg			10/03/24 03:29	1

Client Sample ID: S-2 (4.1')

Lab Sample ID: 880-49106-2
Matrix: Solid
Date Collected: 09/26/24 14:30
Date Received: 09/27/24 13:45
Sample Depth: 4.1'

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		09/30/24 11:06	10/01/24 16:17	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/30/24 11:06	10/01/24 16:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/30/24 11:06	10/01/24 16:17	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/30/24 11:06	10/01/24 16:17	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/30/24 11:06	10/01/24 16:17	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/30/24 11:06	10/01/24 16:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*09/30/24 11:06*	*10/01/24 16:17*	*1*

Eurofins Midland

Client Sample Results

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-49106-1
SDG: Lea Co., NM

Client Sample ID: S-2 (4.1')

Lab Sample ID: 880-49106-2
Matrix: Solid
Date Collected: 09/26/24 14:30
Date Received: 09/27/24 13:45
Sample Depth: 4.1'

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*09/30/24 11:06*	*10/01/24 16:17*	*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			10/01/24 16:17	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			10/02/24 01:42	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	<49.7	U	49.7		mg/Kg		09/29/24 20:31	10/02/24 01:42	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		09/29/24 20:31	10/02/24 01:42	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		09/29/24 20:31	10/02/24 01:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*09/29/24 20:31*	*10/02/24 01:42*	*1*
o-Terphenyl	*85*		*70 - 130*	*09/29/24 20:31*	*10/02/24 01:42*	*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			10/03/24 03:36	1

Client Sample ID: S-3 (4.1')

Lab Sample ID: 880-49106-3
Matrix: Solid
Date Collected: 09/26/24 14:35
Date Received: 09/27/24 13:45
Sample Depth: 4.1'

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		09/30/24 11:06	10/01/24 16:37	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/30/24 11:06	10/01/24 16:37	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/30/24 11:06	10/01/24 16:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/30/24 11:06	10/01/24 16:37	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/30/24 11:06	10/01/24 16:37	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/30/24 11:06	10/01/24 16:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*09/30/24 11:06*	*10/01/24 16:37*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*09/30/24 11:06*	*10/01/24 16:37*	*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			10/01/24 16:37	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			10/02/24 01:56	1

Eurofins Midland

Client Sample Results

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-49106-1
SDG: Lea Co., NM

Client Sample ID: S-3 (4.1')

Lab Sample ID: 880-49106-3
Matrix: Solid
Date Collected: 09/26/24 14:35
Date Received: 09/27/24 13:45
Sample Depth: 4.1'

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		09/29/24 20:31	10/02/24 01:56	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/29/24 20:31	10/02/24 01:56	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/29/24 20:31	10/02/24 01:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*09/29/24 20:31*	*10/02/24 01:56*	*1*
o-Terphenyl	*88*		*70 - 130*	*09/29/24 20:31*	*10/02/24 01:56*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.99	U	4.99		mg/Kg			10/03/24 03:42	1

Client Sample ID: S-4 (0-4')

Lab Sample ID: 880-49106-4
Matrix: Solid
Date Collected: 09/26/24 14:40
Date Received: 09/27/24 13:45
Sample Depth: 0-4'

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		09/30/24 11:06	10/01/24 18:00	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/30/24 11:06	10/01/24 18:00	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/30/24 11:06	10/01/24 18:00	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/30/24 11:06	10/01/24 18:00	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/30/24 11:06	10/01/24 18:00	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/30/24 11:06	10/01/24 18:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*09/30/24 11:06*	*10/01/24 18:00*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*09/30/24 11:06*	*10/01/24 18:00*	*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			10/01/24 18:00	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			10/02/24 02:11	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		09/29/24 20:31	10/02/24 02:11	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/29/24 20:31	10/02/24 02:11	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/29/24 20:31	10/02/24 02:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*09/29/24 20:31*	*10/02/24 02:11*	*1*
o-Terphenyl	*97*		*70 - 130*	*09/29/24 20:31*	*10/02/24 02:11*	*1*

Client Sample Results

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-49106-1
SDG: Lea Co., NM

Client Sample ID: S-4 (0-4')

Lab Sample ID: 880-49106-4
Matrix: Solid
Date Collected: 09/26/24 14:40
Date Received: 09/27/24 13:45
Sample Depth: 0-4'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	23.5		5.00		mg/Kg			10/03/24 03:48	1

Client Sample ID: S-5 (0-4')

Lab Sample ID: 880-49106-5
Matrix: Solid
Date Collected: 09/26/24 14:45
Date Received: 09/27/24 13:45
Sample Depth: 0-4'

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		09/30/24 11:06	10/01/24 18:21	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/30/24 11:06	10/01/24 18:21	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/30/24 11:06	10/01/24 18:21	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/30/24 11:06	10/01/24 18:21	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/30/24 11:06	10/01/24 18:21	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/30/24 11:06	10/01/24 18:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*09/30/24 11:06*	*10/01/24 18:21*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*09/30/24 11:06*	*10/01/24 18:21*	*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			10/01/24 18:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/02/24 02:25	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	<50.0	U	50.0		mg/Kg		09/29/24 20:31	10/02/24 02:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/29/24 20:31	10/02/24 02:25	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/29/24 20:31	10/02/24 02:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*09/29/24 20:31*	*10/02/24 02:25*	*1*
o-Terphenyl	*95*		*70 - 130*	*09/29/24 20:31*	*10/02/24 02:25*	*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			10/03/24 04:08	1

Client Sample Results

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-49106-1
SDG: Lea Co., NM

Client Sample ID: S-6 (0-4')

Lab Sample ID: 880-49106-6
Matrix: Solid
Date Collected: 09/26/24 14:50
Date Received: 09/27/24 13:45
Sample Depth: 0-4'

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		09/30/24 11:06	10/01/24 18:41	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/30/24 11:06	10/01/24 18:41	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/30/24 11:06	10/01/24 18:41	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		09/30/24 11:06	10/01/24 18:41	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		09/30/24 11:06	10/01/24 18:41	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		09/30/24 11:06	10/01/24 18:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*09/30/24 11:06*	*10/01/24 18:41*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*09/30/24 11:06*	*10/01/24 18:41*	*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			10/01/24 18:41	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			10/02/24 02:40	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		09/29/24 20:31	10/02/24 02:40	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/29/24 20:31	10/02/24 02:40	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/29/24 20:31	10/02/24 02:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*09/29/24 20:31*	*10/02/24 02:40*	*1*
o-Terphenyl	*88*		*70 - 130*	*09/29/24 20:31*	*10/02/24 02:40*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.05	U	5.05		mg/Kg			10/03/24 04:14	1

Client Sample ID: S-7 (0-4')

Lab Sample ID: 880-49106-7
Matrix: Solid
Date Collected: 09/26/24 14:55
Date Received: 09/27/24 13:45
Sample Depth: 0-4'

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		09/30/24 11:06	10/01/24 19:01	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/30/24 11:06	10/01/24 19:01	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/30/24 11:06	10/01/24 19:01	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/30/24 11:06	10/01/24 19:01	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/30/24 11:06	10/01/24 19:01	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/30/24 11:06	10/01/24 19:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*09/30/24 11:06*	*10/01/24 19:01*	*1*

Client Sample Results

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-49106-1
SDG: Lea Co., NM

Client Sample ID: S-7 (0-4')

