.

Revised Site Characterization Report and Remediation Workplan

September 15, 2024

Anderson Ranch Unit #017H Crude Oil and Produced Water Release

Incident #: nAPP2321553613

Prepared For:

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1.0 Introduction

Crain Environmental (CE), on behalf of Grand Banks Energy Company (GBE), has prepared this Revised *Site Characterization Report and Remediation Workplan* for the crude oil and produced water release at Anderson Ranch Unit #017H (Site), located approximately 25 miles west of Lovington, in Lea County, New Mexico. The global positioning system (GPS) coordinates for the Site are 32.9489174, -103.7349548. The property surface rights are owned by the State of New Mexico. The location of the Release Site is depicted on Figure 1.

2.0 Background

On August 1, 2023, a fire occurred at the tank battery, causing a release of crude oil and produced water from the storage tanks. The New Mexico Oil Conservation Division (NMOCD) was immediately informed of the release.

An initial Release Notification Report (C-141) was received by the NMOCD on August 18, 2023, and the Site was assigned Incident # nAPP2321553613. It was estimated that approximately 46 barrels (bbls) of crude oil and 979 bbls of produced water were released, and 500 bbls of produced water was recovered by vacuum truck. The release was mainly contained within the firewall of the tank battery and covered a surface area of approximately 11,400 square feet. The surface extent of the crude oil and produced water release are depicted on Figure 2. A copy of the C-141 is provided in Appendix A.

A *Site Characterization Report and Remediation Workplan* (Workplan) was submitted to the NMOCD on November 15, 2023, and was denied on March 6, 2024, with the following comments:

1. The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater.
2. Release has not been fully delineated.
3. According to NMOCD Environmental Map, the release encroached within a wetland area located north of the well pad.
4. Please provide an accurate floodplain map. Map furnished is illegible.
5. Due to the proximity of the wetland area, the use of microblaze chemical treatment is denied.
6. Variance request to increase sampling frequency from 200 to 900 square feet is denied. The maximum amount allowed is 400-500 square feet per one (1) 5-point composite sample showing that depth to water is at least >50 feet below grade and that no other siting is adversely affected.
7. All reclamation activities should adhere to 19.15.29.13 NMAC. Per 19.15.29.13D NMAC, Reclamation of areas no longer in use. The responsible party shall reclaim all areas disturbed by the remediation and closure, except areas reasonable needed for production operations or for subsequent drilling operations, as early and as nearly as practical to their original condition or their final land use and maintain those areas to control dust and minimize erosion to the extent practical.
8. Grand Banks Energy has until June 4, 2024, to submit to OCD a revised site characterization/remediation plan or final remediation closure report.

On April 17, 2024, CE reached out to NMOCD to schedule a call to discuss the comments. On April 24, 2024, CE was advised that the Workplan would be approved for the use of MicroBlaze if depth to groundwater could be confirmed to be greater than 50' below ground surface (bgs), and a description of the area north of the tank battery (referred to as a "playa lake") was provided. That information was provided to the NMOCD in an email on April 24, 2024. In a phone call with the NMOCD on May 16, 2024, CE was also advised that soil samples between the tank battery and the "playa lake" showing that the release had not affected the "playa" would also be required before the remediation using MicroBlaze would be approved. Those samples were collected on May 20, 2024, and laboratory results were received on June 3, 2024. On July 15, 2024, CE again reached out to NMOCD and discussed ex-situ treatment of the soil with MicroBlaze.

On August 13, 2024, CE and the New Mexico State Land Office (SLO) Environmental Compliance Office (ECO) held a conference call to discuss soil remediation using MicroBlaze, and the variance to the set back of the the "playa lake".

This *Revised Site Characterization Report and Remediation Workplan* (Workplan) provides all information requested by the NMOCD in their denial of March 6, 2024, and in subsequent conversations, and all information requested by the ECO in the August 13, 2024, conference call. The Workplan revises the proposed remediation to include ex-situ treatment with MicroBlaze, eliminates the variance to the set back of the "playa lake", eliminates the variance to the confirmation sampling frequency, and adds details of the construction of the soil treatment area and the collection of confirmation samples from the treatment area before and after soil treatment.

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 three water wells located within 0.5 mile of the Site that provide an initial depth to groundwater, and one water well that did not provide an initial depth to groundwater. Depth to groundwater in the three wells within a 0.5-mile radius of the Site ranged from 250 to 275 feet below ground surface (bgs), with depth to groundwater in the nearest well (L 02467 – drilled in 1954) initially recorded at 275 feet bgs. The most recent well to be installed (L 08241) was drilled approximately 1,665 feet southeast of the Site in 1980, and an initial depth to water was not recorded. A review of the United State Geological Survey (USGS) water well records indicated there was one water well located within 0.5 miles of the Site that provided depth to groundwater information until 2006.

All wells located within a 0.5-mile from the Site, with depth to groundwater information provided, are listed in the table below, and the location of all wells is provided on Figure 3. Based on the water well data available in NMOSE records, it is estimated that depth to groundwater at the Site is greater than 100 feet bgs. A copy of the USGS well information is provided in Appendix B.

Nearby Water Wells

Well ID	Location from Release Site	Year Installed	Use	Well Depth and Depth to Water (feet bgs)
L 02467	Approx. 325’ to the northeast	1954	N/A	328 / 275
L 02617	Approx. 1,745’ to the southeast	1954	N/A	322 / 270
L 03631	Approx. 2,490’ to the northeast	1957	N/A	315 / 250
L 08241	Approx. 1,665’ to the southeast	1980	N/A	316 / NA
USGS Well 325650103435601	Approx. 1,041’ to the southeast	1961 – monitored until 2006	N/A	2/16/2006 – Depth to water = 213.20

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 Figures 1, the Site is **not** located:

- Within 300 feet of any continuously flowing watercourse or any other significant watercourse.
  - The topographic map (Figure 1) shows a “playa lake” within 200 feet of the Site.
- Within 300 feet from an occupied permanent residence, school, hospital, institution or church.
  - The Site Location Map (Figure 1) and information available from the Lea County, New Mexico Central Appraisal District do not show or list any permanent residence, school, hospital, institution, or church located within 300 feet of the Site.

- Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes.
    - No wells or springs located within 500 feet of the Site appear in any of the NMOSE records reviewed by CE.
- Within 1,000 feet of any fresh water well or spring.
    - No freshwater wells or springs located within 1,000 feet of the Site appear in any of the records reviewed by CE.
- Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended.
    - Based on the property and other records review by CE, the Site is not located in incorporated municipal boundaries or within a defined municipal fresh water well field.
- Within the area overlying a subsurface mine
    - Based on the property and other records reviewed by CE, the Site is not located within an area overlying a subsurface mine.

3.3 Wetlands, Floodplain, and Karst Geology

A review of the United States Fish and Wildlife Service (USFWS) wetlands map (Figure 4) indicated the Site is not located within 200 feet of a wetland. The New Mexico Bureau of Land Management (BLM) karst potential map indicates the Site is located within a “low karst potential” area. Figure 5 depicts the karst potential data.

A review of the Federal Emergency Management Act (FEMA) floodplain map indicates the release is in an unmapped area (Figure 6); however, the topographic map (Figure 1) and the National Wetlands Inventory Map (Figure 7) shows the site to be within 200’ of a playa lake.

Documentation of the playa lake conditions, and soil sample results collected between the release area and the playa are provided in Section 5.1 of this Workplan. A request for a variance toward the setback of the playa lake (per 19.15.29.12(c)(4a) (II) has been eliminated at the request of the ECO.

3.4 Closure Criteria Currently Assumed Applicable to the Site

At the request of the ECO, the Closure Criteria applicable to the Site will be based on the distance to the “playa lake”, which dictates the most stringent regulatory guidelines typically associated with groundwater depths of less than 50 feet bgs. A summary of the Closure Criteria is provided in the table below.

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, depth to groundwater at the Site is greater than 100 feet bgs. During investigation activities, a maximum depth of 10 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. Four water wells that provide depth to groundwater data are located within 0.5 mile of the Site. A “playa lake” is located within 200 feet 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 September 2023 Remediation and Analytical Results

On August 1, 2023, 500 bbls of fluid was removed from the site by vacuum truck and hauled to an NMOCD approved disposal facility.

From September 19, through September 27, 2023, storage tanks and equipment were dismantled and hauled to Gandy Marley, Inc. (GMI) disposal facility. Additionally, the liner was removed from the tank battery, and saturated soil was excavated and removed. A total of 27 loads of metal, debris, and soil was hauled to GMI for disposal.

On September 29, 2023, a backhoe was used to excavate five test holes (TH-1 through TH-5). Test holes TH-1 and TH-2 were dug within the tank battery area, at depths ranging from 9 feet (') (TH-2) to 10' bgs (TH-1). Soil samples were collected at the surface, and at depths of 5' bgs, and the total depth of the hole (i.e., 10' bgs at TH-1 and 9' bgs at TH-2). Test hole TH-3 was installed north of the tank battery, to a depth of 5' bgs. Soil samples were collected at the surface, and at depths of 3' and 5' bgs. As GBE had originally planned to plug and abandon (P&A) the Anderson Ranch Unit #017H well, test holes TH-4 and TH-5 were installed on the well pad to the east (TH-4) and west (TH-5) of the well. Soil samples were collected from TH-4 at surface and 5' bgs, and samples were collected from TH-5 at surface and 2.5' bgs. GBE has since decided not to P&A this well.

All soil samples were placed in clean glass sample jars, properly labeled, immediately placed on ice and hand delivered to Eurofins Environment Testing (Eurofins) in Midland, Texas under proper chain-of-custody control. All samples were analyzed for total petroleum hydrocarbons (TPH) by Environmental Protection Agency (EPA) SW-846 Method 8015 Modified, for benzene, toluene, ethylbenzene and xylenes (collectively referred to as BTEX) by EPA SW-846 Method 8021B, and for chlorides by EPA Method SM-4500Cl-B.

Table 1 provides a summary of the laboratory results, and sample locations with TPH, BTEX, and chloride concentrations are provided on Figure 2. Photographs of the release area are provided in Appendix C. The laboratory report and chain-of-custody documentation is provided in Appendix D.

Referring to Table 1, concentrations of BTEX were reported below the test method detection limits and/or Closure Criteria in all samples. Concentrations of TPH exceeded the Closure Criteria at sample points TH-1 at a depth of 0-6" bgs (1,420 mg/kg), TH-2 at a depth of 0-6" (3,770 mg/kg), TH-3 at depths of 0-6" bgs (103 mg/kg) and 3' bgs (1,430 mg/kg), and TH-4 at depths of 0-6" bgs (5,320 mg/kg) and 5' bgs (2,540 mg/kg total Gasoline Range Organics [GRO] and Diesel Range Organics [DRO]). Chloride concentrations exceeded the Closure Criteria in the surface samples (0-6") of TH-1 (2,990 mg/kg), TH-2 (2,710 mg/kg), and TH-4 (735 mg/kg).

Vertical delineation of TPH and chloride concentrations was achieved at test holes TH-1, TH-2, TH-3, and TH-5. Vertical delineation of Total TPH (GRO+DRO) remained above the Closure Criteria at the total depth of 5' bgs at test hole TH-4 (2,540 mg/kg).

On May 20, 2024, two test holes (TH-7 and TH-8) were installed between the release area and the "playa lake" (as shown on Figure 2) to provide documentation that the playa was not affected by the release. Soil samples were collected at depths of 1', 2', 3', and 4' bgs at each location, were properly collected, stored on ice, and hand delivered to Eurofins for analysis of TPH, BTEX, and chlorides. Referring to Table 1, concentrations of TPH, BTEX, and chlorides were reported below the NMOCD Closure Criteria in each sample. Photographs are provided in Appendix C. The laboratory report and chain-of-custody documentation is provided in Appendix D.

Soils with TPH and chloride exceedances will be addressed in accordance with the Remediation Workplan discussed in Section 5.0.

4.6 Laboratory Analytical Data Quality Assurance/Quality Control Results

Data in the laboratory reports dated October 11, 2023, and May 24, 2024, generated by Eurofins in Midland, Texas, was reviewed to ensure that reported analytical results met data quality objectives. It was determined by quality control data associated with analytical results that reported concentrations of target analytes are defensible and that measurement data reliability is within the expected limits of sampling and analytical error. All analytical results are usable for characterization of soil at the Site. The laboratory analytical results are provided as Appendix D.

5.0 Proposed Remediation Workplan

5.1 Proposed Remediation Activities

Benzene and BTEX concentrations were reported below the test method detection limits and/or Closure Criteria in all samples. Concentrations of TPH exceeded the Closure Criteria at sample points TH-1 at a depth of 0-6" bgs (1,420 mg/kg), TH-2 at a depth of 0-6" (3,770 mg/kg), TH-3 at depths of 0-6" bgs (103 mg/kg) and 3' bgs (1,430 mg/kg), and TH-4 at depths of 0-6" bgs (5,320 mg/kg) and 5' bgs (2,540 mg/kg total Gasoline Range Organics [GRO] and Diesel Range Organics [DRO]). Chloride concentrations exceeded the Closure Criteria in the surface samples (0-6") of TH-1 (2,990 mg/kg), TH-2 (2,710 mg/kg), and TH-4 (735 mg/kg).

Vertical delineation of TPH and chloride concentrations was achieved at test holes TH-1, TH-2, TH-3, and TH-5. Vertical delineation of Total TPH (GRO+DRO) remained above the Closure Criteria at the total depth of 5' bgs at test hole TH-4 (2,540 mg/kg). GBE proposes to excavate the upper 1 foot of soil from the affected areas (approximately 520 cy) and haul the soil to disposal at GMI.

The remaining affected soil will be excavated and stockpiled on the southern portion of the well pad and will be treated by tilling and Microblaze application until TPH and chloride concentrations are reported below the Closure Criteria. It is estimated that a total of approximately 2,000 cubic yards (cy) of soil will be either excavated and hauled to an NMOCD approved disposal facility or treated with Microblaze. Figure 2 indicates the areas of proposed remediation.

Prior to placement of soil in the treatment area, 10 discrete soil samples will be collected throughout the area at a depth of 0-6" bgs to determine baseline soil concentrations. As initial BTEX concentrations were below the test method detection limit, each sample will be delivered to Eurofins for analysis of TPH and chlorides. Berms will be constructed on the north and east sides of the treatment area to ensure that treatment fluids are not introduced to the "playa lake". Figure 8 indicates the area proposed for soil treatment and shows the sample locations.

Following sample collection at the treatment area, all impacted soil will be excavated from the release area, moved to the treatment area, and spread to a depth of approximately 18". One gallon of MicroBlaze will be used to remediate each approximately 10 cubic yards of soil and will be mixed at a ratio of 1-gallon MicroBlaze to 10 gallons of fresh water. Fresh water will be added to the treatment area as necessary to keep the MicroBlaze moist during remediation activities.

Following excavation of impacted soil, samples will be collected from the base and sidewalls of the excavation (at a rate of 1 sample per 200 square feet) and delivered to Eurofins for analysis of TPH and chlorides. Excavation will continue if TPH and/or chloride concentrations are reported above the Closure Criteria. As initial BTEX concentrations were below the test method detection limits and/or Closure Criteria, each confirmation sample will be analyzed only for TPH and chlorides. Pursuant to 19.15.29.12(D) NMAC, confirmation samples will consist of five-point composite samples, and discrete grab samples will be collected from any wet or discolored areas.

Following ex situ soil treatment, samples will be collected from the treated soil at a rate of 1 sample per 100 cy of soil. All samples will be analyzed for TPH and chlorides. Treatment will continue until all TPH and chloride concentrations are reported below the Closure Criteria. Upon receipt of laboratory results that all TPH and chloride concentrations are below the Closure Criteria, the excavation will be backfilled to grade with the treated soil. 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.

Upon removal of all treated soil from the treatment area, 10 discrete soil samples will be collected throughout the area at a depth of 0-6” bgs to ensure that the well pad was not affected by soil treatment. As initial BTEX concentrations were below the test method detection limit, each sample will be delivered to Eurofins for analysis of TPH and chlorides. Figure 8 shows the sample locations.

5.2 Proposed Reclamation Activities

AS GBE no longer desires to P&A the well, caliche will not be removed from the well pad and access road at this time. Upon completion of remediation, any areas that were disturbed north of the well pad will be cross ripped to a minimum of 18 inches (unless caliche is encountered at a shallower depth) with a furrow spacing of 2 feet, following backfill of any excavation.

Seeding will be conducted within 2 weeks following completion of final seedbed preparation. According to the United States Department of Agriculture (USDA) Web Soil Survey, soil at the Anderson Ranch #17H is classified as (KO) Kimbrough, gravelly loam, dry, 0-3% slopes. The Revegetation Plan therefore requires the Coarse (CS) NMSLO Seed Mix. Following surface grading and contouring, any disturbed areas off the well pad will be re-seeded by seed drill method using the (CS) NMSLO Seed Mix (planted in the amount specified in the pounds live seed (PLS) per acre), and fresh water will be applied for two consecutive weeks following re-seeding. Reclamation activities will be documented with photographs.

5.3 Reclamation Monitoring

Any seeded areas will be monitored for vegetation growth to ensure that the reclamation activities performed were sufficient. Annual inspections (at a minimum) will take place until revegetation is consistent with local natural vegetation density. Upon completion of revegetation, a copy of the C-103 submitted to the NMOCD will also be submitted to the New Mexico State Land Office Environmental Compliance Office (ECO) for final inspection and release.

5.4 Schedule of Reclamation Implementation

Site reclamation activities will begin within two weeks of completion of remediation activities, or within the next favorable growing season.

6.0 Proposed Remediation Schedule

GBE requests a remediation schedule of 180 days from the date of NMOCD approval of this Remediation Workplan to complete the proposed remediation and reclamation activities and submit a *Remediation Summary and Closure Report* for NMOCD approval, pending the results of the confirmation samples. If additional treatment is required, a time extension may be requested. The closure report will summarize remedial activities and confirmation sampling results and will include the final Form C-141.