Lab Sample ID: 880-49106-7
Matrix: Solid
Date Collected: 09/26/24 14:55
Date Received: 09/27/24 13:45
Sample Depth: 0-4'

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*09/30/24 11:06*	*10/01/24 19:01*	*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			10/01/24 19:01	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			10/02/24 02:54	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		09/29/24 20:31	10/02/24 02:54	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/29/24 20:31	10/02/24 02:54	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/29/24 20:31	10/02/24 02:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*09/29/24 20:31*	*10/02/24 02:54*	*1*
o-Terphenyl	*97*		*70 - 130*	*09/29/24 20:31*	*10/02/24 02:54*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**82.5**		5.01		mg/Kg			10/03/24 04:20	1

Client Sample ID: S-8 (0-4')

Lab Sample ID: 880-49106-8
Matrix: Solid
Date Collected: 09/26/24 15:00
Date Received: 09/27/24 13:45
Sample Depth: 0-4'

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		09/30/24 11:06	10/01/24 19:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/30/24 11:06	10/01/24 19:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/30/24 11:06	10/01/24 19:22	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/30/24 11:06	10/01/24 19:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/30/24 11:06	10/01/24 19:22	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/30/24 11:06	10/01/24 19:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*09/30/24 11:06*	*10/01/24 19:22*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*09/30/24 11:06*	*10/01/24 19:22*	*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			10/01/24 19:22	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			10/02/24 03:10	1

Eurofins Midland

Client Sample Results

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-49106-1
SDG: Lea Co., NM

Client Sample ID: S-8 (0-4')

Lab Sample ID: 880-49106-8
Matrix: Solid
Date Collected: 09/26/24 15:00
Date Received: 09/27/24 13:45
Sample Depth: 0-4'

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		09/29/24 20:31	10/02/24 03:10	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		09/29/24 20:31	10/02/24 03:10	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		09/29/24 20:31	10/02/24 03:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*09/29/24 20:31*	*10/02/24 03:10*	*1*
o-Terphenyl	*95*		*70 - 130*	*09/29/24 20:31*	*10/02/24 03:10*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.02	U	5.02		mg/Kg			10/03/24 04:27	1

Client Sample ID: S-9 (0-4')

Lab Sample ID: 880-49106-9
Matrix: Solid
Date Collected: 09/26/24 15:05
Date Received: 09/27/24 13:45
Sample Depth: 0-4'

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		09/30/24 11:06	10/01/24 19:42	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/30/24 11:06	10/01/24 19:42	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/30/24 11:06	10/01/24 19:42	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/30/24 11:06	10/01/24 19:42	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/30/24 11:06	10/01/24 19:42	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/30/24 11:06	10/01/24 19:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*09/30/24 11:06*	*10/01/24 19:42*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*09/30/24 11:06*	*10/01/24 19:42*	*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			10/01/24 19:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/02/24 03:24	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	<50.0	U	50.0		mg/Kg		09/29/24 20:31	10/02/24 03:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/29/24 20:31	10/02/24 03:24	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/29/24 20:31	10/02/24 03:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*09/29/24 20:31*	*10/02/24 03:24*	*1*
o-Terphenyl	*103*		*70 - 130*	*09/29/24 20:31*	*10/02/24 03:24*	*1*

Client Sample Results

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-49106-1
SDG: Lea Co., NM

Client Sample ID: S-9 (0-4')
Date Collected: 09/26/24 15:05
Date Received: 09/27/24 13:45
Sample Depth: 0-4'

Lab Sample ID: 880-49106-9
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.01	U	5.01		mg/Kg			10/03/24 04:33	1

Surrogate Summary

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-49106-1
SDG: Lea Co., NM

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-49106-1	S-1 (4.1')	104	103
880-49106-2	S-2 (4.1')	109	105
880-49106-3	S-3 (4.1')	106	102
880-49106-4	S-4 (0-4')	107	103
880-49106-5	S-5 (0-4')	111	100
880-49106-6	S-6 (0-4')	104	104
880-49106-7	S-7 (0-4')	107	103
880-49106-8	S-8 (0-4')	107	101
880-49106-9	S-9 (0-4')	106	104
LCS 880-92072/1-A	Lab Control Sample	100	97
LCS 880-92118/1-A	Lab Control Sample	105	100
LCSD 880-92072/2-A	Lab Control Sample Dup	99	99
LCSD 880-92118/2-A	Lab Control Sample Dup	101	103
MB 880-92072/5-A	Method Blank	107	96
MB 880-92118/5-A	Method Blank	103	99

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)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-49106-1	S-1 (4.1')	91	92
880-49106-2	S-2 (4.1')	85	85
880-49106-3	S-3 (4.1')	92	88
880-49106-4	S-4 (0-4')	101	97
880-49106-5	S-5 (0-4')	99	95
880-49106-6	S-6 (0-4')	88	88
880-49106-7	S-7 (0-4')	101	97
880-49106-8	S-8 (0-4')	99	95
880-49106-9	S-9 (0-4')	103	103
LCS 880-92041/2-A	Lab Control Sample	112	110
LCSD 880-92041/3-A	Lab Control Sample Dup	126	127
MB 880-92041/1-A	Method Blank	145 S1+	143 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-49106-1
SDG: Lea Co., NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-92072/5-A
Matrix: Solid
Analysis Batch: 92059

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 92072

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/30/24 09:32	09/30/24 11:42	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/30/24 09:32	09/30/24 11:42	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/30/24 09:32	09/30/24 11:42	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/30/24 09:32	09/30/24 11:42	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/30/24 09:32	09/30/24 11:42	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/30/24 09:32	09/30/24 11:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*09/30/24 09:32*	*09/30/24 11:42*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*09/30/24 09:32*	*09/30/24 11:42*	*1*

Lab Sample ID: LCS 880-92072/1-A
Matrix: Solid
Analysis Batch: 92059

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 92072

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.08366		mg/Kg		84	70 - 130
Toluene	0.100	0.07872		mg/Kg		79	70 - 130
Ethylbenzene	0.100	0.07943		mg/Kg		79	70 - 130
m-Xylene & p-Xylene	0.200	0.1717		mg/Kg		86	70 - 130
o-Xylene	0.100	0.08510		mg/Kg		85	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 880-92072/2-A
Matrix: Solid
Analysis Batch: 92059

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 92072

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09213		mg/Kg		92	70 - 130	10	35
Toluene	0.100	0.08661		mg/Kg		87	70 - 130	10	35
Ethylbenzene	0.100	0.08663		mg/Kg		87	70 - 130	9	35
m-Xylene & p-Xylene	0.200	0.1871		mg/Kg		94	70 - 130	9	35
o-Xylene	0.100	0.09345		mg/Kg		93	70 - 130	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: MB 880-92118/5-A
Matrix: Solid
Analysis Batch: 92214

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 92118

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/30/24 11:06	10/01/24 13:07	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/30/24 11:06	10/01/24 13:07	1

QC Sample Results

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-49106-1
SDG: Lea Co., NM

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

Lab Sample ID: MB 880-92118/5-A
Matrix: Solid
Analysis Batch: 92214

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 92118

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/30/24 11:06	10/01/24 13:07	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/30/24 11:06	10/01/24 13:07	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/30/24 11:06	10/01/24 13:07	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/30/24 11:06	10/01/24 13:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*09/30/24 11:06*	*10/01/24 13:07*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*09/30/24 11:06*	*10/01/24 13:07*	*1*

Lab Sample ID: LCS 880-92118/1-A
Matrix: Solid
Analysis Batch: 92214

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 92118

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09254		mg/Kg		93	70 - 130
Toluene	0.100	0.08706		mg/Kg		87	70 - 130
Ethylbenzene	0.100	0.08786		mg/Kg		88	70 - 130
m-Xylene & p-Xylene	0.200	0.1884		mg/Kg		94	70 - 130
o-Xylene	0.100	0.09428		mg/Kg		94	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-92118/2-A
Matrix: Solid
Analysis Batch: 92214

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 92118

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08638		mg/Kg		86	70 - 130	7	35
Toluene	0.100	0.08080		mg/Kg		81	70 - 130	7	35
Ethylbenzene	0.100	0.08134		mg/Kg		81	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.1756		mg/Kg		88	70 - 130	7	35
o-Xylene	0.100	0.08855		mg/Kg		89	70 - 130	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

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

Lab Sample ID: MB 880-92041/1-A
Matrix: Solid
Analysis Batch: 92279

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 92041

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		09/29/24 20:31	10/01/24 21:43	1

QC Sample Results

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-49106-1
SDG: Lea Co., NM

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

Lab Sample ID: MB 880-92041/1-A
Matrix: Solid
Analysis Batch: 92279

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 92041

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/29/24 20:31	10/01/24 21:43	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/29/24 20:31	10/01/24 21:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*145*	*S1+*	*70 - 130*	*09/29/24 20:31*	*10/01/24 21:43*	*1*
o-Terphenyl	*143*	*S1+*	*70 - 130*	*09/29/24 20:31*	*10/01/24 21:43*	*1*

Lab Sample ID: LCS 880-92041/2-A
Matrix: Solid
Analysis Batch: 92279

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 92041

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	974.6		mg/Kg		97	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1135		mg/Kg		113	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*112*		*70 - 130*
o-Terphenyl	*110*		*70 - 130*

Lab Sample ID: LCSD 880-92041/3-A
Matrix: Solid
Analysis Batch: 92279

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 92041

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1086		mg/Kg		109	70 - 130	11	20
Diesel Range Organics (Over C10-C28)	1000	1297		mg/Kg		130	70 - 130	13	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*126*		*70 - 130*
o-Terphenyl	*127*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-92145/1-A
Matrix: Solid
Analysis Batch: 92250

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			10/03/24 02:51	1

QC Sample Results

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-49106-1
SDG: Lea Co., NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-92145/2-A
Matrix: Solid
Analysis Batch: 92250

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	268.1		mg/Kg		107	90 - 110

Lab Sample ID: LCSD 880-92145/3-A
Matrix: Solid
Analysis Batch: 92250

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	264.0		mg/Kg		106	90 - 110	2	20

QC Association Summary

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-49106-1
SDG: Lea Co., NM

GC VOA

Analysis Batch: 92059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-49106-1	S-1 (4.1')	Total/NA	Solid	8021B	92072
MB 880-92072/5-A	Method Blank	Total/NA	Solid	8021B	92072
LCS 880-92072/1-A	Lab Control Sample	Total/NA	Solid	8021B	92072
LCSD 880-92072/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	92072

Prep Batch: 92072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-49106-1	S-1 (4.1')	Total/NA	Solid	5035	
MB 880-92072/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-92072/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-92072/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 92118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-49106-2	S-2 (4.1')	Total/NA	Solid	5035	
880-49106-3	S-3 (4.1')	Total/NA	Solid	5035	
880-49106-4	S-4 (0-4')	Total/NA	Solid	5035	
880-49106-5	S-5 (0-4')	Total/NA	Solid	5035	
880-49106-6	S-6 (0-4')	Total/NA	Solid	5035	
880-49106-7	S-7 (0-4')	Total/NA	Solid	5035	
880-49106-8	S-8 (0-4')	Total/NA	Solid	5035	
880-49106-9	S-9 (0-4')	Total/NA	Solid	5035	
MB 880-92118/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-92118/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-92118/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 92214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-49106-2	S-2 (4.1')	Total/NA	Solid	8021B	92118
880-49106-3	S-3 (4.1')	Total/NA	Solid	8021B	92118
880-49106-4	S-4 (0-4')	Total/NA	Solid	8021B	92118
880-49106-5	S-5 (0-4')	Total/NA	Solid	8021B	92118
880-49106-6	S-6 (0-4')	Total/NA	Solid	8021B	92118
880-49106-7	S-7 (0-4')	Total/NA	Solid	8021B	92118
880-49106-8	S-8 (0-4')	Total/NA	Solid	8021B	92118
880-49106-9	S-9 (0-4')	Total/NA	Solid	8021B	92118
MB 880-92118/5-A	Method Blank	Total/NA	Solid	8021B	92118
LCS 880-92118/1-A	Lab Control Sample	Total/NA	Solid	8021B	92118
LCSD 880-92118/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	92118

Analysis Batch: 92253

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-49106-1	S-1 (4.1')	Total/NA	Solid	Total BTEX	
880-49106-2	S-2 (4.1')	Total/NA	Solid	Total BTEX	
880-49106-3	S-3 (4.1')	Total/NA	Solid	Total BTEX	
880-49106-4	S-4 (0-4')	Total/NA	Solid	Total BTEX	
880-49106-5	S-5 (0-4')	Total/NA	Solid	Total BTEX	
880-49106-6	S-6 (0-4')	Total/NA	Solid	Total BTEX	
880-49106-7	S-7 (0-4')	Total/NA	Solid	Total BTEX	
880-49106-8	S-8 (0-4')	Total/NA	Solid	Total BTEX	
880-49106-9	S-9 (0-4')	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-49106-1
SDG: Lea Co., NM

GC Semi VOA

Prep Batch: 92041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-49106-1	S-1 (4.1')	Total/NA	Solid	8015NM Prep	
880-49106-2	S-2 (4.1')	Total/NA	Solid	8015NM Prep	
880-49106-3	S-3 (4.1')	Total/NA	Solid	8015NM Prep	
880-49106-4	S-4 (0-4')	Total/NA	Solid	8015NM Prep	
880-49106-5	S-5 (0-4')	Total/NA	Solid	8015NM Prep	
880-49106-6	S-6 (0-4')	Total/NA	Solid	8015NM Prep	
880-49106-7	S-7 (0-4')	Total/NA	Solid	8015NM Prep	
880-49106-8	S-8 (0-4')	Total/NA	Solid	8015NM Prep	
880-49106-9	S-9 (0-4')	Total/NA	Solid	8015NM Prep	
MB 880-92041/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-92041/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-92041/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 92279

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-49106-1	S-1 (4.1')	Total/NA	Solid	8015B NM	92041
880-49106-2	S-2 (4.1')	Total/NA	Solid	8015B NM	92041
880-49106-3	S-3 (4.1')	Total/NA	Solid	8015B NM	92041
880-49106-4	S-4 (0-4')	Total/NA	Solid	8015B NM	92041
880-49106-5	S-5 (0-4')	Total/NA	Solid	8015B NM	92041
880-49106-6	S-6 (0-4')	Total/NA	Solid	8015B NM	92041
880-49106-7	S-7 (0-4')	Total/NA	Solid	8015B NM	92041
880-49106-8	S-8 (0-4')	Total/NA	Solid	8015B NM	92041
880-49106-9	S-9 (0-4')	Total/NA	Solid	8015B NM	92041
MB 880-92041/1-A	Method Blank	Total/NA	Solid	8015B NM	92041
LCS 880-92041/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	92041
LCSD 880-92041/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	92041