7.0 Distribution

Copy 1: Mike Bratcher
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Oil Conservation Division, District 2
Via Email: mike.bratcher@emnrd.nm.gov

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TABLE

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
GRAND BANKS ENERGY COMPANY
ANDERSON RANCH UNIT #017H
Incident # nAPP2321553613

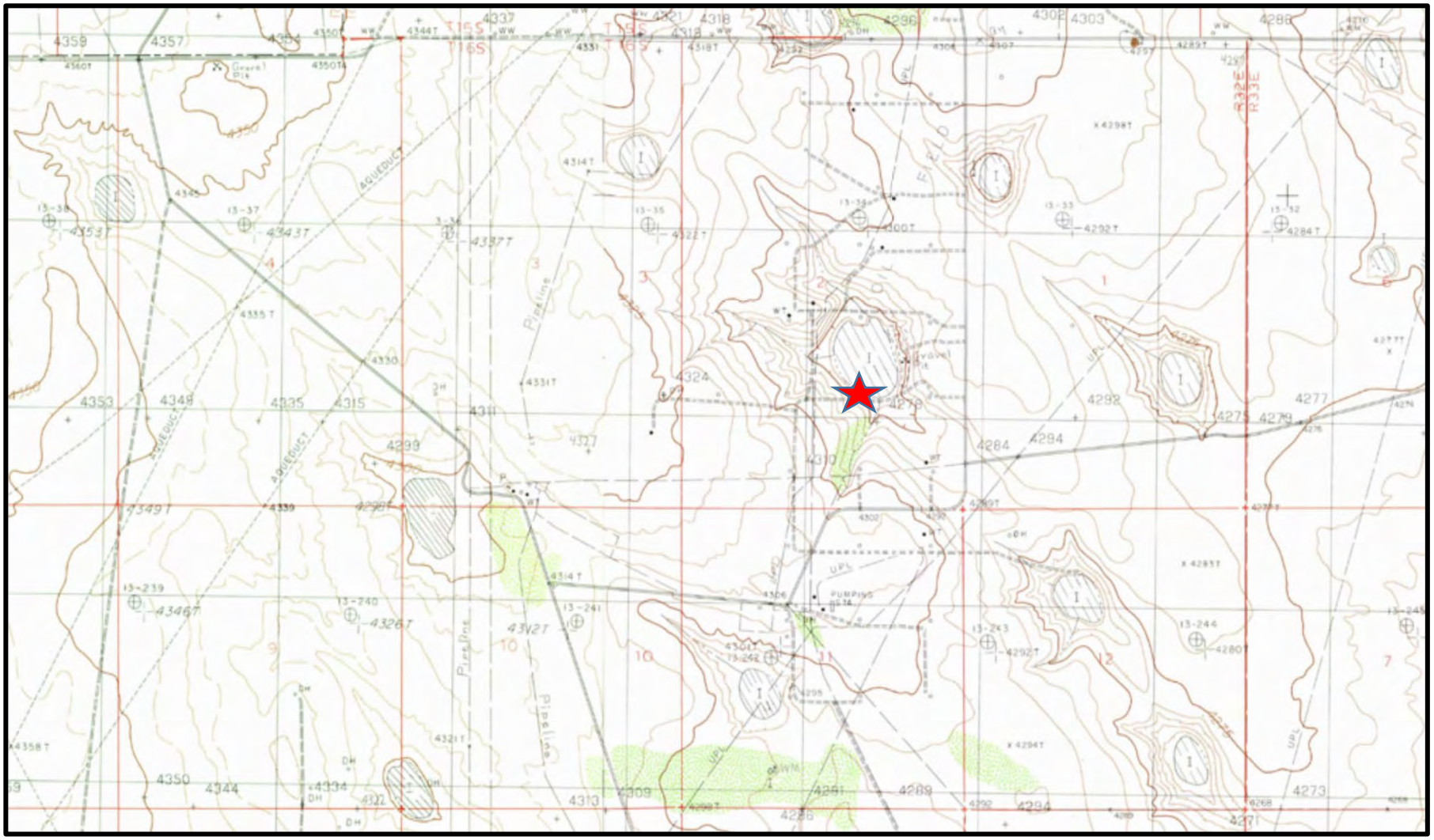
Sample ID	Sample Date	Sample Depth (feet bgs)	Soil Status	TPH (GRO)	TPH (DRO)	TPH (MRO)	Total TPH	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	Chloride
				milligrams per kilogram (mg/kg)									
NMOCD Closure Criteria (0-4' bgs)				-	-	-	100	10	-	-	-	50	600
NMOCD Closure Criteria (Below 4' bgs)				1,000		-	2,500	10	-	-	-	50	10,000
TH-1 (0-6")	09/29/23	0-6"	In Situ	<49.9	**1,420**	<49.9	**1,420**	<0.0198	**0.0438**	**0.0256**	**0.0888**	**0.158**	**2,990**
	09/29/23	5	In Situ	<49.7	**892**	<49.7	**892**	<0.0200	<0.0200	<0.0200	<0.0401	<0.0401	**2,130**
	09/29/23	10	In Situ	<50.4	<50.4	<50.4	<50.4	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	**3,160**
TH-2 (0-6")	09/29/23	0-6"	In Situ	<50.5	**3,770**	<50.5	**3,770**	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	**2,710**
	09/29/23	5	In Situ	<49.8	**239**	<49.8	**239**	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	**1,780**
	09/29/23	9	In Situ	<49.6	**64.8**	<49.6	**64.8**	<0.00200	<0.00200	<0.00200	<0.00401	<0.00401	**146**
TH-3 (0-6")	09/29/23	0-6"	In Situ	<49.6	**103**	<49.6	**103**	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	**49.2**
	09/29/23	3	In Situ	<50.2	**1,430**	<50.2	**1,430**	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	**230**
	09/29/23	5	In Situ	<50.5	<50.5	<50.5	<50.5	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	**222**
TH-4 (0-6")	09/29/23	0-6"	In Situ	<253	**5,320**	<253	**5,320**	<0.00200	<0.00200	<0.00200	**0.0122**	**0.0122**	**735**
	09/29/23	5	In Situ	<49.9	**2,540**	<49.9	**2,540**	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	**246**
TH-5 (0-6")	09/29/23	0-6"	In Situ	<49.7	<49.7	<49.7	<49.7	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	**59.6**
	09/29/23	2.5	In Situ	<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	**113**
TH-7 (1')	05/20/24	1	In Situ	<49.9	<49.9	<49.9	<49.9	<0.00202	<0.00202	<0.00202	<0.00404	<0.00404	<5.03
TH-7 (2')	05/20/24	2	In Situ	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00400	<0.00400	<4.99
TH-7 (3')	05/20/24	3	In Situ	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	<5.00
TH-7 (4')	05/20/24	4	In Situ	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<4.96
TH-8 (1')	05/20/24	1	In Situ	<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00397	<0.00397	**230**
TH-8 (2')	05/20/24	2	In Situ	<49.9	<49.9	<49.9	<49.9	<0.00202	<0.00202	<0.00202	<0.00404	<0.00404	**140**
TH-8 (3')	05/20/24	3	In Situ	<49.9	<49.9	<49.9	<49.9	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	**280**
TH-8 (4')	05/20/24	4	In Situ	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	**40**

Notes:

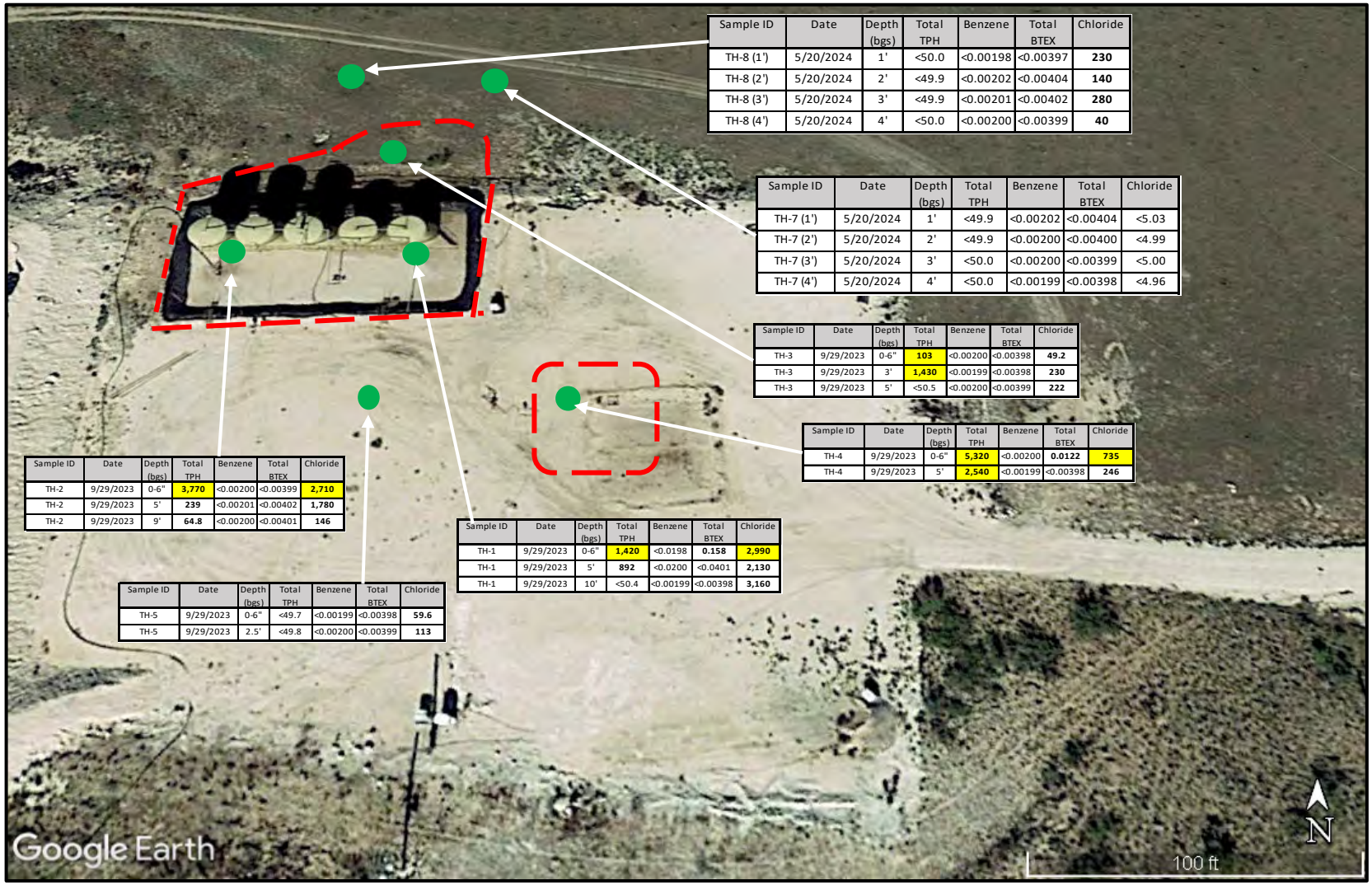
1. GRO: Gasoline Range Organics
2. DRO: Diesel Range Organics
3. MRO: Motor Oil Range Organics
4. bgs: below ground surface
5. Bold and highlighting indicates the COC was detected above the NMOCD Closure Criteria.
6. < indicates the COC was below the appropriate laboratory method/sample detection limit
7. Yellow highlighting indicates the COC concentration exceeds the NMOCD Closure Criteria.

Grain Environmental

FIGURES



LEGEND: Site Location Base Map From GAIA GPS Topo	**Figure 1** **Site Location Map** Grand Banks Energy Company Anderson Ranch Unit #017H Lea County, New Mexico	Drafted by: CC | Checked by: CC Draft: November 13, 2023 GPS: 32.9489174° -103.7349548°	Grain Environmental



Sample ID	Date	Depth (bgs)	Total TPH	Benzene	Total BTEX	Chloride
TH-8 (1')	5/20/2024	1'	<50.0	<0.00198	<0.00397	**230**
TH-8 (2')	5/20/2024	2'	<49.9	<0.00202	<0.00404	**140**
TH-8 (3')	5/20/2024	3'	<49.9	<0.00201	<0.00402	**280**
TH-8 (4')	5/20/2024	4'	<50.0	<0.00200	<0.00399	**40**

Sample ID	Date	Depth (bgs)	Total TPH	Benzene	Total BTEX	Chloride
TH-7 (1')	5/20/2024	1'	<49.9	<0.00202	<0.00404	<5.03
TH-7 (2')	5/20/2024	2'	<49.9	<0.00200	<0.00400	<4.99
TH-7 (3')	5/20/2024	3'	<50.0	<0.00200	<0.00399	<5.00
TH-7 (4')	5/20/2024	4'	<50.0	<0.00199	<0.00398	<4.96

Sample ID	Date	Depth (bgs)	Total TPH	Benzene	Total BTEX	Chloride
TH-3	9/29/2023	0-6"	**103**	<0.00200	<0.00398	**49.2**
TH-3	9/29/2023	3'	**1,430**	<0.00199	<0.00398	**230**
TH-3	9/29/2023	5'	<50.5	<0.00200	<0.00399	**222**

Sample ID	Date	Depth (bgs)	Total TPH	Benzene	Total BTEX	Chloride
TH-4	9/29/2023	0-6"	**5,320**	<0.00200	**0.0122**	**735**
TH-4	9/29/2023	5'	**2,540**	<0.00199	<0.00398	**246**

Sample ID	Date	Depth (bgs)	Total TPH	Benzene	Total BTEX	Chloride
TH-2	9/29/2023	0-6"	**3,770**	<0.00200	<0.00399	**2,710**
TH-2	9/29/2023	5'	**239**	<0.00201	<0.00402	**1,780**
TH-2	9/29/2023	9'	**64.8**	<0.00200	<0.00401	**146**

Sample ID	Date	Depth (bgs)	Total TPH	Benzene	Total BTEX	Chloride
TH-1	9/29/2023	0-6"	**1,420**	<0.0198	**0.158**	**2,990**
TH-1	9/29/2023	5'	**892**	<0.0200	<0.0401	**2,130**
TH-1	9/29/2023	10'	<50.4	<0.00199	<0.00398	**3,160**

Sample ID	Date	Depth (bgs)	Total TPH	Benzene	Total BTEX	Chloride
TH-5	9/29/2023	0-6"	<49.7	<0.00199	<0.00398	**59.6**
TH-5	9/29/2023	2.5'	<49.8	<0.00200	<0.00399	**113**

LEGEND:

Sample Location With Concentrations (mg/kg)

Proposed Remediation Area.

Highlighted cells indicate concentrations above the Closure Criteria

Figure 2

Soil Sample Analytical Results Map

Grand Banks Energy Company

Anderson Ranch Unit #017H

Lea County, New Mexico

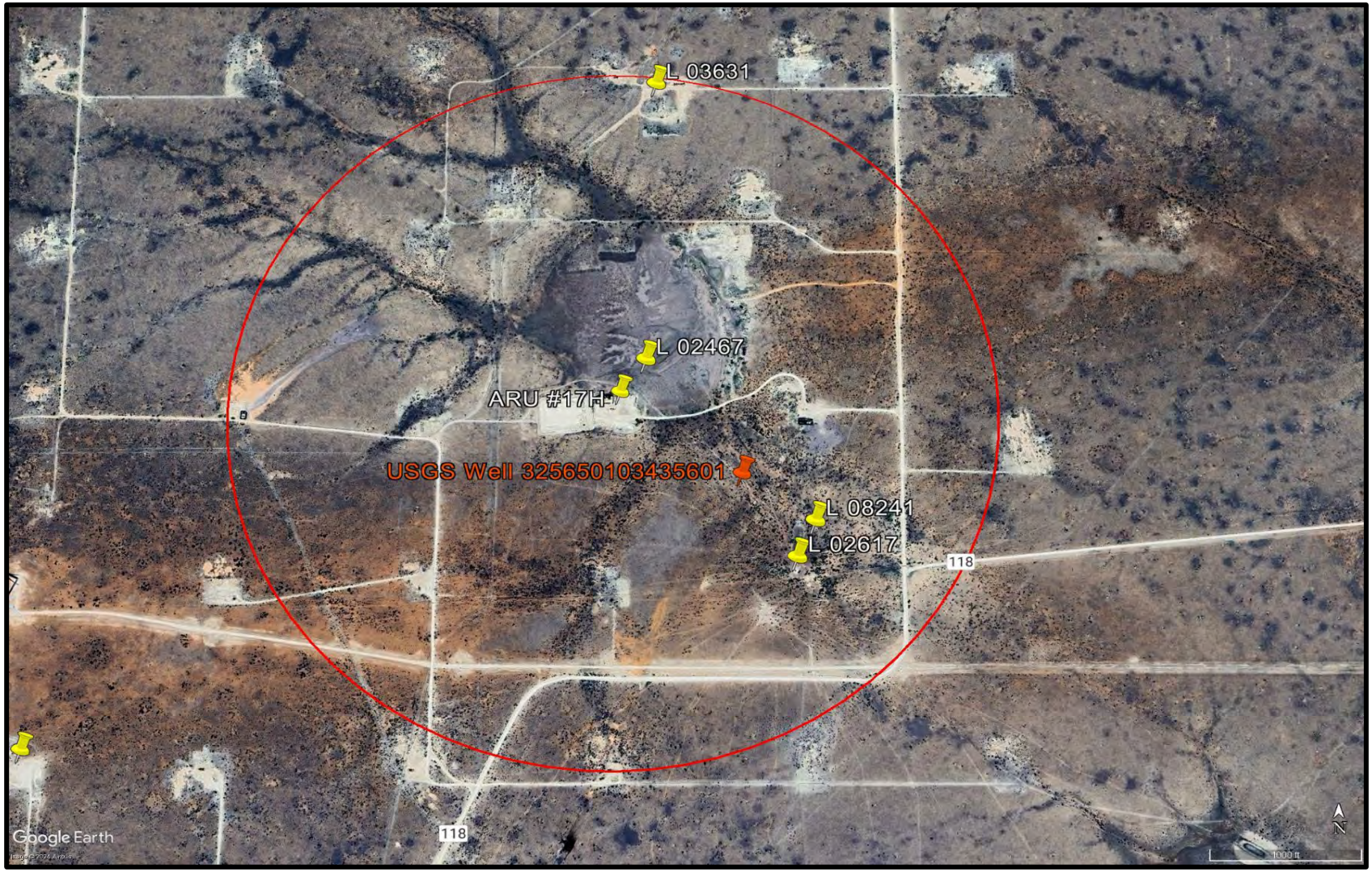
Drafted by: CC | Checked by: CC

Draft: June 5, 2024

GPS: 32.9489174° -103.7359548°

Base Map from Google Earth

Grain Environmental



LEGEND:

Site and Water Well Locations

0.5 Mile Radius

Base Map from Google Earth

Figure 3

Revised Wellhead Protection Area Map

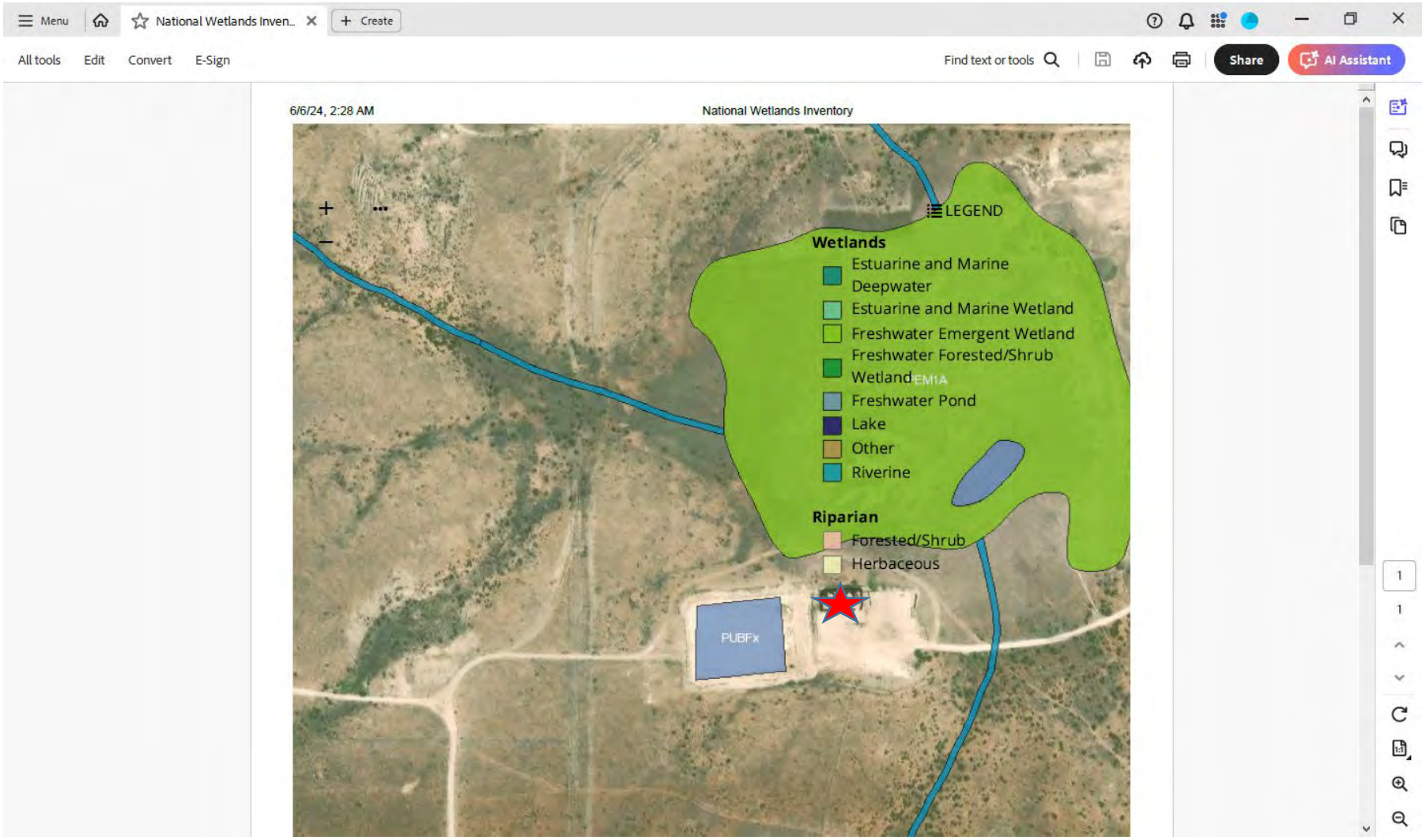
Grand Banks Energy Company

Anderson Ranch Unit #017H

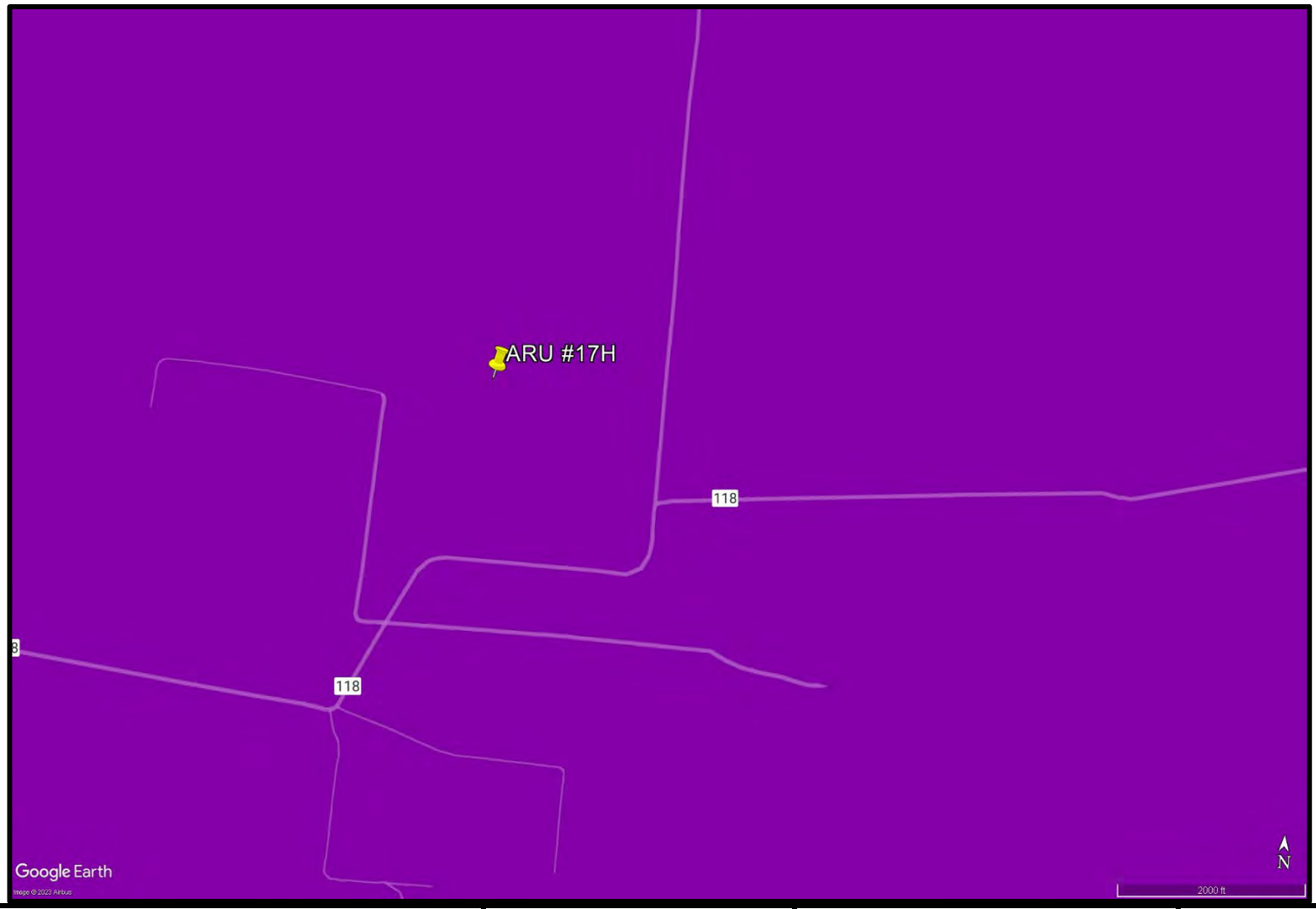
Lea County, New Mexico

Drafted by: CC | Checked by: CC	
Draft: April 24, 2024	
GPS:	32.9489174° -103.7349548°

Grain Environmental



LEGEND: Site Location	**Figure 4** **US Fish & Wildlife Service** **Wetlands Map** Grand Banks Energy Company Anderson Ranch Unit #017H Lea County, New Mexico	Drafted by: CC | Checked by: CC Draft: June 6, 2024 GPS: 32.9489174° -103.7349548°



LEGEND:

Site Location

Low Karst Potential

Medium Karst Potential

High Karst Potential

Base Map from Google Earth and BLM

Figure 5

Karst Potential Map

Grand Banks Energy Company

Anderson Ranch Unit #017H

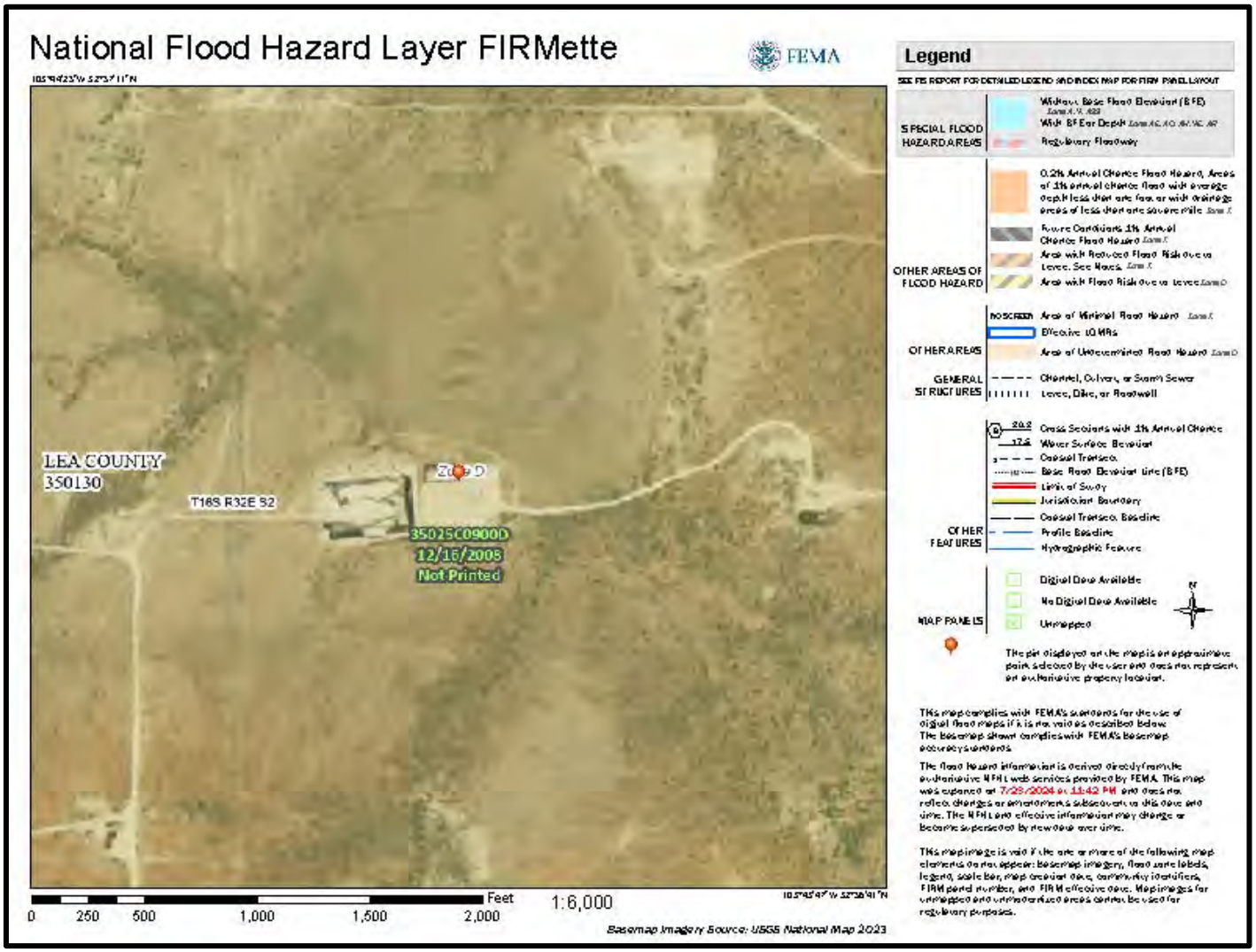
Lea County, New Mexico

Drafted by: CC | Checked by: CC

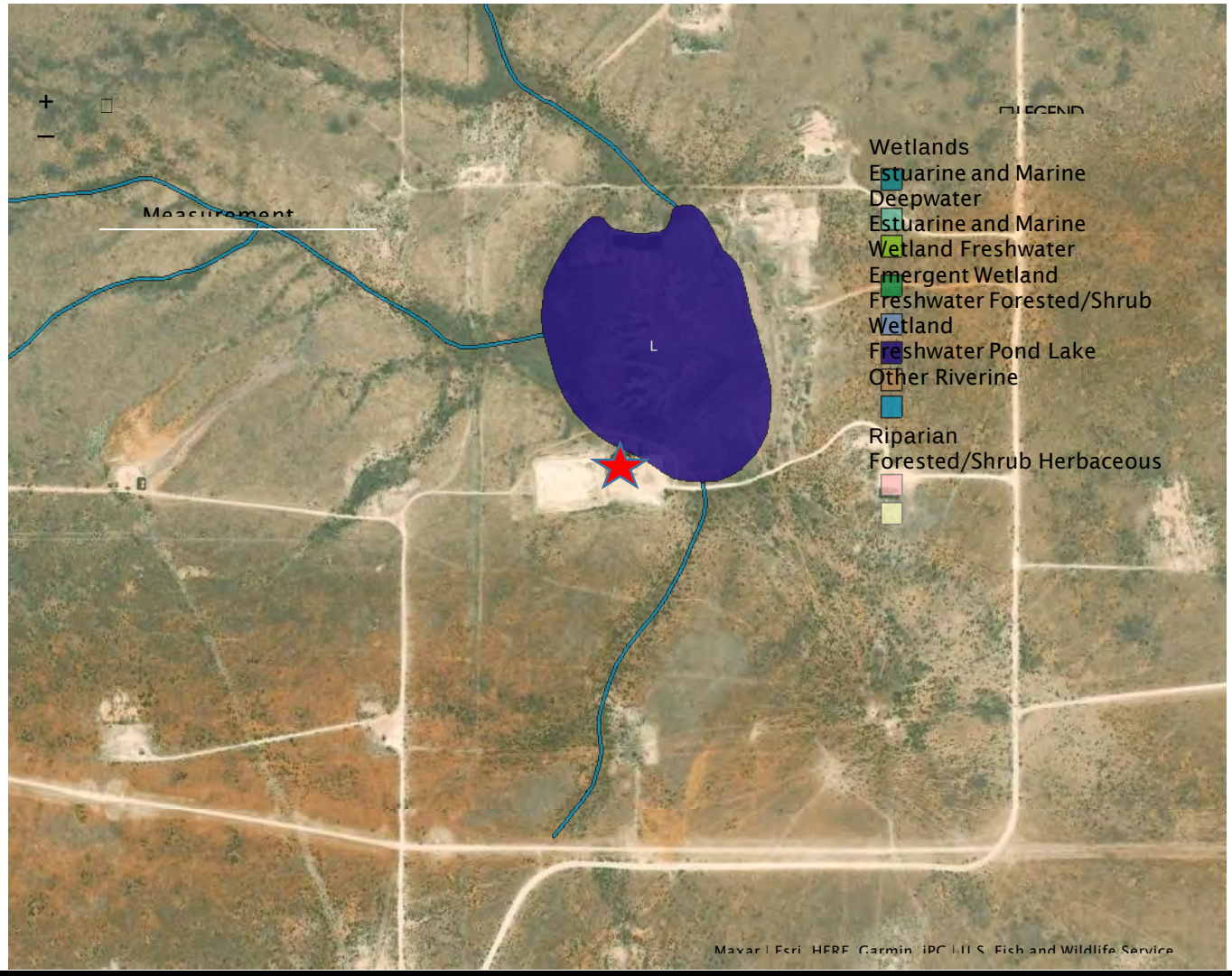
Draft: November 13, 2023

GPS: 32.9489174° -103.7349548°

Crain Environmental



LEGEND: Site Location Base Map from FEMA	**Figure 6** **FEMA Floodplain Map** Grand Banks Energy Company Anderson Ranch Unit #017H Lea County, New Mexico	Drafted by: CC | Checked by: CC Draft: July 23, 2024 GPS: 32.9489174° -103.7349548°



LEGEND:

Site Location

Figure 7

National Wetlands Inventory Map

Grand Banks Energy Company

Anderson Ranch Unit #017H

Lea County, New Mexico

Drafted by: CC | Checked by: CC

Draft: June 6, 2024

GPS: 32.9489174° -103.7349548°

Grain Environmental

LEGEND: Proposed Sample Location Proposed Treatment Area.	**Figure 8** Soil Treatment Area with Sample Locations Grand Banks Energy Company Anderson Ranch Unit #017H Lea County, New Mexico	Drafted by: CC | Checked by: CC Draft: August 21, 2024 GPS: 32.9489174° -103.7359548° Base Map from Google Earth	Grain Environmental

Grain Environmental

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

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	nAPP2321553613
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Grand Banks Energy Co	OGRID 155471
Contact Name Brian Scarborough	Contact Telephone 432-967-2862
Contact email bhs33160@gmail.com	Incident # *(assigned by OCD)*
Contact mailing address 10 Desta Drive, Suite 300-E Midland, Texas 79705	

Location of Release Source

Latitude 32.94891 Longitude -103.73495
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Anderson Ranch Unit #017H	Site Type Battery
Date Release Discovered 08/01/2023	API# *(if applicable)* 30-025-00367

Unit Letter	Section	Township	Range	County
J	2	16S	32 E	Lea

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

Nature and Volume of Release

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

☑ Crude Oil	Volume Released (bbls) 46	Volume Recovered (bbls) 0
☑ Produced Water	Volume Released (bbls) 979	Volume Recovered (bbls) 500
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A severe thunderstorm causing lightning to strike the battery which caught on fire.

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2321553613
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☑ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? The volume that was released. The released caused the fire.

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

Yes, by Socorro Hendry, to Mike Bratcher on Aug. 1, 2023 by phone and email.

Initial Response

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

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

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

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

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

Printed Name: Socorro Hendry Title: Regulatory Analyst

Signature: Socorro Hendry Date: 08/03/2023

email: socorro.hendry@octane-energy.com Telephone: 432-685-7736

OCD Only

Received by: Shelly Wells Date: 8/18/2023

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

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

CONDITIONS

Operator: GRAND BANKS ENERGY CO 10 Desta Drive Midland, TX 79705	OGRID: 155471
	Action Number: 253886
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
scwells	None	8/18/2023

Incident ID	nAPP2321553613
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2321553613
District RP	
Facility ID	
Application ID	

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

Printed Name: Cindy Crain Title: Agent for Grand Banks Energy Company

Signature: Cindy Crain Date: 9/15/24

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2321553613
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

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

Printed Name: Cindy Crain Title: Agent for Grand Banks Energy Company

Signature: Cindy Crain Date: 9/15/24

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

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

Grand Banks Energy Company - Anderson Ranch Unit #017H Battery (Incident #nAPP2321553613) - Workplan Denied March 6, 2024

Crain Environmental/OCTANE/Anderson Ranch #017H
Search for all messages with label Crain Environmental/OCTANE/Anderson Ranch #017H
Remove label Crain Environmental/OCTANE/Anderson Ranch #017H from this conversation

C

Cindy Crain <cindy.crain@gmail.com> Wed, Apr 17, 2:52 PM

to Nelson,

Nelson,

On March 6, 2024, Grand Banks received a notice that the Remediation Workplan for the above referenced Battery (and Incident) had been denied, and that either a revised Workplan or a Closure Report be submitted to the OCD by June 4, 2024.

I have a couple of questions that I would like to discuss with you regarding comments associated with the denial. Do you have a few minutes in the next few days for a phone call? I can be available anytime tomorrow or either on Wednesday or Thursday of next week.

Please let me know what works best for you.

Thank you,
Cindy Crain
--
Crain Environmental
2925 East 17th Street
Odessa, TX 79761
(575) 441-7244

C

Cindy Crain <cindy.crain@gmail.com> Wed, Apr 24, 8:31 PM

to Nelson,, bcc: Chris

Hi Nelson,

Thank you for your phone call to discuss the Anderson Ranch Unit #17H Battery (Incident #nAPP2321553613) Remediation Workplan. During that call, you stated that the Workplan would be approved for the use of Microblaze if I provided depth to groundwater verification, and a description of the area to the north of the tank battery that is referred to as a "playa lake" in an email.

As I stated in the call, there is a USGS water well (325650103435601) located 1,033 feet southeast of the ARU #17H well that recorded a depth of groundwater of 213.20' below ground surface (bgs) on February 16, 2006. Attached please find a figure showing the ARU #17H and USGS well locations, and a copy of the USGS well information.

The "playa lake" area is shown on USGS maps to be located immediately north of the ARU #17 Tank Battery. On our call, we also discussed the fact that the Tank Battery was constructed at a higher elevation than the "playa lake" and that a berm was constructed on the north side of the battery. The release in question occurred on 8/1/23, and the first site inspection was conducted on 8/21/23. On that date there was no water observed in the "playa lake", and groundwater has not been observed in that area to date. Attached please find photographs of the "playa lake" area from 8/21/23 to 10/25/23.