Analysis Batch: 92412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-49106-1	S-1 (4.1')	Total/NA	Solid	8015 NM	
880-49106-2	S-2 (4.1')	Total/NA	Solid	8015 NM	
880-49106-3	S-3 (4.1')	Total/NA	Solid	8015 NM	
880-49106-4	S-4 (0-4')	Total/NA	Solid	8015 NM	
880-49106-5	S-5 (0-4')	Total/NA	Solid	8015 NM	
880-49106-6	S-6 (0-4')	Total/NA	Solid	8015 NM	
880-49106-7	S-7 (0-4')	Total/NA	Solid	8015 NM	
880-49106-8	S-8 (0-4')	Total/NA	Solid	8015 NM	
880-49106-9	S-9 (0-4')	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 92145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-49106-1	S-1 (4.1')	Soluble	Solid	DI Leach	
880-49106-2	S-2 (4.1')	Soluble	Solid	DI Leach	
880-49106-3	S-3 (4.1')	Soluble	Solid	DI Leach	
880-49106-4	S-4 (0-4')	Soluble	Solid	DI Leach	
880-49106-5	S-5 (0-4')	Soluble	Solid	DI Leach	
880-49106-6	S-6 (0-4')	Soluble	Solid	DI Leach	
880-49106-7	S-7 (0-4')	Soluble	Solid	DI Leach	

QC Association Summary

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-49106-1
SDG: Lea Co., NM

HPLC/IC (Continued)

Leach Batch: 92145 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-49106-8	S-8 (0-4')	Soluble	Solid	DI Leach	
880-49106-9	S-9 (0-4')	Soluble	Solid	DI Leach	
MB 880-92145/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-92145/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-92145/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 92250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-49106-1	S-1 (4.1')	Soluble	Solid	300.0	92145
880-49106-2	S-2 (4.1')	Soluble	Solid	300.0	92145
880-49106-3	S-3 (4.1')	Soluble	Solid	300.0	92145
880-49106-4	S-4 (0-4')	Soluble	Solid	300.0	92145
880-49106-5	S-5 (0-4')	Soluble	Solid	300.0	92145
880-49106-6	S-6 (0-4')	Soluble	Solid	300.0	92145
880-49106-7	S-7 (0-4')	Soluble	Solid	300.0	92145
880-49106-8	S-8 (0-4')	Soluble	Solid	300.0	92145
880-49106-9	S-9 (0-4')	Soluble	Solid	300.0	92145
MB 880-92145/1-A	Method Blank	Soluble	Solid	300.0	92145
LCS 880-92145/2-A	Lab Control Sample	Soluble	Solid	300.0	92145
LCSD 880-92145/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	92145

Lab Chronicle

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-49106-1
SDG: Lea Co., NM

Client Sample ID: S-1 (4.1')

Lab Sample ID: 880-49106-1
Matrix: Solid
Date Collected: 09/26/24 14:25
Date Received: 09/27/24 13:45

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	92072	09/30/24 09:32	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	92059	09/30/24 20:30	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			92253	09/30/24 20:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			92412	10/02/24 01:12	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10.00 mL	92041	09/29/24 20:31	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	92279	10/02/24 01:12	TKC	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	92145	09/30/24 12:52	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	92250	10/03/24 03:29	CH	EET MID

Client Sample ID: S-2 (4.1')

Lab Sample ID: 880-49106-2
Matrix: Solid
Date Collected: 09/26/24 14:30
Date Received: 09/27/24 13:45

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	92118	09/30/24 11:06	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	92214	10/01/24 16:17	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			92253	10/01/24 16:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			92412	10/02/24 01:42	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10.00 mL	92041	09/29/24 20:31	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	92279	10/02/24 01:42	TKC	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	92145	09/30/24 12:52	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	92250	10/03/24 03:36	CH	EET MID

Client Sample ID: S-3 (4.1')

Lab Sample ID: 880-49106-3
Matrix: Solid
Date Collected: 09/26/24 14:35
Date Received: 09/27/24 13:45

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	92118	09/30/24 11:06	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	92214	10/01/24 16:37	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			92253	10/01/24 16:37	SM	EET MID
Total/NA	Analysis	8015 NM		1			92412	10/02/24 01:56	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10.00 mL	92041	09/29/24 20:31	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	92279	10/02/24 01:56	TKC	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	92145	09/30/24 12:52	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	92250	10/03/24 03:42	CH	EET MID

Client Sample ID: S-4 (0-4')

Lab Sample ID: 880-49106-4
Matrix: Solid
Date Collected: 09/26/24 14:40
Date Received: 09/27/24 13:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	92118	09/30/24 11:06	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	92214	10/01/24 18:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			92253	10/01/24 18:00	SM	EET MID

Lab Chronicle

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-49106-1
SDG: Lea Co., NM

Client Sample ID: S-4 (0-4')

Lab Sample ID: 880-49106-4

Date Collected: 09/26/24 14:40
Matrix: Solid
Date Received: 09/27/24 13:45

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			92412	10/02/24 02:11	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10.00 mL	92041	09/29/24 20:31	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	92279	10/02/24 02:11	TKC	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	92145	09/30/24 12:52	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	92250	10/03/24 03:48	CH	EET MID

Client Sample ID: S-5 (0-4')

Lab Sample ID: 880-49106-5

Date Collected: 09/26/24 14:45
Matrix: Solid
Date Received: 09/27/24 13:45

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	92118	09/30/24 11:06	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	92214	10/01/24 18:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			92253	10/01/24 18:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			92412	10/02/24 02:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10.00 mL	92041	09/29/24 20:31	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	92279	10/02/24 02:25	TKC	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	92145	09/30/24 12:52	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	92250	10/03/24 04:08	CH	EET MID

Client Sample ID: S-6 (0-4')

Lab Sample ID: 880-49106-6

Date Collected: 09/26/24 14:50
Matrix: Solid
Date Received: 09/27/24 13:45

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	92118	09/30/24 11:06	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	92214	10/01/24 18:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			92253	10/01/24 18:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			92412	10/02/24 02:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10.00 mL	92041	09/29/24 20:31	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	92279	10/02/24 02:40	TKC	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	92145	09/30/24 12:52	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	92250	10/03/24 04:14	CH	EET MID

Client Sample ID: S-7 (0-4')

Lab Sample ID: 880-49106-7

Date Collected: 09/26/24 14:55
Matrix: Solid
Date Received: 09/27/24 13:45

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	92118	09/30/24 11:06	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	92214	10/01/24 19:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			92253	10/01/24 19:01	SM	EET MID
Total/NA	Analysis	8015 NM		1			92412	10/02/24 02:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10.00 mL	92041	09/29/24 20:31	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	92279	10/02/24 02:54	TKC	EET MID

Lab Chronicle

Client: Crain Environmental
Project/Site: Chem State #3

Job ID: 880-49106-1
SDG: Lea Co., NM

Client Sample ID: S-7 (0-4')

Lab Sample ID: 880-49106-7
Matrix: Solid
Date Collected: 09/26/24 14:55
Date Received: 09/27/24 13:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.99 g	50 mL	92145	09/30/24 12:52	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	92250	10/03/24 04:20	CH	EET MID

Client Sample ID: S-8 (0-4')

Lab Sample ID: 880-49106-8
Matrix: Solid
Date Collected: 09/26/24 15:00
Date Received: 09/27/24 13:45

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	92118	09/30/24 11:06	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	92214	10/01/24 19:22	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			92253	10/01/24 19:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			92412	10/02/24 03:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10.00 mL	92041	09/29/24 20:31	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	92279	10/02/24 03:10	TKC	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	92145	09/30/24 12:52	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	92250	10/03/24 04:27	CH	EET MID

Client Sample ID: S-9 (0-4')

Lab Sample ID: 880-49106-9
Matrix: Solid
Date Collected: 09/26/24 15:05
Date Received: 09/27/24 13:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	92118	09/30/24 11:06	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	92214	10/01/24 19:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			92253	10/01/24 19:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			92412	10/02/24 03:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10.00 mL	92041	09/29/24 20:31	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	92279	10/02/24 03:24	TKC	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	92145	09/30/24 12:52	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	92250	10/03/24 04:33	CH	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: Chem State #3

Job ID: 880-49106-1
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	06-30-25

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: Chem State #3

Job ID: 880-49106-1
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: Chem State #3

Job ID: 880-49106-1
SDG: Lea Co., NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-49106-1	S-1 (4.1')	Solid	09/26/24 14:25	09/27/24 13:45	4.1'
880-49106-2	S-2 (4.1')	Solid	09/26/24 14:30	09/27/24 13:45	4.1'
880-49106-3	S-3 (4.1')	Solid	09/26/24 14:35	09/27/24 13:45	4.1'
880-49106-4	S-4 (0-4')	Solid	09/26/24 14:40	09/27/24 13:45	0-4'
880-49106-5	S-5 (0-4')	Solid	09/26/24 14:45	09/27/24 13:45	0-4'
880-49106-6	S-6 (0-4')	Solid	09/26/24 14:50	09/27/24 13:45	0-4'
880-49106-7	S-7 (0-4')	Solid	09/26/24 14:55	09/27/24 13:45	0-4'
880-49106-8	S-8 (0-4')	Solid	09/26/24 15:00	09/27/24 13:45	0-4'
880-49106-9	S-9 (0-4')	Solid	09/26/24 15:05	09/27/24 13:45	0-4'

eurofins | Environment Testing Xenco

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

880-49106 Chain of Custody

www.xenco.com Page 1

Project Manager:	Cindy Crain	Bill to: (if different)	Chris Gaddy
Company Name:	Crain Environmental	Company Name:	Octane
Address:	2925 E. 17th St.	Address:	310 W. Wall, Ste. 300
City, State ZIP:	Odessa, TX 79761	City, State ZIP:	Midland, TX 79701
Phone:	(575) 441-7244	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:	Chem State #3	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:	IR5
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-1
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	3.2
Total Containers:		Corrected Temperature:	3.1

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 Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: TPH 8015M	BTEX	Chlorides	Sample Comments
S-1 (4.1')	S	9/26/24	1425	4.1'	C	1		X	X	X	
S-2 (4.1')			1430	4.1'							
S-3 (4.1')			1435	4.1'							
S-4 (0-4')			1440	0-4'							
S-5 (0-4')			1445	0-4'							
S-6 (0-4')			1450	0-4'							
S-7 (0-4')			1455	0-4'							
S-8 (0-4')			1500	0-4'							
S-9 (0-4')			1505	0-4'							

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		9/27/24 1345	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Crain Environmental

Job Number: 880-49106-1
SDG Number: Lea Co., NM

Login Number: 49106
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	

Grain Environmental

Appendix B: Photographic Documentation

Appendix B
Chem State #3

View to E of marker and former well pad (10/25/23).

View to S of marker and former well pad (10/25/23).

View to SE of marker and former well pad (10/25/23).

View of sample S-2 collection (3/12/24).

View to NW of excavation (9/26/24).

View to N of excavation (9/26/24).

Grain Environmental

Appendix C: Waste Manifests

GM inc.

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST/DISPOSAL TICKET

Ticket Number
106288
09/17/24 01:56 PM

GENERATOR

Generator: CAMBRIAN MANAGEMENT
Generator Contact:
PO BOX 272
MIDLAND, TX 79702
Phone No.: (432)620-9181

Lease: CHEM CTATE #4
Location: CHEM CTATE #4
Job Contact: CHRIS GADDY
Phone Number: (000)000-0000
Email:

DISPOSAL FACILITY

Site Name/Permit No.: Commercial Landfarm (NM-711-1-0020)
P.O. Box 1658
Roswell, NM 88202
Office (575) 347-0434
Fax (575)347-0435

NORM Readings Taken: No
Reading > 50 micro roentgens: No
Pass the Paint Filter Test: No
Box Number:

WASTE MATERIAL

Material	Quantity	Cell
OCD EXEMPT SOILS	20.00 YDS	LF

TRANSPORTER

Name: PONDEROSA TRUCKING
Address:
Phone No.:

Driver Name:
Truck Number: 1
Phone No.:

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

Peggy A Marley

Driver Signature

C-138

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the Environmental Protection Agency's July 1988 regulatory determination, the above described waste load is:

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. (Gandy Marley, Inc. accepts certifications on a per month only basis.)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261-24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached:

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis

Other (Provide Description Below)

☐ Emergency Non-Oilfield: Emergency non-hazardous, non-oilfied waste that has been ordered by the Department of Public Safety. (The order, documentation of non-hazardous waste determination, and a description of the waste must accompany this form.)

Name | Signature

Kimberly Murphy | Kimberly Murphy

Name | Signature

GM Inc.

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST/DISPOSAL TICKET

Ticket Number
106698
09/26/24 01:05 PM

GENERATOR

Generator: CAMBRIAN MANAGEMENT
Generator Contact:
PO BOX 272
MIDLAND, TX 79702
Phone No.: (432)620-9181

Lease: CHEM STATE #3
Location: CHEM STATE #3
Job Contact: CHRIS GADDY
Phone Number: (000)000-0000
Email:

DISPOSAL FACILITY

Site Name/Permit No.: Commercial Landfarm (NM-711-1-0020)
P.O. Box 1658
Roswell, NM 88202
Office (575) 347-0434
Fax (575)347-0435

NORM Readings Taken: No
Reading > 50 micro roentgens: No
Pass the Paint Filter Test: No
Box Number:

WASTE MATERIAL

Material	Quantity	Cell
OCD EXEMPT SOILS	20.00 YDS	LF

TRANSPORTER

Name: EL PRIMO TRUCKING
Address:
Phone No.:

Driver Name:
Truck Number: 01
Phone No.:

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

Oscar Robles

Driver Signature

C-138

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the Environmental Protection Agency's July 1988 regulatory determination, the above described waste load is:

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. (Gandy Marley, Inc. accepts certifications on a per month only basis.)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261-24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached:

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis

Other (Provide Description Below)

☐ Emergency Non-Oilfield: Emergency non-hazardous, non-oilfied waste that has been ordered by the Department of Public Safety. (The order, documentation of non-hazardous waste determination, and a description of the waste must accompany this form.)