Please let me know if you have any questions, or if the Remediation Workplan dated 11/15/23 is approved for the use of Microblaze as proposed.
Grand Banks is prepared to begin remediation within 2 weeks of approval of the Workplan and will make every effort to complete remediation and submit a Closure Report to the OCD within 90 days of approval.

Thank you,
Cindy Crain

3 Attachments • Scanned by Gmail

Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov> Fri, May 10, 11:10 AM

to me

Good morning Cindy,

Thank you for the information. My apology for the late response. I commend you for trying to save your client $150 for the remediation plan re-submittal, but that's the only way we can approve what you submitted via email.

I can take a look at your revised remediation plan (including the new data provided) if you wish to submit to me via email (preliminary). Eventually, you will need to re-submit through the Permitting portal. I apologize again if I misspoke the last time we communicated.

If you have any questions or concerns, please contact me at your convenience.

Regards,

Nelson Velez • Environmental Specialist - Adv
Environmental Bureau | EMNRD - Oil Conservation Division
1000 Rio Brazos Road | Aztec, NM 87410
(505) 469-6146 | nelson.velez@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/

From: Cindy Crain <cindy.crain@gmail.com>
Sent: Wednesday, April 24, 2024 7:31 PM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Subject: [EXTERNAL] Re: Grand Banks Energy Company - Anderson Ranch Unit #017H Battery (Incident #nAPP2321553613) - Workplan Denied March 6, 2024

C

Cindy Crain <cindy.crain@gmail.com> Wed, Jun 5, 11:24 PM (3 hours ago)

to Nelson,, bcc: Chris

Nelson,

As you requested, soil samples (T-7 and T-8) were collected on 5/20/24 from two locations between the ARU #17H tank battery (site) and the "playa lake".
Attached please find a Figure 2 that shows the sample locations, a Figure 6 that shows the water well locations, a table that provides a summary of the lab results, and a copy of the lab report for the 5/20/24 samples.

Referring to Table 1 and Figure 2, TPH, BTEX, and chloride concentrations were reported below the Closure Criteria in each sample at depths of 1', 2', 3', and 4' below ground surface.

Are you able to tell from this information whether or not a Revised Workplan would be approved for the remediation using MicroBlaze, or do I need to send you a copy of the Revised Workplan prior to submitting it to the fee portal?

Thank you,
Cindy Crain

4 Attachments • Scanned by Gmail

From: OCDOnline@state.nm.us <OCDOnline@state.nm.us>
Sent: Monday, August 5, 2024 3:22 PM
To: Socorro Hendry <socorro.hendry@octane-energy.com>
Subject: The Oil Conservation Division (OCD) has approved the application, Application ID: 366843

To whom it may concern (c/o Socorro Hendry for CAMBRIAN MANAGEMENT LTD),

The OCD has approved the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nAPP2321553613,
with the following conditions:

- **Remediation plan is approved with the following conditions; 1. Sampling plan is approved for increasing the sampling frequency from 200 to 400 square feet (sq. ft.) per five (5)-point composite sample (5-pcs). Sidewalls must be sampled using 200 sq. ft. per 5-pcs. 2. Ex-situ treated soils must be confirmed using 5-pcs per 100 cubic yards. Lab results must conform to the reclamation standards if used within the top four (4) feet below grade. 3. Variance requesting foregoing the setback toward the adjacent playa lake is approved. 4. Grand Bank (GBE) Energy has 180-days (February 3, 2025) to submit to OCD its appropriate or final remediation closure report. GBE may seek an extension of time to submit its appropriate or final remediation closure report for good cause as determined by the division.**

The signed C-141 can be found in the OCD Online: Imaging under the incident ID (n#).

If you have any questions regarding this application, please contact me.

Thank you,
Nelson Velez
Environmental Specialist - Advanced
505-469-6146
Nelson.Velez@emnrd.nm.gov

New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

From: OCDOnline@state.nm.us<mailto:OCDOnline@state.nm.us> <OCDOnline@state.nm.us<mailto:OCDOnline@state.nm.us>>
Sent: Friday, August 9, 2024 2:38 PM
To: Socorro Hendry <socorro.hendry@octane-energy.com<mailto:socorro.hendry@octane-energy.com>>
Subject: The Oil Conservation Division (OCD) has rejected the application, Application ID: 366843

To whom it may concern (c/o Socorro Hendry for CAMBRIAN MANAGEMENT LTD),

The OCD has rejected the submitted Application for administrative approval of a release notification and corrective action (C-141), for incident ID (n#) nAPP2321553613,
for the following reasons:

* Remediation plan is denied 1. Incorrect operator/ OGRID used during the submittal. Original used was [155471] Grand Banks Energy Co. 2. Grand Bank (GBE) Energy has 60-days (October 8, 2024) to submit to OCD its appropriate or final remediation closure report.

The rejected C-141 can be found in the OCD Online: Permitting - Action Status, under the Application ID: 366843.
Please review and make the required correction(s) prior to resubmitting.
If you have any questions why this application was rejected or believe it was rejected in error, please contact me prior to submitting an additional C-141.

Thank you,
Nelson Velez
Environmental Specialist - Advanced
505-469-6146
Nelson.Velez@emnrd.nm.gov<mailto:Nelson.Velez@emnrd.nm.gov>

New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

Appendix B: USGS Well Information

Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Full News

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 325650103435601

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 325650103435601 16S.32E.02.41341

Lea County, New Mexico
Latitude 32°56'50", Longitude 103°43'56" NAD27
Land-surface elevation 4,277 feet above NAVD88
The depth of the well is 328 feet below land surface.
This well is completed in the High Plains aquifer (N100HGHPLN) national aquifer.
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
1961-03-15		D	62610		4068.31	NGVD29	1	Z		
1961-03-15		D	62611		4070.01	NAVD88	1	Z		
1961-03-15		D	72019	206.99			1	Z		
1976-05-06		D	62610		4065.40	NGVD29	1	Z		
1976-05-06		D	62611		4067.10	NAVD88	1	Z		
1976-05-06		D	72019	209.90			1	Z		
1981-03-27		D	62610		4063.96	NGVD29	1	Z		
1981-03-27		D	62611		4065.66	NAVD88	1	Z		
1981-03-27		D	72019	211.34			1	Z		
1986-01-10		D	62610		4064.02	NGVD29	1	Z		
1986-01-10		D	62611		4065.72	NAVD88	1	Z		
1986-01-10		D	72019	211.28			1	Z		
1990-11-30		D	62610		4062.76	NGVD29	1	Z		
1990-11-30		D	62611		4064.46	NAVD88	1	Z		
1990-11-30		D	72019	212.54			1	Z		
2001-02-16		D	62610		4061.18	NGVD29	1	S		

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
2001-02-16		D	62611		4062.88	NAVD88	1	S		
2001-02-16		D	72019	214.12			1	S		
2006-02-16	19:18 UTC	m	62610		4062.10	NGVD29	1	S	USGS	
2006-02-16	19:18 UTC	m	62611		4063.80	NAVD88	1	S	USGS	
2006-02-16	19:18 UTC	m	72019	213.20			1	S	USGS	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement		Not determined
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

Appendix C: Photographic Documentation

Anderson Ranch Unit #017H

View to NE of N berm and "playa" (8/21/23).

View to W showing "playa" to E and N (8/21/23).

View to W of N berm and "playa" (8/21/23).

View to N of tanks and "playa" (9/19/23).

View to N of trash (liner) and "playa" (9/25/23).

View to N of pad and "playa" (9/25/23).

View to N of pad and "playa" (10/25/23).

Grain Environmental

Appendix D: Laboratory Analytical Reports

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 1/16/2024 9:55:38 AM

JOB DESCRIPTION

ARU #17H Pit
Lea Co., NM

JOB NUMBER

880-37870-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

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

Generated
1/16/2024 9:55:38 AM

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

Client: Crain Environmental
Project/Site: ARU #17H Pit

Laboratory Job ID: 880-37870-1
SDG: Lea Co., NM

Table of Contents

Definitions/Glossary

Client: Crain Environmental
Project/Site: ARU #17H Pit

Job ID: 880-37870-1
SDG: Lea Co., NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
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: ARU #17H Pit

Job ID: 880-37870-1

Job ID: 880-37870-1 Eurofins Midland

Job Narrative
880-37870-1

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 1/11/2024 2:29 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 0.5°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: NW (880-37870-1), NE (880-37870-2), SW (880-37870-3), SE (880-37870-4) and C (880-37870-5).

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: SE (880-37870-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: NW (880-37870-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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: The surrogate recovery for the blank associated with preparation batch 880-70655 and analytical batch 880-70619 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-70655/2-A). Evidence of matrix interferences is not obvious.

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: ARU #17H Pit

Job ID: 880-37870-1
SDG: Lea Co., NM

Client Sample ID: NW

Date Collected: 01/10/24 11:10
Date Received: 01/11/24 14:29
Sample Depth: 0-6"

Lab Sample ID: 880-37870-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/15/24 12:53	01/16/24 01:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/15/24 12:53	01/16/24 01:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/15/24 12:53	01/16/24 01:40	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		01/15/24 12:53	01/16/24 01:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/15/24 12:53	01/16/24 01:40	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		01/15/24 12:53	01/16/24 01:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*01/15/24 12:53*	*01/16/24 01:40*	*1*
1,4-Difluorobenzene (Surr)	*66*	*S1-*	*70 - 130*	*01/15/24 12:53*	*01/16/24 01:40*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			01/16/24 01:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			01/12/24 04:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		01/11/24 15:24	01/12/24 04:41	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		01/11/24 15:24	01/12/24 04:41	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		01/11/24 15:24	01/12/24 04:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*01/11/24 15:24*	*01/12/24 04:41*	*1*
o-Terphenyl	*119*		*70 - 130*	*01/11/24 15:24*	*01/12/24 04:41*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**110**		4.95		mg/Kg			01/16/24 03:25	1

Client Sample ID: NE

Date Collected: 01/10/24 11:15
Date Received: 01/11/24 14:29
Sample Depth: 0-6"

Lab Sample ID: 880-37870-2
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		01/15/24 12:53	01/16/24 02:01	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/15/24 12:53	01/16/24 02:01	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/15/24 12:53	01/16/24 02:01	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/15/24 12:53	01/16/24 02:01	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/15/24 12:53	01/16/24 02:01	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/15/24 12:53	01/16/24 02:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*01/15/24 12:53*	*01/16/24 02:01*	*1*

Eurofins Midland

Client Sample Results

Client: Crain Environmental
Project/Site: ARU #17H Pit

Job ID: 880-37870-1
SDG: Lea Co., NM

Client Sample ID: NE

Date Collected: 01/10/24 11:15
Date Received: 01/11/24 14:29
Sample Depth: 0-6"

Lab Sample ID: 880-37870-2

Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*01/15/24 12:53*	*01/16/24 02:01*	*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			01/16/24 02:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			01/12/24 05:03	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		01/11/24 15:24	01/12/24 05:03	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		01/11/24 15:24	01/12/24 05:03	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		01/11/24 15:24	01/12/24 05:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*114*		*70 - 130*	*01/11/24 15:24*	*01/12/24 05:03*	*1*
o-Terphenyl	*120*		*70 - 130*	*01/11/24 15:24*	*01/12/24 05:03*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**23.9**		5.04		mg/Kg			01/16/24 03:45	1

Client Sample ID: SW

Date Collected: 01/10/24 11:20
Date Received: 01/11/24 14:29
Sample Depth: 0-6"

Lab Sample ID: 880-37870-3

Matrix: Solid

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		01/15/24 12:53	01/16/24 02:21	1
Toluene	<0.00198	U	0.00198		mg/Kg		01/15/24 12:53	01/16/24 02:21	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		01/15/24 12:53	01/16/24 02:21	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		01/15/24 12:53	01/16/24 02:21	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		01/15/24 12:53	01/16/24 02:21	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		01/15/24 12:53	01/16/24 02:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*01/15/24 12:53*	*01/16/24 02:21*	*1*
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*	*01/15/24 12:53*	*01/16/24 02:21*	*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			01/16/24 02:21	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			01/12/24 05:25	1

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Client Sample Results

Client: Crain Environmental
Project/Site: ARU #17H Pit

Job ID: 880-37870-1
SDG: Lea Co., NM

Client Sample ID: SW

Lab Sample ID: 880-37870-3
Matrix: Solid
Date Collected: 01/10/24 11:20
Date Received: 01/11/24 14:29
Sample Depth: 0-6"

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		01/11/24 15:24	01/12/24 05:25	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		01/11/24 15:24	01/12/24 05:25	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		01/11/24 15:24	01/12/24 05:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*121*		*70 - 130*	*01/11/24 15:24*	*01/12/24 05:25*	*1*
o-Terphenyl	*130*		*70 - 130*	*01/11/24 15:24*	*01/12/24 05:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.7**		4.99		mg/Kg			01/16/24 03:52	1

Client Sample ID: SE

Lab Sample ID: 880-37870-4
Matrix: Solid
Date Collected: 01/10/24 11:25
Date Received: 01/11/24 14:29
Sample Depth: 0-6"

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		01/15/24 12:53	01/16/24 03:44	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/15/24 12:53	01/16/24 03:44	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/15/24 12:53	01/16/24 03:44	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/15/24 12:53	01/16/24 03:44	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/15/24 12:53	01/16/24 03:44	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/15/24 12:53	01/16/24 03:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*75*		*70 - 130*	*01/15/24 12:53*	*01/16/24 03:44*	*1*
1,4-Difluorobenzene (Surr)	*64*	*S1-*	*70 - 130*	*01/15/24 12:53*	*01/16/24 03:44*	*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			01/16/24 03:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			01/12/24 05:48	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		01/11/24 15:24	01/12/24 05:48	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		01/11/24 15:24	01/12/24 05:48	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		01/11/24 15:24	01/12/24 05:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*01/11/24 15:24*	*01/12/24 05:48*	*1*
o-Terphenyl	*126*		*70 - 130*	*01/11/24 15:24*	*01/12/24 05:48*	*1*

Eurofins Midland

Client Sample Results

Client: Crain Environmental
Project/Site: ARU #17H Pit

Job ID: 880-37870-1
SDG: Lea Co., NM

Client Sample ID: SE

Lab Sample ID: 880-37870-4
Matrix: Solid
Date Collected: 01/10/24 11:25
Date Received: 01/11/24 14:29
Sample Depth: 0-6"

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.95	U	4.95		mg/Kg			01/16/24 03:59	1

Client Sample ID: C

Lab Sample ID: 880-37870-5
Matrix: Solid
Date Collected: 01/10/24 11:30
Date Received: 01/11/24 14:29
Sample Depth: 0-6"

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		01/15/24 12:53	01/16/24 04:05	1
Toluene	<0.00198	U	0.00198		mg/Kg		01/15/24 12:53	01/16/24 04:05	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		01/15/24 12:53	01/16/24 04:05	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		01/15/24 12:53	01/16/24 04:05	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		01/15/24 12:53	01/16/24 04:05	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		01/15/24 12:53	01/16/24 04:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*01/15/24 12:53*	*01/16/24 04:05*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*01/15/24 12:53*	*01/16/24 04:05*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			01/16/24 04:05	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			01/12/24 06:10	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		01/11/24 15:24	01/12/24 06:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/11/24 15:24	01/12/24 06:10	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/11/24 15:24	01/12/24 06:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*01/11/24 15:24*	*01/12/24 06:10*	*1*
o-Terphenyl	*118*		*70 - 130*	*01/11/24 15:24*	*01/12/24 06:10*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.95	U	4.95		mg/Kg			01/16/24 04:06	1

Surrogate Summary

Client: Crain Environmental
Project/Site: ARU #17H Pit

Job ID: 880-37870-1
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)
880-37870-1	NW	82	66 S1-
880-37870-2	NE	97	72
880-37870-3	SW	103	71
880-37870-4	SE	75	64 S1-
880-37870-5	C	82	80
LCS 880-70858/1-A	Lab Control Sample	109	104
LCSD 880-70858/2-A	Lab Control Sample Dup	119	108
MB 880-70840/5-A	Method Blank	75	88
MB 880-70858/5-A	Method Blank	71	90

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-37870-1	NW	113	119
880-37870-2	NE	114	120
880-37870-3	SW	121	130
880-37870-4	SE	119	126
880-37870-5	C	111	118
LCS 880-70655/2-A	Lab Control Sample	130	141 S1+
LCSD 880-70655/3-A	Lab Control Sample Dup	99	113
MB 880-70655/1-A	Method Blank	133 S1+	155 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Crain Environmental
Project/Site: ARU #17H Pit

Job ID: 880-37870-1
SDG: Lea Co., NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-70840/5-A
Matrix: Solid
Analysis Batch: 70828

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 70840

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/15/24 08:59	01/15/24 11:08	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/15/24 08:59	01/15/24 11:08	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/15/24 08:59	01/15/24 11:08	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/15/24 08:59	01/15/24 11:08	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/15/24 08:59	01/15/24 11:08	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/15/24 08:59	01/15/24 11:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*75*		*70 - 130*	*01/15/24 08:59*	*01/15/24 11:08*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*01/15/24 08:59*	*01/15/24 11:08*	*1*

Lab Sample ID: MB 880-70858/5-A
Matrix: Solid
Analysis Batch: 70828

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 70858

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/15/24 12:53	01/15/24 22:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/15/24 12:53	01/15/24 22:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/15/24 12:53	01/15/24 22:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/15/24 12:53	01/15/24 22:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/15/24 12:53	01/15/24 22:55	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/15/24 12:53	01/15/24 22:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*71*		*70 - 130*	*01/15/24 12:53*	*01/15/24 22:55*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*01/15/24 12:53*	*01/15/24 22:55*	*1*

Lab Sample ID: LCS 880-70858/1-A
Matrix: Solid
Analysis Batch: 70828

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 70858

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1096		mg/Kg		110	70 - 130
Toluene	0.100	0.09809		mg/Kg		98	70 - 130
Ethylbenzene	0.100	0.1043		mg/Kg		104	70 - 130
m-Xylene & p-Xylene	0.200	0.2197		mg/Kg		110	70 - 130
o-Xylene	0.100	0.1054		mg/Kg		105	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-70858/2-A
Matrix: Solid
Analysis Batch: 70828

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 70858

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1163		mg/Kg		116	70 - 130	6	35

QC Sample Results

Client: Crain Environmental
Project/Site: ARU #17H Pit

Job ID: 880-37870-1
SDG: Lea Co., NM

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

Lab Sample ID: LCSD 880-70858/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 70828 — **Prep Batch: 70858**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09918		mg/Kg		99	70 - 130	1	35
Ethylbenzene			0.100	0.1036		mg/Kg		104	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.2444		mg/Kg		122	70 - 130	11	35
o-Xylene			0.100	0.1171		mg/Kg		117	70 - 130	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

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

Lab Sample ID: MB 880-70655/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 70619 — **Prep Batch: 70655**

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		01/11/24 13:50	01/11/24 20:57	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/11/24 13:50	01/11/24 20:57	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/11/24 13:50	01/11/24 20:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*133*	*S1+*	*70 - 130*	*01/11/24 13:50*	*01/11/24 20:57*	*1*
o-Terphenyl	*155*	*S1+*	*70 - 130*	*01/11/24 13:50*	*01/11/24 20:57*	*1*