Name Signature

Kimberly Murphy

Kimberly Murphy

Name Signature

GM inc.

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST/DISPOSAL TICKET

Ticket Number
106724
09/26/24 04:00 PM

GENERATOR

Generator: CAMBRIAN MANAGEMENT
Generator Contact:
PO BOX 272
MIDLAND, TX 79702
Phone No.: (432)620-9181

Lease: CHEM STATE #3
Location: CHEM STATE #3
Job Contact: CHRIS GADDY
Phone Number: (000)000-0000
Email:

DISPOSAL FACILITY

Site Name/Permit No.: Commercial Landfarm (NM-711-1-0020)
P.O. Box 1658
Roswell, NM 88202
Office (575) 347-0434
Fax (575)347-0435

NORM Readings Taken: No
Reading > 50 micro roentgens: No
Pass the Paint Filter Test: No
Box Number:

WASTE MATERIAL

Material	Quantity	Cell
OCD EXEMPT SOILS	20.00 YDS	LF

TRANSPORTER

Name: EL PRIMO TRUCKING
Address:
Phone No.:

Driver Name:
Truck Number: 01
Phone No.:

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

Driver Signature

C-138

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the Environmental Protection Agency's July 1988 regulatory determination, the above described waste load is:

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. (Gandy Marley, Inc. accepts certifications on a per month only basis.)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261-24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached:

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis

Other (Provide Description Below)

☐ Emergency Non-Oilfield: Emergency non-hazardous, non-oilfied waste that has been ordered by the Department of Public Safety. (The order, documentation of non-hazardous waste determination, and a description of the waste must accompany this form.)

Name Signature

Kimberly Murphy

Name Signature

GM inc.

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST/DISPOSAL TICKET

Ticket Number 106683
09/26/24 10:18 AM

GENERATOR

Generator: CAMBRIAN MANAGEMENT
Generator Contact:
PO BOX 272
MIDLAND, TX 79702
Phone No.: (432)620-9181

Lease: CHEM STATE #3
Location: CHEM STATE #3
Job Contact: CHRIS GADDY
Phone Number: (000)000-0000
Email:

DISPOSAL FACILITY

Site Name/Permit No.: Commercial Landfarm (NM-711-1-0020)
P.O. Box 1658
Roswell, NM 88202
Office (575) 347-0434
Fax (575)347-0435

NORM Readings Taken: No
Reading > 50 micro roentgens: No
Pass the Paint Filter Test: No
Box Number:

WASTE MATERIAL

Material	Quantity	Cell
OCD EXEMPT SOILS	20.00 YDS	LF

TRANSPORTER

Name: EL PRIMO TRUCKING
Address:
Phone No.:

Driver Name:
Truck Number: 01
Phone No.:

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

Driver Signature

C-138

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the Environmental Protection Agency's July 1988 regulatory determination, the above described waste load is:

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. (Gandy Marley, Inc. accepts certifications on a per month only basis.)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261-24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached:

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis

Other (Provide Description Below)

☐ Emergency Non-Oilfield: Emergency non-hazardous, non-oilfied waste that has been ordered by the Department of Public Safety. (The order, documentation of non-hazardous waste determination, and a description of the waste must accompany this form.)

Name Signature

Kimberly Murphy

Name Signature

GM inc.

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST / DISPOSAL TICKET

71883

GENERATOR

Generator Name _____

Address _____

_____

City, State, Zip _____

Phone No. _____

Company Man _____

Location of Origin
Lease/Well _____

Name & No. _____

County _____

API No. _____

Rig Name & No. _____

AFE/PO No. _____

TRUCK TIME STAMP

IN: _____ OUT: _____

DISPOSAL FACILITY

RECEIVING AREA

Name/No. Landfill

Site Name / Permit No. **Commercial Landfill (NM-01-0019)**

Address **P.O. Box 1658 Roswell, NM 88202**

Phone No. 575-347-0434

NORM Readings Taken? (Circle One) YES NO

If YES, was reading > 50 micro roentgens? (Circle One) YES NO

Pass the Paint Filter Test? (Circle One) YES NO

TRANSPORTER

Transporter's Name _____

Address _____

_____

Phone No. _____

Print Name _____

Truck No. _____

Bin No. _____

Phone No. _____

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

_____ SHIPMENT DATE

_____ DRIVER'S SIGNATURE

_____ DELIVERY DATE

_____ DRIVER'S SIGNATURE

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

Oil Based Muds	_____	Completion Fluid/Flowback	_____	OTHER EXEMPT WASTE	
Oil Based Cuttings	_____	Produced Water (Non-Injectable)	_____		
Water Based Muds	_____	Gathering Line Water/Waste	_____		
Water Based Cuttings	_____	Cement Water	_____		
Produced Formation Solids	_____	Truck Washout /Jet Out	_____	OTHER NON-EXEMPT WASTE	
Tank Bottoms	_____	Trash & Debris	_____		
E&P Contaminated Soil	_____				
Gas Plant Waste	_____				

WASTE GENERATION PROCESS: ❑ Drilling ❑ Completion ❑ Production ❑ Gathering Lines

Non-Exempt E&P Waste/Service Identification and Amount

(All non-exempt E&P waste must be analyzed and be below the threshold limits for toxicity (TCLP), ignition, corrosiveness, and reactivity.)

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

QUANTITY: _____ B - Barrels _____ L - Liquid _____ Y - Yards _____ E - Each

C-138

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste load is (Check the appropriate classification)

❑ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. (Gandy Marley, Inc. accepts certifications on a per month only basis.)

❑ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided.)

❑ MSDS Information ❑ RCRA Hazardous Waste Analysis ❑ Other (Provide Description Below)

_____

❑ EMERGENCY NON-OILFIELD: Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety. (The order, documentation of non-hazardous waste determination and a description of the waste must accompany this form.)

_____ (PRINT) AUTHORIZED AGENTS SIGNATURE

_____ DATE

_____ SIGNATURE

GM inc.

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST/DISPOSAL TICKET

Ticket Number
106753
09/27/24 01:07 PM

GENERATOR

Generator: CAMBRIAN MANAGEMENT
Generator Contact:
PO BOX 272
MIDLAND, TX 79702
Phone No.: (432)620-9181

Lease: CHEM STATE #3
Location: CHEM STATE #3
Job Contact: CHRIS GADDY
Phone Number: (000)000-0000
Email:

DISPOSAL FACILITY

Site Name/Permit No.: Commercial Landfarm (NM-711-1-0020)
P.O. Box 1658
Roswell, NM 88202
Office (575) 347-0434
Fax (575)347-0435

NORM Readings Taken: No
Reading > 50 micro roentgens: No
Pass the Paint Filter Test: No
Box Number:

WASTE MATERIAL

Material	Quantity	Cell
OCD EXEMPT SOILS	20.00 YDS	LF

TRANSPORTER

Name: EL PRIMO TRUCKING
Address:
Phone No.:

Driver Name:
Truck Number: 01
Phone No.:

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

Oscar A Rodriguez

Driver Signature

C-138

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the Environmental Protection Agency's July 1988 regulatory determination, the above described waste load is:

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. (Gandy Marley, Inc. accepts certifications on a per month only basis.)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261-24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached:

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis

Other (Provide Description Below)

☐ Emergency Non-Oilfield: Emergency non-hazardous, non-oilfied waste that has been ordered by the Department of Public Safety. (The order, documentation of non-hazardous waste determination, and a description of the waste must accompany this form.)