Lab Sample ID: LCS 880-70655/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 70619 — **Prep Batch: 70655**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	815.7		mg/Kg		82	70 - 130
Diesel Range Organics (Over C10-C28)			1000	986.4		mg/Kg		99	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*130*		*70 - 130*
o-Terphenyl	*141*	*S1+*	*70 - 130*

Lab Sample ID: LCSD 880-70655/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 70619 — **Prep Batch: 70655**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	891.3		mg/Kg		89	70 - 130	9	20
Diesel Range Organics (Over C10-C28)			1000	968.6		mg/Kg		97	70 - 130	2	20

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QC Sample Results

Client: Crain Environmental
Project/Site: ARU #17H Pit

Job ID: 880-37870-1
SDG: Lea Co., NM

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

Lab Sample ID: LCSD 880-70655/3-A
Matrix: Solid
Analysis Batch: 70619

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 70655

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*113*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-70721/1-A
Matrix: Solid
Analysis Batch: 70853

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			01/16/24 02:23	1

Lab Sample ID: LCS 880-70721/2-A
Matrix: Solid
Analysis Batch: 70853

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	226.3		mg/Kg		91	90 - 110		

Lab Sample ID: LCSD 880-70721/3-A
Matrix: Solid
Analysis Batch: 70853

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	225.9		mg/Kg		90	90 - 110	0	20

QC Association Summary

Client: Crain Environmental
Project/Site: ARU #17H Pit

Job ID: 880-37870-1
SDG: Lea Co., NM

GC VOA

Analysis Batch: 70828

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-37870-1	NW	Total/NA	Solid	8021B	70858
880-37870-2	NE	Total/NA	Solid	8021B	70858
880-37870-3	SW	Total/NA	Solid	8021B	70858
880-37870-4	SE	Total/NA	Solid	8021B	70858
880-37870-5	C	Total/NA	Solid	8021B	70858
MB 880-70840/5-A	Method Blank	Total/NA	Solid	8021B	70840
MB 880-70858/5-A	Method Blank	Total/NA	Solid	8021B	70858
LCS 880-70858/1-A	Lab Control Sample	Total/NA	Solid	8021B	70858
LCSD 880-70858/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	70858

Prep Batch: 70840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-70840/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 70858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-37870-1	NW	Total/NA	Solid	5035	
880-37870-2	NE	Total/NA	Solid	5035	
880-37870-3	SW	Total/NA	Solid	5035	
880-37870-4	SE	Total/NA	Solid	5035	
880-37870-5	C	Total/NA	Solid	5035	
MB 880-70858/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-70858/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-70858/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 70984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-37870-1	NW	Total/NA	Solid	Total BTEX	
880-37870-2	NE	Total/NA	Solid	Total BTEX	
880-37870-3	SW	Total/NA	Solid	Total BTEX	
880-37870-4	SE	Total/NA	Solid	Total BTEX	
880-37870-5	C	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 70619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-37870-1	NW	Total/NA	Solid	8015B NM	70655
880-37870-2	NE	Total/NA	Solid	8015B NM	70655
880-37870-3	SW	Total/NA	Solid	8015B NM	70655
880-37870-4	SE	Total/NA	Solid	8015B NM	70655
880-37870-5	C	Total/NA	Solid	8015B NM	70655
MB 880-70655/1-A	Method Blank	Total/NA	Solid	8015B NM	70655
LCS 880-70655/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	70655
LCSD 880-70655/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	70655

Prep Batch: 70655

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-37870-1	NW	Total/NA	Solid	8015NM Prep	
880-37870-2	NE	Total/NA	Solid	8015NM Prep	
880-37870-3	SW	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Crain Environmental
Project/Site: ARU #17H Pit

Job ID: 880-37870-1
SDG: Lea Co., NM

GC Semi VOA (Continued)

Prep Batch: 70655 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-37870-4	SE	Total/NA	Solid	8015NM Prep	
880-37870-5	C	Total/NA	Solid	8015NM Prep	
MB 880-70655/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-70655/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-70655/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 70746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-37870-1	NW	Total/NA	Solid	8015 NM	
880-37870-2	NE	Total/NA	Solid	8015 NM	
880-37870-3	SW	Total/NA	Solid	8015 NM	
880-37870-4	SE	Total/NA	Solid	8015 NM	
880-37870-5	C	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 70721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-37870-1	NW	Soluble	Solid	DI Leach	
880-37870-2	NE	Soluble	Solid	DI Leach	
880-37870-3	SW	Soluble	Solid	DI Leach	
880-37870-4	SE	Soluble	Solid	DI Leach	
880-37870-5	C	Soluble	Solid	DI Leach	
MB 880-70721/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-70721/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-70721/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 70853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-37870-1	NW	Soluble	Solid	300.0	70721
880-37870-2	NE	Soluble	Solid	300.0	70721
880-37870-3	SW	Soluble	Solid	300.0	70721
880-37870-4	SE	Soluble	Solid	300.0	70721
880-37870-5	C	Soluble	Solid	300.0	70721
MB 880-70721/1-A	Method Blank	Soluble	Solid	300.0	70721
LCS 880-70721/2-A	Lab Control Sample	Soluble	Solid	300.0	70721
LCSD 880-70721/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	70721

Lab Chronicle

Client: Crain Environmental
Project/Site: ARU #17H Pit

Job ID: 880-37870-1
SDG: Lea Co., NM

Client Sample ID: NW
Date Collected: 01/10/24 11:10
Date Received: 01/11/24 14:29

Lab Sample ID: 880-37870-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	70858	01/15/24 12:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	70828	01/16/24 01:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			70984	01/16/24 01:40	SM	EET MID
Total/NA	Analysis	8015 NM		1			70746	01/12/24 04:41	SM	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	70655	01/11/24 15:24	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70619	01/12/24 04:41	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	70721	01/12/24 08:15	CH	EET MID
Soluble	Analysis	300.0		1			70853	01/16/24 03:25	CH	EET MID

Client Sample ID: NE
Date Collected: 01/10/24 11:15
Date Received: 01/11/24 14:29

Lab Sample ID: 880-37870-2
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			5.02 g	5 mL	70858	01/15/24 12:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	70828	01/16/24 02:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			70984	01/16/24 02:01	SM	EET MID
Total/NA	Analysis	8015 NM		1			70746	01/12/24 05:03	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	70655	01/11/24 15:24	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70619	01/12/24 05:03	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	70721	01/12/24 08:15	CH	EET MID
Soluble	Analysis	300.0		1			70853	01/16/24 03:45	CH	EET MID

Client Sample ID: SW
Date Collected: 01/10/24 11:20
Date Received: 01/11/24 14:29

Lab Sample ID: 880-37870-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	70858	01/15/24 12:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	70828	01/16/24 02:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			70984	01/16/24 02:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			70746	01/12/24 05:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	70655	01/11/24 15:24	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70619	01/12/24 05:25	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	70721	01/12/24 08:15	CH	EET MID
Soluble	Analysis	300.0		1			70853	01/16/24 03:52	CH	EET MID

Client Sample ID: SE
Date Collected: 01/10/24 11:25
Date Received: 01/11/24 14:29

Lab Sample ID: 880-37870-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	70858	01/15/24 12:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	70828	01/16/24 03:44	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			70984	01/16/24 03:44	SM	EET MID

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Lab Chronicle

Client: Crain Environmental
Project/Site: ARU #17H Pit

Job ID: 880-37870-1
SDG: Lea Co., NM

Client Sample ID: SE

Lab Sample ID: 880-37870-4
Matrix: Solid
Date Collected: 01/10/24 11:25
Date Received: 01/11/24 14:29

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			70746	01/12/24 05:48	SM	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	70655	01/11/24 15:24	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70619	01/12/24 05:48	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	70721	01/12/24 08:15	CH	EET MID
Soluble	Analysis	300.0		1			70853	01/16/24 03:59	CH	EET MID

Client Sample ID: C

Lab Sample ID: 880-37870-5
Matrix: Solid
Date Collected: 01/10/24 11:30
Date Received: 01/11/24 14:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	70858	01/15/24 12:53	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	70828	01/16/24 04:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			70984	01/16/24 04:05	SM	EET MID
Total/NA	Analysis	8015 NM		1			70746	01/12/24 06:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	70655	01/11/24 15:24	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70619	01/12/24 06:10	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	70721	01/12/24 08:15	CH	EET MID
Soluble	Analysis	300.0		1			70853	01/16/24 04:06	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: ARU #17H Pit

Job ID: 880-37870-1
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: ARU #17H Pit

Job ID: 880-37870-1
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: ARU #17H Pit

Job ID: 880-37870-1
SDG: Lea Co., NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-37870-1	NW	Solid	01/10/24 11:10	01/11/24 14:29	0-6"
880-37870-2	NE	Solid	01/10/24 11:15	01/11/24 14:29	0-6"
880-37870-3	SW	Solid	01/10/24 11:20	01/11/24 14:29	0-6"
880-37870-4	SE	Solid	01/10/24 11:25	01/11/24 14:29	0-6"
880-37870-5	C	Solid	01/10/24 11:30	01/11/24 14:29	0-6"

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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

880-37870 Chain of Custody

www.xenco.com Page ____ ____

Project Manager:	Cindy Crain	Bill to: (if different)	Chris Gaddy
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:	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:	ARU # 17H Pit	Turn Around	☒ Routine ☐ Rush
Project Number:	–	Due Date:	1/19/24
Project Location:	Lea Co., NM	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Cindy Crain		
PO #	–		

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	IR8	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	+.20	
Sample Custody Seals:	Yes No N/A	Temperature Reading	0.3	
Total Containers:		Corrected Temperature:	0.5	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: TPH 8015M	BTEX	Chlorides	Sample Comments
NW	S	1/10/24	1110	0-6"	C	1		X	X	X	
NE			1115	0-6"				X	X	X	
SW			1120	0-6"				X	X	X	
SE			1125	0-6"				X	X	X	
C	↓	↓	1130	0-6"	↓	↓		X	X	X	

Preservative Codes

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

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		1/11/24 1429	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Crain Environmental

Job Number: 880-37870-1
SDG Number: Lea Co., NM

Login Number: 37870
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 5/24/2024 8:08:44 PM

JOB DESCRIPTION

ARU #17H
Lea Co., NM

JOB NUMBER

880-43707-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

my EOL

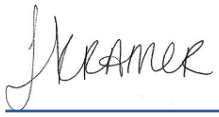
Eurofins Midland

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: ARU #17H

Laboratory Job ID: 880-43707-1
SDG: Lea Co., NM

Table of Contents

Definitions/Glossary

Client: Crain Environmental
Project/Site: ARU #17H

Job ID: 880-43707-1
SDG: Lea Co., NM

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

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: ARU #17H

Job ID: 880-43707-1

Job ID: 880-43707-1 Eurofins Midland

Job Narrative
880-43707-1

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 5/21/2024 10:32 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.1°C.

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: TH-7 (1') (880-43707-1), TH-7 (2') (880-43707-2), TH-7 (3') (880-43707-3), TH-7 (4') (880-43707-4), TH-8 (1') (880-43707-5), TH-8 (2') (880-43707-6), TH-8 (3') (880-43707-7) and TH-8 (4') (880-43707-8).

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: TH-7 (3') (880-43707-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-81147 recovered above the upper control limit for o-Xylene. An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported.

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 matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-81231 and analytical batch 880-81242 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance 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: ARU #17H

Job ID: 880-43707-1
SDG: Lea Co., NM

Client Sample ID: TH-7 (1')

Date Collected: 05/20/24 12:15
Date Received: 05/21/24 10:32
Sample Depth: 1'

Lab Sample ID: 880-43707-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		05/21/24 14:42	05/22/24 02:18	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/21/24 14:42	05/22/24 02:18	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/21/24 14:42	05/22/24 02:18	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		05/21/24 14:42	05/22/24 02:18	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/21/24 14:42	05/22/24 02:18	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		05/21/24 14:42	05/22/24 02:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*05/21/24 14:42*	*05/22/24 02:18*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*05/21/24 14:42*	*05/22/24 02:18*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			05/22/24 02:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/23/24 14:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/22/24 19:24	05/23/24 14:26	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/22/24 19:24	05/23/24 14:26	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/22/24 19:24	05/23/24 14:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*05/22/24 19:24*	*05/23/24 14:26*	*1*
o-Terphenyl	*126*		*70 - 130*	*05/22/24 19:24*	*05/23/24 14:26*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.03	U	5.03		mg/Kg			05/22/24 15:48	1

Client Sample ID: TH-7 (2')

Date Collected: 05/20/24 12:20
Date Received: 05/21/24 10:32
Sample Depth: 2'

Lab Sample ID: 880-43707-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/21/24 14:42	05/22/24 03:52	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/21/24 14:42	05/22/24 03:52	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/21/24 14:42	05/22/24 03:52	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/21/24 14:42	05/22/24 03:52	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/21/24 14:42	05/22/24 03:52	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/21/24 14:42	05/22/24 03:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*05/21/24 14:42*	*05/22/24 03:52*	*1*

Eurofins Midland

Client Sample Results

Client: Crain Environmental
Project/Site: ARU #17H

Job ID: 880-43707-1
SDG: Lea Co., NM

Client Sample ID: TH-7 (2')

Date Collected: 05/20/24 12:20
Date Received: 05/21/24 10:32
Sample Depth: 2'

Lab Sample ID: 880-43707-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*05/21/24 14:42*	*05/22/24 03:52*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			05/22/24 03:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/23/24 14:45	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	<49.9	U	49.9		mg/Kg		05/22/24 19:24	05/23/24 14:45	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/22/24 19:24	05/23/24 14:45	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/22/24 19:24	05/23/24 14:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*05/22/24 19:24*	*05/23/24 14:45*	*1*
o-Terphenyl	*125*		*70 - 130*	*05/22/24 19:24*	*05/23/24 14:45*	*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			05/22/24 15:54	1

Client Sample ID: TH-7 (3')

Date Collected: 05/20/24 12:25
Date Received: 05/21/24 10:32
Sample Depth: 3'

Lab Sample ID: 880-43707-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/21/24 14:42	05/22/24 04:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/21/24 14:42	05/22/24 04:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/21/24 14:42	05/22/24 04:12	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/21/24 14:42	05/22/24 04:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/21/24 14:42	05/22/24 04:12	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/21/24 14:42	05/22/24 04:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*131*	*S1+*	*70 - 130*	*05/21/24 14:42*	*05/22/24 04:12*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*05/21/24 14:42*	*05/22/24 04:12*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			05/22/24 04:12	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			05/23/24 15:04	1

Eurofins Midland

Client Sample Results

Client: Crain Environmental
Project/Site: ARU #17H

Job ID: 880-43707-1
SDG: Lea Co., NM

Client Sample ID: TH-7 (3')

Lab Sample ID: 880-43707-3
Matrix: Solid
Date Collected: 05/20/24 12:25
Date Received: 05/21/24 10:32
Sample Depth: 3'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/22/24 19:24	05/23/24 15:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/22/24 19:24	05/23/24 15:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/22/24 19:24	05/23/24 15:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*05/22/24 19:24*	*05/23/24 15:04*	*1*
o-Terphenyl	*113*		*70 - 130*	*05/22/24 19:24*	*05/23/24 15:04*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/22/24 16:00	1

Client Sample ID: TH-7 (4')

Lab Sample ID: 880-43707-4
Matrix: Solid
Date Collected: 05/20/24 12:30
Date Received: 05/21/24 10:32
Sample Depth: 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		05/21/24 14:42	05/22/24 04:32	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/21/24 14:42	05/22/24 04:32	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/21/24 14:42	05/22/24 04:32	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/21/24 14:42	05/22/24 04:32	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/21/24 14:42	05/22/24 04:32	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/21/24 14:42	05/22/24 04:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*05/21/24 14:42*	*05/22/24 04:32*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*05/21/24 14:42*	*05/22/24 04:32*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/22/24 04:32	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			05/23/24 15:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/22/24 19:24	05/23/24 15:22	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/22/24 19:24	05/23/24 15:22	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/22/24 19:24	05/23/24 15:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*05/22/24 19:24*	*05/23/24 15:22*	*1*
o-Terphenyl	*116*		*70 - 130*	*05/22/24 19:24*	*05/23/24 15:22*	*1*

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Client Sample Results

Client: Crain Environmental
Project/Site: ARU #17H

Job ID: 880-43707-1
SDG: Lea Co., NM

Client Sample ID: TH-7 (4')

Lab Sample ID: 880-43707-4
Matrix: Solid
Date Collected: 05/20/24 12:30
Date Received: 05/21/24 10:32
Sample Depth: 4'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.96	U	4.96		mg/Kg			05/22/24 16:06	1

Client Sample ID: TH-8 (1')

Lab Sample ID: 880-43707-5
Matrix: Solid
Date Collected: 05/20/24 12:45
Date Received: 05/21/24 10:32
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		05/21/24 14:42	05/22/24 04:53	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/21/24 14:42	05/22/24 04:53	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/21/24 14:42	05/22/24 04:53	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		05/21/24 14:42	05/22/24 04:53	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/21/24 14:42	05/22/24 04:53	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		05/21/24 14:42	05/22/24 04:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*	*05/21/24 14:42*	*05/22/24 04:53*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*05/21/24 14:42*	*05/22/24 04:53*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			05/22/24 04:53	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			05/23/24 15:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/22/24 19:24	05/23/24 15:41	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/22/24 19:24	05/23/24 15:41	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/22/24 19:24	05/23/24 15:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*118*		*70 - 130*	*05/22/24 19:24*	*05/23/24 15:41*	*1*
o-Terphenyl	*120*		*70 - 130*	*05/22/24 19:24*	*05/23/24 15:41*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**230**		24.9		mg/Kg			05/22/24 16:13	5

Client Sample Results

Client: Crain Environmental
Project/Site: ARU #17H

Job ID: 880-43707-1
SDG: Lea Co., NM

Client Sample ID: TH-8 (2')

Lab Sample ID: 880-43707-6
Matrix: Solid
Date Collected: 05/20/24 12:50
Date Received: 05/21/24 10:32
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		05/21/24 14:42	05/22/24 05:13	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/21/24 14:42	05/22/24 05:13	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/21/24 14:42	05/22/24 05:13	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		05/21/24 14:42	05/22/24 05:13	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/21/24 14:42	05/22/24 05:13	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		05/21/24 14:42	05/22/24 05:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*05/21/24 14:42*	*05/22/24 05:13*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*05/21/24 14:42*	*05/22/24 05:13*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			05/22/24 05:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/23/24 16:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/22/24 19:24	05/23/24 16:00	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/22/24 19:24	05/23/24 16:00	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/22/24 19:24	05/23/24 16:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*05/22/24 19:24*	*05/23/24 16:00*	*1*
o-Terphenyl	*115*		*70 - 130*	*05/22/24 19:24*	*05/23/24 16:00*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**140**		25.2		mg/Kg			05/22/24 16:19	5

Client Sample ID: TH-8 (3')

Lab Sample ID: 880-43707-7
Matrix: Solid
Date Collected: 05/20/24 12:55
Date Received: 05/21/24 10:32
Sample Depth: 3'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/21/24 14:42	05/22/24 05:34	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/21/24 14:42	05/22/24 05:34	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/21/24 14:42	05/22/24 05:34	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/21/24 14:42	05/22/24 05:34	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/21/24 14:42	05/22/24 05:34	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/21/24 14:42	05/22/24 05:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*05/21/24 14:42*	*05/22/24 05:34*	*1*

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Client Sample Results

Client: Crain Environmental
Project/Site: ARU #17H

Job ID: 880-43707-1
SDG: Lea Co., NM

Client Sample ID: TH-8 (3')

Date Collected: 05/20/24 12:55
Date Received: 05/21/24 10:32
Sample Depth: 3'

Lab Sample ID: 880-43707-7
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*05/21/24 14:42*	*05/22/24 05:34*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			05/22/24 05:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/23/24 16:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/22/24 19:24	05/23/24 16:19	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/22/24 19:24	05/23/24 16:19	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/22/24 19:24	05/23/24 16:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*05/22/24 19:24*	*05/23/24 16:19*	*1*
o-Terphenyl	*113*		*70 - 130*	*05/22/24 19:24*	*05/23/24 16:19*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**280**		49.9		mg/Kg			05/22/24 16:25	10

Client Sample ID: TH-8 (4')

Date Collected: 05/20/24 13:00
Date Received: 05/21/24 10:32
Sample Depth: 4'

Lab Sample ID: 880-43707-8
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/21/24 14:42	05/22/24 05:54	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/21/24 14:42	05/22/24 05:54	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/21/24 14:42	05/22/24 05:54	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/21/24 14:42	05/22/24 05:54	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/21/24 14:42	05/22/24 05:54	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/21/24 14:42	05/22/24 05:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*	*05/21/24 14:42*	*05/22/24 05:54*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*05/21/24 14:42*	*05/22/24 05:54*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			05/22/24 05:54	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			05/22/24 16:57	1

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Client Sample Results

Client: Crain Environmental
Project/Site: ARU #17H

Job ID: 880-43707-1
SDG: Lea Co., NM

Client Sample ID: TH-8 (4')

Date Collected: 05/20/24 13:00
Date Received: 05/21/24 10:32
Sample Depth: 4'

Lab Sample ID: 880-43707-8

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	<50.0	U	50.0		mg/Kg		05/21/24 16:20	05/22/24 16:57	1
Diesel Range Organics (Over C10-C28)	<50.0	U F1	50.0		mg/Kg		05/21/24 16:20	05/22/24 16:57	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/21/24 16:20	05/22/24 16:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*05/21/24 16:20*	*05/22/24 16:57*	*1*
o-Terphenyl	*122*		*70 - 130*	*05/21/24 16:20*	*05/22/24 16:57*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**40**		25.2		mg/Kg			05/23/24 07:07	5

Surrogate Summary

Client: Crain Environmental
Project/Site: ARU #17H

Job ID: 880-43707-1
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)
880-43707-1	TH-7 (1')	122	93
880-43707-2	TH-7 (2')	122	93
880-43707-3	TH-7 (3')	131 S1+	88
880-43707-4	TH-7 (4')	121	93
880-43707-5	TH-8 (1')	123	93
880-43707-6	TH-8 (2')	122	92
880-43707-7	TH-8 (3')	119	92
880-43707-8	TH-8 (4')	123	92
LCS 880-81211/1-A	Lab Control Sample	118	91
LCSD 880-81211/2-A	Lab Control Sample Dup	119	99
MB 880-81124/5-A	Method Blank	116	88
MB 880-81211/5-A	Method Blank	119	89

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)
880-43707-1	TH-7 (1')	124	126
880-43707-2	TH-7 (2')	124	125
880-43707-3	TH-7 (3')	111	113
880-43707-4	TH-7 (4')	113	116
880-43707-5	TH-8 (1')	118	120
880-43707-6	TH-8 (2')	112	115
880-43707-7	TH-8 (3')	110	113
880-43707-8	TH-8 (4')	119	122
880-43707-8 MS	TH-8 (4')	122	121
880-43707-8 MSD	TH-8 (4')	122	123
LCS 880-81231/2-A	Lab Control Sample	99	89
LCS 880-81364/2-A	Lab Control Sample	100	105
LCSD 880-81231/3-A	Lab Control Sample Dup	100	97
LCSD 880-81364/3-A	Lab Control Sample Dup	98	102
MB 880-81231/1-A	Method Blank	111	119
MB 880-81364/1-A	Method Blank	118	119

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Crain Environmental
Project/Site: ARU #17H

Job ID: 880-43707-1
SDG: Lea Co., NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-81124/5-A
Matrix: Solid
Analysis Batch: 81147

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 81124

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/20/24 15:25	05/21/24 11:38	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/20/24 15:25	05/21/24 11:38	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/20/24 15:25	05/21/24 11:38	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/20/24 15:25	05/21/24 11:38	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/20/24 15:25	05/21/24 11:38	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/20/24 15:25	05/21/24 11:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*05/20/24 15:25*	*05/21/24 11:38*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*05/20/24 15:25*	*05/21/24 11:38*	*1*

Lab Sample ID: MB 880-81211/5-A
Matrix: Solid
Analysis Batch: 81147

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 81211

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/21/24 14:42	05/21/24 22:52	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/21/24 14:42	05/21/24 22:52	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/21/24 14:42	05/21/24 22:52	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/21/24 14:42	05/21/24 22:52	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/21/24 14:42	05/21/24 22:52	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/21/24 14:42	05/21/24 22:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*05/21/24 14:42*	*05/21/24 22:52*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*05/21/24 14:42*	*05/21/24 22:52*	*1*

Lab Sample ID: LCS 880-81211/1-A
Matrix: Solid
Analysis Batch: 81147

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 81211

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1114		mg/Kg		111	70 - 130
Toluene	0.100	0.1115		mg/Kg		112	70 - 130
Ethylbenzene	0.100	0.1061		mg/Kg		106	70 - 130
m-Xylene & p-Xylene	0.200	0.2234		mg/Kg		112	70 - 130
o-Xylene	0.100	0.1155		mg/Kg		115	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*

Lab Sample ID: LCSD 880-81211/2-A
Matrix: Solid
Analysis Batch: 81147

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 81211

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1179		mg/Kg		118	70 - 130	6	35

QC Sample Results

Client: Crain Environmental
Project/Site: ARU #17H

Job ID: 880-43707-1
SDG: Lea Co., NM

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

Lab Sample ID: LCSD 880-81211/2-A
Matrix: Solid
Analysis Batch: 81147

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 81211

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1147		mg/Kg		115	70 - 130	3	35
Ethylbenzene			0.100	0.1125		mg/Kg		113	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.2328		mg/Kg		116	70 - 130	4	35
o-Xylene			0.100	0.1201		mg/Kg		120	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

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

Lab Sample ID: MB 880-81231/1-A
Matrix: Solid
Analysis Batch: 81242

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 81231

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/21/24 16:20	05/22/24 15:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/21/24 16:20	05/22/24 15:55	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/21/24 16:20	05/22/24 15:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*05/21/24 16:20*	*05/22/24 15:55*	*1*
o-Terphenyl	*119*		*70 - 130*	*05/21/24 16:20*	*05/22/24 15:55*	*1*

Lab Sample ID: LCS 880-81231/2-A
Matrix: Solid
Analysis Batch: 81242

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 81231

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	862.6		mg/Kg		86	70 - 130
Diesel Range Organics (Over C10-C28)			1000	829.6		mg/Kg		83	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*89*		*70 - 130*

Lab Sample ID: LCSD 880-81231/3-A
Matrix: Solid
Analysis Batch: 81242

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 81231

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	914.3		mg/Kg		91	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	916.4		mg/Kg		92	70 - 130	10	20

Eurofins Midland

QC Sample Results

Client: Crain Environmental
Project/Site: ARU #17H

Job ID: 880-43707-1
SDG: Lea Co., NM

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

Lab Sample ID: LCSD 880-81231/3-A
Matrix: Solid
Analysis Batch: 81242

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 81231

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	97		70 - 130

Lab Sample ID: 880-43707-8 MS
Matrix: Solid
Analysis Batch: 81242

Client Sample ID: TH-8 (4')
Prep Type: Total/NA
Prep Batch: 81231

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	957.0		mg/Kg		96	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U F1	1000	562.6	F1	mg/Kg		54	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	122		70 - 130
o-Terphenyl	121		70 - 130

Lab Sample ID: 880-43707-8 MSD
Matrix: Solid
Analysis Batch: 81242

Client Sample ID: TH-8 (4')
Prep Type: Total/NA
Prep Batch: 81231

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	966.5		mg/Kg		97	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U F1	1000	562.5	F1	mg/Kg		54	70 - 130	0	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	122		70 - 130
o-Terphenyl	123		70 - 130

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

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

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

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

QC Sample Results

Client: Crain Environmental
Project/Site: ARU #17H

Job ID: 880-43707-1
SDG: Lea Co., NM

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

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

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

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

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

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

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

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

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-81248/1-A
Matrix: Solid
Analysis Batch: 81267

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/22/24 13:20	1

Lab Sample ID: LCS 880-81248/2-A
Matrix: Solid
Analysis Batch: 81267

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	242.0		mg/Kg		97	90 - 110		

Lab Sample ID: LCSD 880-81248/3-A
Matrix: Solid
Analysis Batch: 81267

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	236.3		mg/Kg		95	90 - 110	2	20

QC Sample Results

Client: Crain Environmental
Project/Site: ARU #17H

Job ID: 880-43707-1
SDG: Lea Co., NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 880-81265/1-A
Matrix: Solid
Analysis Batch: 81289

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/23/24 06:48	1

Lab Sample ID: LCS 880-81265/2-A
Matrix: Solid
Analysis Batch: 81289

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	251.8		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-81265/3-A
Matrix: Solid
Analysis Batch: 81289

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	249.3		mg/Kg		100	90 - 110	1	20

Lab Sample ID: 880-43707-8 MS
Matrix: Solid
Analysis Batch: 81289

Client Sample ID: TH-8 (4')
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	40		260	40.5		mg/Kg		101	90 - 110		

Lab Sample ID: 880-43707-8 MSD
Matrix: Solid
Analysis Batch: 81289

Client Sample ID: TH-8 (4')
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	40		260	40.5		mg/Kg		101	90 - 110	0	20

QC Association Summary

Client: Crain Environmental
Project/Site: ARU #17H

Job ID: 880-43707-1
SDG: Lea Co., NM

GC VOA

Prep Batch: 81124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-81124/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 81147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43707-1	TH-7 (1')	Total/NA	Solid	8021B	81211
880-43707-2	TH-7 (2')	Total/NA	Solid	8021B	81211
880-43707-3	TH-7 (3')	Total/NA	Solid	8021B	81211
880-43707-4	TH-7 (4')	Total/NA	Solid	8021B	81211
880-43707-5	TH-8 (1')	Total/NA	Solid	8021B	81211
880-43707-6	TH-8 (2')	Total/NA	Solid	8021B	81211
880-43707-7	TH-8 (3')	Total/NA	Solid	8021B	81211
880-43707-8	TH-8 (4')	Total/NA	Solid	8021B	81211
MB 880-81124/5-A	Method Blank	Total/NA	Solid	8021B	81124
MB 880-81211/5-A	Method Blank	Total/NA	Solid	8021B	81211
LCS 880-81211/1-A	Lab Control Sample	Total/NA	Solid	8021B	81211
LCSD 880-81211/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	81211

Prep Batch: 81211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43707-1	TH-7 (1')	Total/NA	Solid	5035	
880-43707-2	TH-7 (2')	Total/NA	Solid	5035	
880-43707-3	TH-7 (3')	Total/NA	Solid	5035	
880-43707-4	TH-7 (4')	Total/NA	Solid	5035	
880-43707-5	TH-8 (1')	Total/NA	Solid	5035	
880-43707-6	TH-8 (2')	Total/NA	Solid	5035	
880-43707-7	TH-8 (3')	Total/NA	Solid	5035	
880-43707-8	TH-8 (4')	Total/NA	Solid	5035	
MB 880-81211/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-81211/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-81211/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 81288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43707-1	TH-7 (1')	Total/NA	Solid	Total BTEX	
880-43707-2	TH-7 (2')	Total/NA	Solid	Total BTEX	
880-43707-3	TH-7 (3')	Total/NA	Solid	Total BTEX	
880-43707-4	TH-7 (4')	Total/NA	Solid	Total BTEX	
880-43707-5	TH-8 (1')	Total/NA	Solid	Total BTEX	
880-43707-6	TH-8 (2')	Total/NA	Solid	Total BTEX	
880-43707-7	TH-8 (3')	Total/NA	Solid	Total BTEX	
880-43707-8	TH-8 (4')	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 81231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43707-8	TH-8 (4')	Total/NA	Solid	8015NM Prep	
MB 880-81231/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-81231/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-81231/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-43707-8 MS	TH-8 (4')	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Crain Environmental
Project/Site: ARU #17H

Job ID: 880-43707-1
SDG: Lea Co., NM

GC Semi VOA (Continued)

Prep Batch: 81231 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43707-8 MSD	TH-8 (4')	Total/NA	Solid	8015NM Prep	

Analysis Batch: 81242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43707-8	TH-8 (4')	Total/NA	Solid	8015B NM	81231
MB 880-81231/1-A	Method Blank	Total/NA	Solid	8015B NM	81231
LCS 880-81231/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	81231
LCSD 880-81231/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	81231
880-43707-8 MS	TH-8 (4')	Total/NA	Solid	8015B NM	81231
880-43707-8 MSD	TH-8 (4')	Total/NA	Solid	8015B NM	81231

Prep Batch: 81364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43707-1	TH-7 (1')	Total/NA	Solid	8015NM Prep	
880-43707-2	TH-7 (2')	Total/NA	Solid	8015NM Prep	
880-43707-3	TH-7 (3')	Total/NA	Solid	8015NM Prep	
880-43707-4	TH-7 (4')	Total/NA	Solid	8015NM Prep	
880-43707-5	TH-8 (1')	Total/NA	Solid	8015NM Prep	
880-43707-6	TH-8 (2')	Total/NA	Solid	8015NM Prep	
880-43707-7	TH-8 (3')	Total/NA	Solid	8015NM Prep	
MB 880-81364/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-81364/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-81364/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 81417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43707-1	TH-7 (1')	Total/NA	Solid	8015B NM	81364
880-43707-2	TH-7 (2')	Total/NA	Solid	8015B NM	81364
880-43707-3	TH-7 (3')	Total/NA	Solid	8015B NM	81364
880-43707-4	TH-7 (4')	Total/NA	Solid	8015B NM	81364
880-43707-5	TH-8 (1')	Total/NA	Solid	8015B NM	81364
880-43707-6	TH-8 (2')	Total/NA	Solid	8015B NM	81364
880-43707-7	TH-8 (3')	Total/NA	Solid	8015B NM	81364
MB 880-81364/1-A	Method Blank	Total/NA	Solid	8015B NM	81364
LCS 880-81364/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	81364
LCSD 880-81364/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	81364

Analysis Batch: 81432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43707-1	TH-7 (1')	Total/NA	Solid	8015 NM	
880-43707-2	TH-7 (2')	Total/NA	Solid	8015 NM	
880-43707-3	TH-7 (3')	Total/NA	Solid	8015 NM	
880-43707-4	TH-7 (4')	Total/NA	Solid	8015 NM	
880-43707-5	TH-8 (1')	Total/NA	Solid	8015 NM	
880-43707-6	TH-8 (2')	Total/NA	Solid	8015 NM	
880-43707-7	TH-8 (3')	Total/NA	Solid	8015 NM	
880-43707-8	TH-8 (4')	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Crain Environmental
Project/Site: ARU #17H

Job ID: 880-43707-1
SDG: Lea Co., NM

HPLC/IC

Leach Batch: 81248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43707-1	TH-7 (1')	Soluble	Solid	DI Leach	
880-43707-2	TH-7 (2')	Soluble	Solid	DI Leach	
880-43707-3	TH-7 (3')	Soluble	Solid	DI Leach	
880-43707-4	TH-7 (4')	Soluble	Solid	DI Leach	
880-43707-5	TH-8 (1')	Soluble	Solid	DI Leach	
880-43707-6	TH-8 (2')	Soluble	Solid	DI Leach	
880-43707-7	TH-8 (3')	Soluble	Solid	DI Leach	
MB 880-81248/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-81248/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-81248/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Leach Batch: 81265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43707-8	TH-8 (4')	Soluble	Solid	DI Leach	
MB 880-81265/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-81265/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-81265/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-43707-8 MS	TH-8 (4')	Soluble	Solid	DI Leach	
880-43707-8 MSD	TH-8 (4')	Soluble	Solid	DI Leach	

Analysis Batch: 81267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43707-1	TH-7 (1')	Soluble	Solid	300.0	81248
880-43707-2	TH-7 (2')	Soluble	Solid	300.0	81248
880-43707-3	TH-7 (3')	Soluble	Solid	300.0	81248
880-43707-4	TH-7 (4')	Soluble	Solid	300.0	81248
880-43707-5	TH-8 (1')	Soluble	Solid	300.0	81248
880-43707-6	TH-8 (2')	Soluble	Solid	300.0	81248
880-43707-7	TH-8 (3')	Soluble	Solid	300.0	81248
MB 880-81248/1-A	Method Blank	Soluble	Solid	300.0	81248
LCS 880-81248/2-A	Lab Control Sample	Soluble	Solid	300.0	81248
LCSD 880-81248/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	81248

Analysis Batch: 81289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-43707-8	TH-8 (4')	Soluble	Solid	300.0	81265
MB 880-81265/1-A	Method Blank	Soluble	Solid	300.0	81265
LCS 880-81265/2-A	Lab Control Sample	Soluble	Solid	300.0	81265
LCSD 880-81265/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	81265
880-43707-8 MS	TH-8 (4')	Soluble	Solid	300.0	81265
880-43707-8 MSD	TH-8 (4')	Soluble	Solid	300.0	81265

Lab Chronicle

Client: Crain Environmental
Project/Site: ARU #17H

Job ID: 880-43707-1
SDG: Lea Co., NM

Client Sample ID: TH-7 (1')

Lab Sample ID: 880-43707-1
Matrix: Solid
Date Collected: 05/20/24 12:15
Date Received: 05/21/24 10:32

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	81211	05/21/24 14:42	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	81147	05/22/24 02:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			81288	05/22/24 02:18	SM	EET MID
Total/NA	Analysis	8015 NM		1			81432	05/23/24 14:26	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	81364	05/22/24 19:24	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	81417	05/23/24 14:26	TKC	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	81248	05/22/24 07:56	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	81267	05/22/24 15:48	SMC	EET MID

Client Sample ID: TH-7 (2')

Lab Sample ID: 880-43707-2
Matrix: Solid
Date Collected: 05/20/24 12:20
Date Received: 05/21/24 10:32

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	81211	05/21/24 14:42	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	81147	05/22/24 03:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			81288	05/22/24 03:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			81432	05/23/24 14:45	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	81364	05/22/24 19:24	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	81417	05/23/24 14:45	TKC	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	81248	05/22/24 07:56	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	81267	05/22/24 15:54	SMC	EET MID

Client Sample ID: TH-7 (3')

Lab Sample ID: 880-43707-3
Matrix: Solid
Date Collected: 05/20/24 12:25
Date Received: 05/21/24 10:32