Name	Signature
Kimberly Murphy	Kimberly Murphy
Name	Signature

GML inc.

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST/DISPOSAL TICKET

Ticket Number
106742
09/27/24 09:55 AM

GENERATOR

Generator: CAMBRIAN MANAGEMENT
Generator Contact:
PO BOX 272
MIDLAND, TX 79702
Phone No.: (432)620-9181

Lease: CHEM STATE #3
Location: CHEM STATE #3
Job Contact: CHRIS GADDY
Phone Number: (000)000-0000
Email:

DISPOSAL FACILITY

Site Name/Permit No.: Commercial Landfarm (NM-711-1-0020)
P.O. Box 1658
Roswell, NM 88202
Office (575) 347-0434
Fax (575)347-0435

NORM Readings Taken: No
Reading > 50 micro roentgens: No
Pass the Paint Filter Test: No
Box Number:

WASTE MATERIAL

Material	Quantity	Cell
OCD EXEMPT SOILS	20.00 YDS	LF

TRANSPORTER

Name: EL PRIMO TRUCKING
Address:
Phone No.:

Driver Name:
Truck Number: 01
Phone No.:

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

Oscar A Morales

Driver Signature

C-138

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the Environmental Protection Agency's July 1988 regulatory determination, the above described waste load is:

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☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261-24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached:

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis

Other (Provide Description Below)

☐ Emergency Non-Oilfield: Emergency non-hazardous, non-oilfied waste that has been ordered by the Department of Public Safety. (The order, documentation of non-hazardous waste determination, and a description of the waste must accompany this form.)

Name | Signature

Kimberly Murphy | Kimberly Murphy

Name | Signature

GM inc.

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST / DISPOSAL TICKET

71886

GENERATOR

Generator Name _____

Address _____

_____

City, State, Zip _____

Phone No. _____

Company Man _____

Location of Origin
Lease/Well _____

Name & No. _____

County _____

API No. _____

Rig Name & No. _____

AFE/PO No. _____

TRUCK TIME STAMP

IN: _____ OUT: _____

DISPOSAL FACILITY

RECEIVING AREA

Name/No. Landfill

Site Name / Permit No. **Commercial Landfill (NM-01-0019)**

Phone No. **575-347-0434**

Address **P.O. Box 1658 Roswell, NM 88202**

NORM Readings Taken? (Circle One) YES NO

If YES, was reading > 50 micro roentgens? (Circle One) YES NO

Pass the Paint Filter Test? (Circle One) YES NO

TRANSPORTER

Transporter's Name _____

Address _____

_____

Phone No. _____

Print Name _____

Truck No. _____

Bin No. _____

Phone No. _____

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

_____ SHIPMENT DATE

_____ DRIVER'S SIGNATURE

9/27/24 DELIVERY DATE

_____ DRIVER'S SIGNATURE

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

Oil Based Muds		Completion Fluid/Flowback		OTHER EXEMPT WASTE	
Oil Based Cuttings		Produced Water (Non-Injectable)			
Water Based Muds		Gathering Line Water/Waste			
Water Based Cuttings		Cement Water			
Produced Formation Solids		Truck Washout /Jet Out		OTHER NON-EXEMPT WASTE	
Tank Bottoms		Trash & Debris			
E&P Contaminated Soil					
Gas Plant Waste					

WASTE GENERATION PROCESS: ❑ Drilling ❑ Completion ❑ Production ❑ Gathering Lines

Non-Exempt E&P Waste/Service Identification and Amount

(All non-exempt E&P waste must be analyzed and be below the threshold limits for toxicity (TCLP), ignition, corrosiveness, and reactivity.)

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

QUANTITY: _____ B - Barrels _____ L - Liquid 30 Y - Yards _____ E - Each

C-138

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste load is (Check the appropriate classification)

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❑ MSDS Information ❑ RCRA Hazardous Waste Analysis ❑ Other (Provide Description Below)

_____

❑ EMERGENCY NON-OILFIELD: Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety. (The order, documentation of non-hazardous waste determination and a description of the waste must accompany this form.)

_____ (PRINT) AUTHORIZED AGENTS SIGNATURE

_____ DATE

_____ SIGNATURE

GM inc.

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST / DISPOSAL TICKET

71896

GENERATOR

Generator Name _____

Address _____

_____

City, State, Zip _____

Phone No. _____

Company Man _____

Location of Origin
Lease/Well _____

Name & No. _____

County _____

API No. _____

Rig Name & No. _____

AFE/PO No. _____

TRUCK TIME STAMP

IN: _____ OUT: _____

DISPOSAL FACILITY

RECEIVING AREA

Name/No. Landfill

Site Name / Permit No. **Commercial Landfill (NM-01-0019)**

Phone No. 575-347-0434

Address **P.O. Box 1658 Roswell, NM 88202**

NORM Readings Taken? (Circle One) YES NO

If YES, was reading > 50 micro roentgens? (Circle One) YES NO

Pass the Paint Filter Test? (Circle One) YES NO

TRANSPORTER

Transporter's Name _____

Address _____

_____

Phone No. _____

Print Name _____

Truck No. _____

Bin No. _____

Phone No. _____

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

_____ SHIPMENT DATE

_____ DRIVER'S SIGNATURE

_____ DELIVERY DATE

_____ DRIVER'S SIGNATURE

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

Oil Based Muds	_____	Completion Fluid/Flowback	_____	OTHER EXEMPT WASTE	
Oil Based Cuttings	_____	Produced Water (Non-Injectable)	_____		
Water Based Muds	_____	Gathering Line Water/Waste	_____		
Water Based Cuttings	_____	Cement Water	_____		
Produced Formation Solids	_____	Truck Washout /Jet Out	_____	OTHER NON-EXEMPT WASTE	
Tank Bottoms	_____	Trash & Debris	_____		
E&P Contaminated Soil	2				
Gas Plant Waste	_____				

WASTE GENERATION PROCESS: ❑ Drilling ❑ Completion ❑ Production ❑ Gathering Lines

Non-Exempt E&P Waste/Service Identification and Amount

(All non-exempt E&P waste must be analyzed and be below the threshold limits for toxicity (TCLP), ignition, corrosiveness, and reactivity.)

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

QUANTITY: _____ B - Barrels _____ L - Liquid 2 Y - Yards _____ E - Each

C-138

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste load is (Check the appropriate classification)

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_____

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_____ (PRINT) AUTHORIZED AGENTS SIGNATURE

_____ DATE

_____ SIGNATURE

GMI

GM inc.