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	81211	05/21/24 14:42	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	81147	05/22/24 04:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			81288	05/22/24 04:12	SM	EET MID
Total/NA	Analysis	8015 NM		1			81432	05/23/24 15:04	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	81364	05/22/24 19:24	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	81417	05/23/24 15:04	TKC	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	81248	05/22/24 07:56	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	81267	05/22/24 16:00	SMC	EET MID

Client Sample ID: TH-7 (4')

Lab Sample ID: 880-43707-4
Matrix: Solid
Date Collected: 05/20/24 12:30
Date Received: 05/21/24 10:32

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	81211	05/21/24 14:42	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	81147	05/22/24 04:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			81288	05/22/24 04:32	SM	EET MID

Eurofins Midland

Lab Chronicle

Client: Crain Environmental
Project/Site: ARU #17H

Job ID: 880-43707-1
SDG: Lea Co., NM

Client Sample ID: TH-7 (4')

Lab Sample ID: 880-43707-4
Matrix: Solid
Date Collected: 05/20/24 12:30
Date Received: 05/21/24 10:32

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			81432	05/23/24 15:22	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	81364	05/22/24 19:24	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	81417	05/23/24 15:22	TKC	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	81248	05/22/24 07:56	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	81267	05/22/24 16:06	SMC	EET MID

Client Sample ID: TH-8 (1')

Lab Sample ID: 880-43707-5
Matrix: Solid
Date Collected: 05/20/24 12:45
Date Received: 05/21/24 10:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	81211	05/21/24 14:42	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	81147	05/22/24 04:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			81288	05/22/24 04:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			81432	05/23/24 15:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	81364	05/22/24 19:24	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	81417	05/23/24 15:41	TKC	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	81248	05/22/24 07:56	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	81267	05/22/24 16:13	SMC	EET MID

Client Sample ID: TH-8 (2')

Lab Sample ID: 880-43707-6
Matrix: Solid
Date Collected: 05/20/24 12:50
Date Received: 05/21/24 10:32

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	81211	05/21/24 14:42	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	81147	05/22/24 05:13	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			81288	05/22/24 05:13	SM	EET MID
Total/NA	Analysis	8015 NM		1			81432	05/23/24 16:00	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	81364	05/22/24 19:24	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	81417	05/23/24 16:00	TKC	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	81248	05/22/24 07:56	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	81267	05/22/24 16:19	SMC	EET MID

Client Sample ID: TH-8 (3')

Lab Sample ID: 880-43707-7
Matrix: Solid
Date Collected: 05/20/24 12:55
Date Received: 05/21/24 10:32

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	81211	05/21/24 14:42	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	81147	05/22/24 05:34	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			81288	05/22/24 05:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			81432	05/23/24 16:19	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	81364	05/22/24 19:24	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	81417	05/23/24 16:19	TKC	EET MID

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Lab Chronicle

Client: Crain Environmental
Project/Site: ARU #17H

Job ID: 880-43707-1
SDG: Lea Co., NM

Client Sample ID: TH-8 (3')

Date Collected: 05/20/24 12:55
Date Received: 05/21/24 10:32

Lab Sample ID: 880-43707-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	81248	05/22/24 07:56	SA	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	81267	05/22/24 16:25	SMC	EET MID

Client Sample ID: TH-8 (4')

Date Collected: 05/20/24 13:00
Date Received: 05/21/24 10:32

Lab Sample ID: 880-43707-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	81211	05/21/24 14:42	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	81147	05/22/24 05:54	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			81288	05/22/24 05:54	SM	EET MID
Total/NA	Analysis	8015 NM		1			81432	05/22/24 16:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	81231	05/21/24 16:20	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	81242	05/22/24 16:57	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	81265	05/22/24 08:55	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	81289	05/23/24 07:07	SMC	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Crain Environmental
Project/Site: ARU #17H

Job ID: 880-43707-1
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: ARU #17H

Job ID: 880-43707-1
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: ARU #17H

Job ID: 880-43707-1
SDG: Lea Co., NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-43707-1	TH-7 (1')	Solid	05/20/24 12:15	05/21/24 10:32	1'
880-43707-2	TH-7 (2')	Solid	05/20/24 12:20	05/21/24 10:32	2'
880-43707-3	TH-7 (3')	Solid	05/20/24 12:25	05/21/24 10:32	3'
880-43707-4	TH-7 (4')	Solid	05/20/24 12:30	05/21/24 10:32	4'
880-43707-5	TH-8 (1')	Solid	05/20/24 12:45	05/21/24 10:32	1'
880-43707-6	TH-8 (2')	Solid	05/20/24 12:50	05/21/24 10:32	2'
880-43707-7	TH-8 (3')	Solid	05/20/24 12:55	05/21/24 10:32	3'
880-43707-8	TH-8 (4')	Solid	05/20/24 13:00	05/21/24 10:32	4'

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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

880-43707 Chain of Custody

www.xenco.com

Project Manager:	Cindy Crain	Bill to: (if different)	Chris Gaddy
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:	ARU # 17H	Turn Around	☒ Routine ☐ Rush
Project Number:	—	Due Date:	
Project Location:	Lea Co. NM	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Cindy Crain		
PO #:	—		

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	IR6
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-.10
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	4.2
Total Containers:		Corrected Temperature:	4.1

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
TH-7 (1')	S	5/20/24	1215	1'	C	1		X	X	X	
TH-7 (2')			1220	2'							
TH-7 (3')			1225	3'							
TH-7 (4')			1230	4'							
TH-8 (1')			1245	1'							
TH-8 (2')			1250	2'							
TH-8 (3')			1255	3'							
TH-8 (4')	↓	↓	1300	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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Cindy Crain		5/21/24 1032	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Crain Environmental

Job Number: 880-43707-1
SDG Number: Lea Co., NM

Login Number: 43707
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 10/11/2023 12:48:50 PM

JOB DESCRIPTION

Anderson Ranch #017H
SDG NUMBER Lea Co NM

JOB NUMBER

880-33915-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

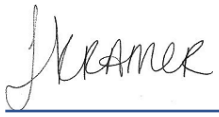
Eurofins Midland

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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10/11/2023 12:48:50 PM

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

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Laboratory Job ID: 880-33915-1
SDG: Lea Co NM

Table of Contents

Definitions/Glossary

Client: Crain Environmental Job ID: 880-33915-1
Project/Site: Anderson Ranch #017H SDG: Lea Co NM

Qualifiers

GC VOA

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

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

Job ID: 880-33915-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-33915-1

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 10/2/2023 4:07 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.4°C

GC VOA
Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-63969 and analytical batch 880-64254 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: TH-1 (0-6") (880-33915-1) and TH-1 (5') (880-33915-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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: The surrogate recovery for the blank associated with preparation batch 880-63937 and analytical batch 880-64070 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-64070/31), (CCV 880-64070/58) and (LCS 880-63937/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: TH-1 (10') (880-33915-3), TH-2 (9') (880-33915-6) and TH-3 (5') (880-33915-9). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: TH-1 (5') (880-33915-2), TH-2 (0-6") (880-33915-4), TH-2 (5') (880-33915-5), TH-3 (0-6") (880-33915-7), TH-3 (3') (880-33915-8), TH-4 (5') (880-33915-11), TH-5 (0-6") (880-33915-12) and TH-5 (2.5') (880-33915-13). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-64003 and analytical batch 880-64045 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

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

Lab Sample ID: 880-33915-1
Matrix: Solid
Date Collected: 09/29/23 13:10
Date Received: 10/02/23 16:07
Sample Depth: 0-6"

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0198	U	0.0198		mg/Kg		10/09/23 15:31	10/10/23 16:51	10
Toluene	**0.0438**		0.0198		mg/Kg		10/09/23 15:31	10/10/23 16:51	10
Ethylbenzene	**0.0256**		0.0198		mg/Kg		10/09/23 15:31	10/10/23 16:51	10
m-Xylene & p-Xylene	**0.0649**		0.0396		mg/Kg		10/09/23 15:31	10/10/23 16:51	10
o-Xylene	**0.0239**		0.0198		mg/Kg		10/09/23 15:31	10/10/23 16:51	10
Xylenes, Total	**0.0888**		0.0396		mg/Kg		10/09/23 15:31	10/10/23 16:51	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*55*	*S1-*	*70 - 130*	*10/09/23 15:31*	*10/10/23 16:51*	*10*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*10/09/23 15:31*	*10/10/23 16:51*	*10*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.158**		0.0396		mg/Kg			10/10/23 16:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**1420**		49.9		mg/Kg			10/07/23 01:58	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		10/04/23 10:00	10/07/23 01:58	1
Diesel Range Organics (Over C10-C28)	**1420**		49.9		mg/Kg		10/04/23 10:00	10/07/23 01:58	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/04/23 10:00	10/07/23 01:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*127*		*70 - 130*	*10/04/23 10:00*	*10/07/23 01:58*	*1*
o-Terphenyl	*111*		*70 - 130*	*10/04/23 10:00*	*10/07/23 01:58*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2990**	**F1**	25.0		mg/Kg			10/06/23 08:49	5

Client Sample ID: TH-1 (5')

Lab Sample ID: 880-33915-2
Matrix: Solid
Date Collected: 09/29/23 13:15
Date Received: 10/02/23 16:07
Sample Depth: 5'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0200	U	0.0200		mg/Kg		10/09/23 15:31	10/10/23 17:11	10
Toluene	<0.0200	U	0.0200		mg/Kg		10/09/23 15:31	10/10/23 17:11	10
Ethylbenzene	<0.0200	U	0.0200		mg/Kg		10/09/23 15:31	10/10/23 17:11	10
m-Xylene & p-Xylene	<0.0401	U	0.0401		mg/Kg		10/09/23 15:31	10/10/23 17:11	10
o-Xylene	**0.0385**		0.0200		mg/Kg		10/09/23 15:31	10/10/23 17:11	10
Xylenes, Total	<0.0401	U	0.0401		mg/Kg		10/09/23 15:31	10/10/23 17:11	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*62*	*S1-*	*70 - 130*	*10/09/23 15:31*	*10/10/23 17:11*	*10*

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Client Sample Results

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

Client Sample ID: TH-1 (5')

Date Collected: 09/29/23 13:15
Date Received: 10/02/23 16:07
Sample Depth: 5'

Lab Sample ID: 880-33915-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*10/09/23 15:31*	*10/10/23 17:11*	*10*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0401	U	0.0401		mg/Kg			10/10/23 17:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**892**		49.7		mg/Kg			10/07/23 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	<49.7	U	49.7		mg/Kg		10/04/23 10:00	10/07/23 03:06	1
Diesel Range Organics (Over C10-C28)	**892**		49.7		mg/Kg		10/04/23 10:00	10/07/23 03:06	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		10/04/23 10:00	10/07/23 03:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*187*	*S1+*	*70 - 130*	*10/04/23 10:00*	*10/07/23 03:06*	*1*
o-Terphenyl	*166*	*S1+*	*70 - 130*	*10/04/23 10:00*	*10/07/23 03:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2130**		25.2		mg/Kg			10/06/23 09:09	5

Client Sample ID: TH-1 (10')

Date Collected: 09/29/23 13:30
Date Received: 10/02/23 16:07
Sample Depth: 10'

Lab Sample ID: 880-33915-3
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		10/04/23 16:36	10/09/23 23:52	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/04/23 16:36	10/09/23 23:52	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/04/23 16:36	10/09/23 23:52	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/04/23 16:36	10/09/23 23:52	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/04/23 16:36	10/09/23 23:52	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/04/23 16:36	10/09/23 23:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*10/04/23 16:36*	*10/09/23 23:52*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*10/04/23 16:36*	*10/09/23 23:52*	*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			10/09/23 23:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			10/06/23 23:41	1

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Client Sample Results

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

Client Sample ID: TH-1 (10')

Lab Sample ID: 880-33915-3
Matrix: Solid
Date Collected: 09/29/23 13:30
Date Received: 10/02/23 16:07
Sample Depth: 10'

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	<50.4	U	50.4		mg/Kg		10/04/23 11:48	10/06/23 23:41	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		10/04/23 11:48	10/06/23 23:41	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		10/04/23 11:48	10/06/23 23:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*158*	*S1+*	*70 - 130*	*10/04/23 11:48*	*10/06/23 23:41*	*1*
o-Terphenyl	*144*	*S1+*	*70 - 130*	*10/04/23 11:48*	*10/06/23 23:41*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3160**		24.8		mg/Kg			10/06/23 09:16	5

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

Lab Sample ID: 880-33915-4
Matrix: Solid
Date Collected: 09/29/23 13:32
Date Received: 10/02/23 16:07
Sample Depth: 0-6"

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		10/04/23 16:36	10/10/23 00:13	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/04/23 16:36	10/10/23 00:13	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/04/23 16:36	10/10/23 00:13	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		10/04/23 16:36	10/10/23 00:13	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/04/23 16:36	10/10/23 00:13	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/04/23 16:36	10/10/23 00:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*10/04/23 16:36*	*10/10/23 00:13*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*10/04/23 16:36*	*10/10/23 00:13*	*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			10/10/23 00:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**3770**		50.5		mg/Kg			10/07/23 01:35	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		10/04/23 11:48	10/07/23 01:35	1
Diesel Range Organics (Over C10-C28)	**3770**		50.5		mg/Kg		10/04/23 11:48	10/07/23 01:35	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		10/04/23 11:48	10/07/23 01:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*145*	*S1+*	*70 - 130*	*10/04/23 11:48*	*10/07/23 01:35*	*1*
o-Terphenyl	*125*		*70 - 130*	*10/04/23 11:48*	*10/07/23 01:35*	*1*

Client Sample Results

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

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

Lab Sample ID: 880-33915-4
Matrix: Solid
Date Collected: 09/29/23 13:32
Date Received: 10/02/23 16:07
Sample Depth: 0-6"

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2710**		24.8		mg/Kg			10/06/23 09:22	5

Client Sample ID: TH-2 (5')

Lab Sample ID: 880-33915-5
Matrix: Solid
Date Collected: 09/29/23 13:36
Date Received: 10/02/23 16:07
Sample Depth: 5'

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		10/04/23 16:36	10/10/23 00:33	1
Toluene	<0.00201	U	0.00201		mg/Kg		10/04/23 16:36	10/10/23 00:33	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		10/04/23 16:36	10/10/23 00:33	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		10/04/23 16:36	10/10/23 00:33	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		10/04/23 16:36	10/10/23 00:33	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		10/04/23 16:36	10/10/23 00:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*10/04/23 16:36*	*10/10/23 00:33*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*10/04/23 16:36*	*10/10/23 00:33*	*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			10/10/23 00:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**239**		49.8		mg/Kg			10/07/23 03:51	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		10/04/23 11:48	10/07/23 03:51	1
Diesel Range Organics (Over C10-C28)	**239**		49.8		mg/Kg		10/04/23 11:48	10/07/23 03:51	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		10/04/23 11:48	10/07/23 03:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*151*	*S1+*	*70 - 130*	*10/04/23 11:48*	*10/07/23 03:51*	*1*
o-Terphenyl	*133*	*S1+*	*70 - 130*	*10/04/23 11:48*	*10/07/23 03:51*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1780**		25.2		mg/Kg			10/06/23 09:29	5

Client Sample Results

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

Client Sample ID: TH-2 (9')

Lab Sample ID: 880-33915-6
Matrix: Solid
Date Collected: 09/29/23 13:40
Date Received: 10/02/23 16:07
Sample Depth: 9'

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		10/04/23 16:36	10/10/23 00:54	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/04/23 16:36	10/10/23 00:54	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/04/23 16:36	10/10/23 00:54	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		10/04/23 16:36	10/10/23 00:54	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/04/23 16:36	10/10/23 00:54	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		10/04/23 16:36	10/10/23 00:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*10/04/23 16:36*	*10/10/23 00:54*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*10/04/23 16:36*	*10/10/23 00:54*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			10/10/23 00:54	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**64.8**		49.6		mg/Kg			10/07/23 00:04	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	<49.6	U	49.6		mg/Kg		10/04/23 11:48	10/07/23 00:04	1
Diesel Range Organics (Over C10-C28)	**64.8**		49.6		mg/Kg		10/04/23 11:48	10/07/23 00:04	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		10/04/23 11:48	10/07/23 00:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*145*	*S1+*	*70 - 130*	*10/04/23 11:48*	*10/07/23 00:04*	*1*
o-Terphenyl	*130*		*70 - 130*	*10/04/23 11:48*	*10/07/23 00:04*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**146**		5.00		mg/Kg			10/06/23 10:22	1

Client Sample ID: TH-3 (0-6")

Lab Sample ID: 880-33915-7
Matrix: Solid
Date Collected: 09/29/23 14:08
Date Received: 10/02/23 16:07
Sample Depth: 0-6"

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		10/04/23 16:36	10/10/23 01:14	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/04/23 16:36	10/10/23 01:14	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/04/23 16:36	10/10/23 01:14	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/04/23 16:36	10/10/23 01:14	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/04/23 16:36	10/10/23 01:14	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/04/23 16:36	10/10/23 01:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*10/04/23 16:36*	*10/10/23 01:14*	*1*

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Client Sample Results

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

Client Sample ID: TH-3 (0-6")

Lab Sample ID: 880-33915-7
Matrix: Solid
Date Collected: 09/29/23 14:08
Date Received: 10/02/23 16:07
Sample Depth: 0-6"

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*10/04/23 16:36*	*10/10/23 01:14*	*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			10/10/23 01:14	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**103**		49.6		mg/Kg			10/07/23 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	<49.6	U	49.6		mg/Kg		10/04/23 11:48	10/07/23 03:28	1
Diesel Range Organics (Over C10-C28)	**103**		49.6		mg/Kg		10/04/23 11:48	10/07/23 03:28	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		10/04/23 11:48	10/07/23 03:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*150*	*S1+*	*70 - 130*	*10/04/23 11:48*	*10/07/23 03:28*	*1*
o-Terphenyl	*135*	*S1+*	*70 - 130*	*10/04/23 11:48*	*10/07/23 03:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**49.2**		4.98		mg/Kg			10/06/23 10:29	1

Client Sample ID: TH-3 (3')

Lab Sample ID: 880-33915-8
Matrix: Solid
Date Collected: 09/29/23 14:10
Date Received: 10/02/23 16:07
Sample Depth: 3'

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		10/04/23 16:36	10/10/23 01:34	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/04/23 16:36	10/10/23 01:34	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/04/23 16:36	10/10/23 01:34	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/04/23 16:36	10/10/23 01:34	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/04/23 16:36	10/10/23 01:34	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/04/23 16:36	10/10/23 01:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*10/04/23 16:36*	*10/10/23 01:34*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*10/04/23 16:36*	*10/10/23 01:34*	*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			10/10/23 01:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**1430**		50.2		mg/Kg			10/07/23 02:43	1

Eurofins Midland

Client Sample Results

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

Client Sample ID: TH-3 (3')

Lab Sample ID: 880-33915-8
Matrix: Solid
Date Collected: 09/29/23 14:10
Date Received: 10/02/23 16:07
Sample Depth: 3'

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	<50.2	U	50.2		mg/Kg		10/04/23 11:48	10/07/23 02:43	1
Diesel Range Organics (Over C10-C28)	**1430**		50.2		mg/Kg		10/04/23 11:48	10/07/23 02:43	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		10/04/23 11:48	10/07/23 02:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*159*	*S1+*	*70 - 130*	*10/04/23 11:48*	*10/07/23 02:43*	*1*
o-Terphenyl	*137*	*S1+*	*70 - 130*	*10/04/23 11:48*	*10/07/23 02:43*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**230**		25.2		mg/Kg			10/06/23 10:35	5