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST / DISPOSAL TICKET

71902

GENERATOR

Generator Name _____

Address _____

_____

City, State, Zip _____

Phone No. _____

Company Man _____

Location of Origin
Lease/Well _____

Name & No. _____

County _____

API No. _____

Rig Name & No. _____

AFE/PO No. _____

TRUCK TIME STAMP

IN: _____ OUT: _____

DISPOSAL FACILITY

RECEIVING AREA

Name/No. Landfill

Site Name / Permit No. **Commercial Landfill (NM-01-0019)**

Phone No. **575-347-0434**

Address **P.O. Box 1658 Roswell, NM 88202**

NORM Readings Taken? (Circle One) YES NO

If YES, was reading > 50 micro roentgens? (Circle One) YES NO

Pass the Paint Filter Test? (Circle One) YES NO

TRANSPORTER

Transporter's Name _____

Address _____

_____

Phone No. _____

Print Name _____

Truck No. _____

Bin No. _____

Phone No. _____

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

_____ SHIPMENT DATE

_____ DRIVER'S SIGNATURE

_____ DELIVERY DATE

_____ DRIVER'S SIGNATURE

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

Oil Based Muds	_____	Completion Fluid/Flowback	_____	OTHER EXEMPT WASTE	
Oil Based Cuttings	_____	Produced Water (Non-Injectable)	_____		
Water Based Muds	_____	Gathering Line Water/Waste	_____		
Water Based Cuttings	_____	Cement Water	_____		
Produced Formation Solids	_____	Truck Washout /Jet Out	_____	OTHER NON-EXEMPT WASTE	
Tank Bottoms	_____	Trash & Debris	_____		
E&P Contaminated Soil	_____				
Gas Plant Waste	_____				

WASTE GENERATION PROCESS: ❑ Drilling ❑ Completion ❑ Production ❑ Gathering Lines

Non-Exempt E&P Waste/Service Identification and Amount

(All non-exempt E&P waste must be analyzed and be below the threshold limits for toxicity (TCLP), ignition, corrosiveness, and reactivity.)

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

QUANTITY: _____ B - Barrels _____ L - Liquid _____ Y - Yards _____ E - Each

C-138

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_____

❑ EMERGENCY NON-OILFIELD: Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety. (The order, documentation of non-hazardous waste determination and a description of the waste must accompany this form.)

_____ (PRINT) AUTHORIZED AGENTS SIGNATURE

_____ DATE

_____ SIGNATURE

_____ NAME (PRINT)

_____ DATE

GMI

TITLE

_____ SIGNATURE

SUPERIOR PRINTING SERVICE, INC.

GM inc.

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST/DISPOSAL TICKET

Ticket Number
106309
09/17/24 04:54 PM

GENERATOR

Generator: CAMBRIAN MANAGEMENT
Generator Contact:
PO BOX 272
MIDLAND, TX 79702
Phone No.: (432)620-9181

Lease: CHEM CTATE #4
Location: CHEM CTATE #4
Job Contact: CHRIS GADDY
Phone Number: (000)000-0000
Email:

DISPOSAL FACILITY

Site Name/Permit No.: Commercial Landfarm (NM-711-1-0020)
P.O. Box 1658
Roswell, NM 88202
Office (575) 347-0434
Fax (575)347-0435

NORM Readings Taken: No
Reading > 50 micro roentgens: No
Pass the Paint Filter Test: No
Box Number:

WASTE MATERIAL

Material	Quantity	Cell
OCD EXEMPT SOILS	20.00 YDS	LF

TRANSPORTER

Name: PONDEROSA TRUCKING
Address:
Phone No.:

Driver Name:
Truck Number: 1
Phone No.:

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

Oscar A Morales

Driver Signature

C-138

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the Environmental Protection Agency's July 1988 regulatory determination, the above described waste load is:

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☐ MSDS Information ☐ RCRA Hazardous Waste Analysis

Other (Provide Description Below)

☐ Emergency Non-Oilfield: Emergency non-hazardous, non-oilfied waste that has been ordered by the Department of Public Safety. (The order, documentation of non-hazardous waste determination, and a description of the waste must accompany this form.)

Name Signature

Kimberly Murphy

Kimberly Murphy

Name Signature

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS

Operator: CAMBRIAN MANAGEMENT LTD 310 W Wall Street Ste 300 Midland, TX 79701	OGRID: 198688
	Action Number: 408499
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nDEV5072**
Incident Name	**NDEV5072 CHEM STATE #003 @ 30-025-22747**
Incident Type	**Other**
Incident Status	**Remediation Closure Report Received**
Incident Well	**[30-025-22747] CHEM STATE #003**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	Chem State #003
Date Release Discovered	02/22/1999
Surface Owner	State

Incident Details	
Please answer all the questions in this group.	
Incident Type	Other
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	*Not answered.*
Produced Water Released (bbls) Details	Cause: Corrosion | Flow Line - Production | Produced Water | Released: 25 BBL | Recovered: 0 BBL | Lost: 25 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	Cause: Corrosion | Flow Line - Production | Produced Water | Released: 25 BBL | Recovered: 0 BBL | Lost: 25 BBL.
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.*

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

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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: CAMBRIAN MANAGEMENT LTD 310 W Wall Street Ste 300 Midland, TX 79701	OGRID: 198688
	Action Number: 408499
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

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: Socorro Hendry Title: Regulatory Manager Email: socorro.hendry@octane-energy.com Date: 12/04/2024

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
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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: CAMBRIAN MANAGEMENT LTD 310 W Wall Street Ste 300 Midland, TX 79701	OGRID: 198688
	Action Number: 408499
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

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 26 and 50 (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	Between 1000 (ft.) and ½ (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1000 (ft.) and ½ (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 1000 (ft.) and ½ (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 500 and 1000 (ft.)
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	Low
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

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)	1690
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	237
GRO+DRO (EPA SW-846 Method 8015M)	70
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	09/09/2024
On what date will (or did) the final sampling or liner inspection occur	09/26/2024
On what date will (or was) the remediation complete(d)	09/28/2024
What is the estimated surface area (in square feet) that will be reclaimed	1150
What is the estimated volume (in cubic yards) that will be reclaimed	180
What is the estimated surface area (in square feet) that will be remediated	1150
What is the estimated volume (in cubic yards) that will be remediated	180
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.	

Sante Fe Main Office
Phone: (505) 476-3441

General Information
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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: CAMBRIAN MANAGEMENT LTD 310 W Wall Street Ste 300 Midland, TX 79701	OGRID: 198688
	Action Number: 408499
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

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-55-95 [fAB0000000061]
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: Socorro Hendry Title: Regulatory Manager Email: socorro.hendry@octane-energy.com Date: 12/04/2024
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.	

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

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QUESTIONS (continued)

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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

Sampling Event Information	
Last sampling notification (C-141N) recorded	**385829**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**09/26/2024**
What was the (estimated) number of samples that were to be gathered	**8**
What was the sampling surface area in square feet	**1600**

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	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Was this release entirely contained within a lined containment area	**No**
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	1150
What was the total volume (cubic yards) remediated	180
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	1150
What was the total volume (in cubic yards) reclaimed	180
Summarize any additional remediation activities not included by answers (above)	The excavation will be backfilled upon OCD approval of this Report. The surface area 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.

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 (in .pdf format) 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.

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.

I hereby agree and sign off to the above statement	Name: Socorro Hendry Title: Regulatory Manager Email: socorro.hendry@octane-energy.com Date: 12/04/2024

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QUESTIONS (continued)

Operator:	OGRID:
CAMBRIAN MANAGEMENT LTD 310 W Wall Street Ste 300 Midland, TX 79701	198688
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QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

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CONDITIONS

Created By	Condition	Condition Date
amaxwell	Remediation closure approved.	12/17/2024
amaxwell	The reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. The OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	12/17/2024