Client Sample ID: TH-3 (5')

Lab Sample ID: 880-33915-9
Matrix: Solid
Date Collected: 09/29/23 14:20
Date Received: 10/02/23 16:07
Sample Depth: 5'

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		10/04/23 16:36	10/10/23 01:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/04/23 16:36	10/10/23 01:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/04/23 16:36	10/10/23 01:55	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		10/04/23 16:36	10/10/23 01:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/04/23 16:36	10/10/23 01:55	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/04/23 16:36	10/10/23 01:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*10/04/23 16:36*	*10/10/23 01:55*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*10/04/23 16:36*	*10/10/23 01:55*	*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			10/10/23 01:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			10/07/23 00:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		10/04/23 11:48	10/07/23 00:26	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		10/04/23 11:48	10/07/23 00:26	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		10/04/23 11:48	10/07/23 00:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*142*	*S1+*	*70 - 130*	*10/04/23 11:48*	*10/07/23 00:26*	*1*
o-Terphenyl	*129*		*70 - 130*	*10/04/23 11:48*	*10/07/23 00:26*	*1*

Client Sample Results

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

Client Sample ID: TH-3 (5')

Lab Sample ID: 880-33915-9
Matrix: Solid
Date Collected: 09/29/23 14:20
Date Received: 10/02/23 16:07
Sample Depth: 5'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**222**		4.97		mg/Kg			10/06/23 10:42	1

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

Lab Sample ID: 880-33915-10
Matrix: Solid
Date Collected: 09/29/23 13:55
Date Received: 10/02/23 16:07
Sample Depth: 0-6"

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		10/04/23 16:36	10/10/23 02:15	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/04/23 16:36	10/10/23 02:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/04/23 16:36	10/10/23 02:15	1
m-Xylene & p-Xylene	**0.00956**		0.00401		mg/Kg		10/04/23 16:36	10/10/23 02:15	1
o-Xylene	**0.00264**		0.00200		mg/Kg		10/04/23 16:36	10/10/23 02:15	1
Xylenes, Total	**0.0122**		0.00401		mg/Kg		10/04/23 16:36	10/10/23 02:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*10/04/23 16:36*	*10/10/23 02:15*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*10/04/23 16:36*	*10/10/23 02:15*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0122**		0.00401		mg/Kg			10/10/23 02:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**5320**		253		mg/Kg			10/07/23 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	<253	U	253		mg/Kg		10/04/23 11:48	10/07/23 01:12	5
Diesel Range Organics (Over C10-C28)	**5320**		253		mg/Kg		10/04/23 11:48	10/07/23 01:12	5
OII Range Organics (Over C28-C36)	<253	U	253		mg/Kg		10/04/23 11:48	10/07/23 01:12	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*10/04/23 11:48*	*10/07/23 01:12*	*5*
o-Terphenyl	*111*		*70 - 130*	*10/04/23 11:48*	*10/07/23 01:12*	*5*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**735**		4.98		mg/Kg			10/06/23 10:48	1

Client Sample Results

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

Client Sample ID: TH-4 (5')

Lab Sample ID: 880-33915-11
Matrix: Solid
Date Collected: 09/29/23 14:05
Date Received: 10/02/23 16:07
Sample Depth: 5'

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		10/04/23 16:36	10/10/23 04:46	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/04/23 16:36	10/10/23 04:46	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/04/23 16:36	10/10/23 04:46	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/04/23 16:36	10/10/23 04:46	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/04/23 16:36	10/10/23 04:46	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/04/23 16:36	10/10/23 04:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*10/04/23 16:36*	*10/10/23 04:46*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*10/04/23 16:36*	*10/10/23 04:46*	*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			10/10/23 04:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**2540**		49.9		mg/Kg			10/07/23 02:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		10/04/23 11:48	10/07/23 02:21	1
Diesel Range Organics (Over C10-C28)	**2540**		49.9		mg/Kg		10/04/23 11:48	10/07/23 02:21	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/04/23 11:48	10/07/23 02:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*175*	*S1+*	*70 - 130*	*10/04/23 11:48*	*10/07/23 02:21*	*1*
o-Terphenyl	*147*	*S1+*	*70 - 130*	*10/04/23 11:48*	*10/07/23 02:21*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**246**	**F1**	5.02		mg/Kg			10/06/23 10:55	1

Client Sample ID: TH-5 (0-6")

Lab Sample ID: 880-33915-12
Matrix: Solid
Date Collected: 09/29/23 13:45
Date Received: 10/02/23 16:07
Sample Depth: 0-6"

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		10/04/23 16:36	10/10/23 05:06	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/04/23 16:36	10/10/23 05:06	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/04/23 16:36	10/10/23 05:06	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/04/23 16:36	10/10/23 05:06	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/04/23 16:36	10/10/23 05:06	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/04/23 16:36	10/10/23 05:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*10/04/23 16:36*	*10/10/23 05:06*	*1*

Client Sample Results

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

Client Sample ID: TH-5 (0-6")

Lab Sample ID: 880-33915-12
Matrix: Solid
Date Collected: 09/29/23 13:45
Date Received: 10/02/23 16:07
Sample Depth: 0-6"

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*10/04/23 16:36*	*10/10/23 05:06*	*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			10/10/23 05:06	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			10/07/23 04:13	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		10/04/23 11:48	10/07/23 04:13	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		10/04/23 11:48	10/07/23 04:13	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		10/04/23 11:48	10/07/23 04:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*161*	*S1+*	*70 - 130*	*10/04/23 11:48*	*10/07/23 04:13*	*1*
o-Terphenyl	*140*	*S1+*	*70 - 130*	*10/04/23 11:48*	*10/07/23 04:13*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**59.6**		5.03		mg/Kg			10/06/23 11:15	1

Client Sample ID: TH-5 (2.5')

Lab Sample ID: 880-33915-13
Matrix: Solid
Date Collected: 09/29/23 13:50
Date Received: 10/02/23 16:07
Sample Depth: 2.5'

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		10/04/23 16:36	10/10/23 05:27	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/04/23 16:36	10/10/23 05:27	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/04/23 16:36	10/10/23 05:27	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		10/04/23 16:36	10/10/23 05:27	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/04/23 16:36	10/10/23 05:27	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/04/23 16:36	10/10/23 05:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*10/04/23 16:36*	*10/10/23 05:27*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*10/04/23 16:36*	*10/10/23 05:27*	*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			10/10/23 05:27	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			10/07/23 04:34	1

Eurofins Midland

Client Sample Results

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

Client Sample ID: TH-5 (2.5')

Date Collected: 09/29/23 13:50
Date Received: 10/02/23 16:07
Sample Depth: 2.5'

Lab Sample ID: 880-33915-13

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		10/04/23 11:48	10/07/23 04:34	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		10/04/23 11:48	10/07/23 04:34	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		10/04/23 11:48	10/07/23 04:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*170*	*S1+*	*70 - 130*	*10/04/23 11:48*	*10/07/23 04:34*	*1*
o-Terphenyl	*159*	*S1+*	*70 - 130*	*10/04/23 11:48*	*10/07/23 04:34*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**113**		5.00		mg/Kg			10/06/23 11:22	1

Surrogate Summary

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
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)
880-33915-1	TH-1 (0-6")	55 S1-	111
880-33915-2	TH-1 (5')	62 S1-	105
880-33915-3	TH-1 (10')	80	95
880-33915-3 MS	TH-1 (10')	100	105
880-33915-3 MSD	TH-1 (10')	111	107
880-33915-4	TH-2 (0-6")	107	95
880-33915-5	TH-2 (5')	97	92
880-33915-6	TH-2 (9')	99	97
880-33915-7	TH-3 (0-6")	95	95
880-33915-8	TH-3 (3')	100	98
880-33915-9	TH-3 (5')	101	102
880-33915-10	TH-4 (0-6")	90	102
880-33915-11	TH-4 (5')	85	99
880-33915-12	TH-5 (0-6")	97	106
880-33915-13	TH-5 (2.5')	102	106
LCS 880-63969/1-A	Lab Control Sample	108	103
LCS 880-64288/1-A	Lab Control Sample	114	109
LCSD 880-63969/2-A	Lab Control Sample Dup	101	104
LCSD 880-64288/2-A	Lab Control Sample Dup	116	110
MB 880-63969/5-A	Method Blank	118	148 S1+
MB 880-64254/8	Method Blank	121	138 S1+
MB 880-64288/5-A	Method Blank	72	98

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)
880-33915-1	TH-1 (0-6")	127	111
880-33915-2	TH-1 (5')	187 S1+	166 S1+
880-33915-3	TH-1 (10')	158 S1+	144 S1+
880-33915-4	TH-2 (0-6")	145 S1+	125
880-33915-5	TH-2 (5')	151 S1+	133 S1+
880-33915-6	TH-2 (9')	145 S1+	130
880-33915-7	TH-3 (0-6")	150 S1+	135 S1+
880-33915-8	TH-3 (3')	159 S1+	137 S1+
880-33915-9	TH-3 (5')	142 S1+	129
880-33915-10	TH-4 (0-6")	119	111
880-33915-11	TH-4 (5')	175 S1+	147 S1+
880-33915-12	TH-5 (0-6")	161 S1+	140 S1+
880-33915-13	TH-5 (2.5')	170 S1+	159 S1+
LCS 880-63937/2-A	Lab Control Sample	132 S1+	143 S1+
LCSD 880-63937/3-A	Lab Control Sample Dup	107	114
MB 880-63937/1-A	Method Blank	145 S1+	140 S1+

Surrogate Legend

Surrogate Summary

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-63969/5-A
Matrix: Solid
Analysis Batch: 64254

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63969

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/04/23 16:36	10/09/23 23:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/04/23 16:36	10/09/23 23:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/04/23 16:36	10/09/23 23:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/04/23 16:36	10/09/23 23:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/04/23 16:36	10/09/23 23:24	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/04/23 16:36	10/09/23 23:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*10/04/23 16:36*	*10/09/23 23:24*	*1*
1,4-Difluorobenzene (Surr)	*148*	*S1+*	*70 - 130*	*10/04/23 16:36*	*10/09/23 23:24*	*1*

Lab Sample ID: LCS 880-63969/1-A
Matrix: Solid
Analysis Batch: 64254

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63969

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1069		mg/Kg		107	70 - 130
Toluene	0.100	0.09231		mg/Kg		92	70 - 130
Ethylbenzene	0.100	0.08765		mg/Kg		88	70 - 130
m-Xylene & p-Xylene	0.200	0.2194		mg/Kg		110	70 - 130
o-Xylene	0.100	0.1079		mg/Kg		108	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-63969/2-A
Matrix: Solid
Analysis Batch: 64254

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 63969

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1086		mg/Kg		109	70 - 130	2	35
Toluene	0.100	0.09493		mg/Kg		95	70 - 130	3	35
Ethylbenzene	0.100	0.08672		mg/Kg		87	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.2113		mg/Kg		106	70 - 130	4	35
o-Xylene	0.100	0.1037		mg/Kg		104	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 880-33915-3 MS
Matrix: Solid
Analysis Batch: 64254

Client Sample ID: TH-1 (10')
Prep Type: Total/NA
Prep Batch: 63969

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.0996	0.09624		mg/Kg		97	70 - 130
Toluene	<0.00199	U	0.0996	0.09177		mg/Kg		92	70 - 130

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QC Sample Results

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

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

Lab Sample ID: 880-33915-3 MS
Matrix: Solid
Analysis Batch: 64254

Client Sample ID: TH-1 (10')
Prep Type: Total/NA
Prep Batch: 63969

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.0996	0.07881		mg/Kg		79	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.199	0.1980		mg/Kg		99	70 - 130
o-Xylene	<0.00199	U	0.0996	0.09763		mg/Kg		98	70 - 130

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

Lab Sample ID: 880-33915-3 MSD
Matrix: Solid
Analysis Batch: 64254

Client Sample ID: TH-1 (10')
Prep Type: Total/NA
Prep Batch: 63969

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0990	0.1001		mg/Kg		101	70 - 130	4	35
Toluene	<0.00199	U	0.0990	0.08862		mg/Kg		90	70 - 130	3	35
Ethylbenzene	<0.00199	U	0.0990	0.08244		mg/Kg		83	70 - 130	5	35
m-Xylene & p-Xylene	<0.00398	U	0.198	0.2009		mg/Kg		101	70 - 130	1	35
o-Xylene	<0.00199	U	0.0990	0.09698		mg/Kg		98	70 - 130	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: MB 880-64254/8
Matrix: Solid
Analysis Batch: 64254

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg			10/09/23 16:42	1
Toluene	<0.00200	U	0.00200		mg/Kg			10/09/23 16:42	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg			10/09/23 16:42	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg			10/09/23 16:42	1
o-Xylene	<0.00200	U	0.00200		mg/Kg			10/09/23 16:42	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg			10/09/23 16:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*		*10/09/23 16:42*	*1*
1,4-Difluorobenzene (Surr)	*138*	*S1+*	*70 - 130*		*10/09/23 16:42*	*1*

Lab Sample ID: MB 880-64288/5-A
Matrix: Solid
Analysis Batch: 64326

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64288

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/09/23 15:31	10/10/23 11:32	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/09/23 15:31	10/10/23 11:32	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/09/23 15:31	10/10/23 11:32	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/09/23 15:31	10/10/23 11:32	1

QC Sample Results

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

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

Lab Sample ID: MB 880-64288/5-A
Matrix: Solid
Analysis Batch: 64326

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64288

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/09/23 15:31	10/10/23 11:32	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/09/23 15:31	10/10/23 11:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*72*		*70 - 130*	*10/09/23 15:31*	*10/10/23 11:32*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*10/09/23 15:31*	*10/10/23 11:32*	*1*

Lab Sample ID: LCS 880-64288/1-A
Matrix: Solid
Analysis Batch: 64326

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 64288

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1054		mg/Kg		105	70 - 130
Toluene	0.100	0.1013		mg/Kg		101	70 - 130
Ethylbenzene	0.100	0.1035		mg/Kg		103	70 - 130
m-Xylene & p-Xylene	0.200	0.2202		mg/Kg		110	70 - 130
o-Xylene	0.100	0.1121		mg/Kg		112	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: LCSD 880-64288/2-A
Matrix: Solid
Analysis Batch: 64326

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 64288

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1058		mg/Kg		106	70 - 130	0	35
Toluene	0.100	0.09806		mg/Kg		98	70 - 130	3	35
Ethylbenzene	0.100	0.09978		mg/Kg		100	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.2118		mg/Kg		106	70 - 130	4	35
o-Xylene	0.100	0.1081		mg/Kg		108	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

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

Lab Sample ID: MB 880-63937/1-A
Matrix: Solid
Analysis Batch: 64070

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63937

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		10/04/23 09:49	10/06/23 19:14	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/04/23 09:49	10/06/23 19:14	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/04/23 09:49	10/06/23 19:14	1

QC Sample Results

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	145	S1+	70 - 130	10/04/23 09:49	10/06/23 19:14	1
o-Terphenyl	140	S1+	70 - 130	10/04/23 09:49	10/06/23 19:14	1

Lab Sample ID: LCS 880-63937/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 64070 — **Prep Batch: 63937**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	969.8		mg/Kg		97	70 - 130
Diesel Range Organics (Over C10-C28)	1000	969.9		mg/Kg		97	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	132	S1+	70 - 130
o-Terphenyl	143	S1+	70 - 130

Lab Sample ID: LCSD 880-63937/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 64070 — **Prep Batch: 63937**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	981.5		mg/Kg		98	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	1000	973.5		mg/Kg		97	70 - 130	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	114		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-64003/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 64045

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			10/06/23 08:29	1

Lab Sample ID: LCS 880-64003/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 64045

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	254.1		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-64003/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 64045

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	253.5		mg/Kg		101	90 - 110	0	20

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QC Sample Results

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-33915-1 MS
Matrix: Solid
Analysis Batch: 64045

Client Sample ID: TH-1 (0-6")
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	2990	F1	1250	4495	F1	mg/Kg		121	90 - 110

Lab Sample ID: 880-33915-1 MSD
Matrix: Solid
Analysis Batch: 64045

Client Sample ID: TH-1 (0-6")
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	2990	F1	1250	4512	F1	mg/Kg		122	90 - 110	0	20

Lab Sample ID: 880-33915-11 MS
Matrix: Solid
Analysis Batch: 64045

Client Sample ID: TH-4 (5')
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	246	F1	251	551.7	F1	mg/Kg		122	90 - 110

Lab Sample ID: 880-33915-11 MSD
Matrix: Solid
Analysis Batch: 64045

Client Sample ID: TH-4 (5')
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	246	F1	251	553.0	F1	mg/Kg		122	90 - 110	0	20

QC Association Summary

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

GC VOA

Prep Batch: 63969

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-33915-3	TH-1 (10')	Total/NA	Solid	5035	
880-33915-4	TH-2 (0-6")	Total/NA	Solid	5035	
880-33915-5	TH-2 (5')	Total/NA	Solid	5035	
880-33915-6	TH-2 (9')	Total/NA	Solid	5035	
880-33915-7	TH-3 (0-6")	Total/NA	Solid	5035	
880-33915-8	TH-3 (3')	Total/NA	Solid	5035	
880-33915-9	TH-3 (5')	Total/NA	Solid	5035	
880-33915-10	TH-4 (0-6")	Total/NA	Solid	5035	
880-33915-11	TH-4 (5')	Total/NA	Solid	5035	
880-33915-12	TH-5 (0-6")	Total/NA	Solid	5035	
880-33915-13	TH-5 (2.5')	Total/NA	Solid	5035	
MB 880-63969/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-63969/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-63969/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-33915-3 MS	TH-1 (10')	Total/NA	Solid	5035	
880-33915-3 MSD	TH-1 (10')	Total/NA	Solid	5035	

Analysis Batch: 64254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-33915-3	TH-1 (10')	Total/NA	Solid	8021B	63969
880-33915-4	TH-2 (0-6")	Total/NA	Solid	8021B	63969
880-33915-5	TH-2 (5')	Total/NA	Solid	8021B	63969
880-33915-6	TH-2 (9')	Total/NA	Solid	8021B	63969
880-33915-7	TH-3 (0-6")	Total/NA	Solid	8021B	63969
880-33915-8	TH-3 (3')	Total/NA	Solid	8021B	63969
880-33915-9	TH-3 (5')	Total/NA	Solid	8021B	63969
880-33915-10	TH-4 (0-6")	Total/NA	Solid	8021B	63969
880-33915-11	TH-4 (5')	Total/NA	Solid	8021B	63969
880-33915-12	TH-5 (0-6")	Total/NA	Solid	8021B	63969
880-33915-13	TH-5 (2.5')	Total/NA	Solid	8021B	63969
MB 880-63969/5-A	Method Blank	Total/NA	Solid	8021B	63969
MB 880-64254/8	Method Blank	Total/NA	Solid	8021B	
LCS 880-63969/1-A	Lab Control Sample	Total/NA	Solid	8021B	63969
LCSD 880-63969/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	63969
880-33915-3 MS	TH-1 (10')	Total/NA	Solid	8021B	63969
880-33915-3 MSD	TH-1 (10')	Total/NA	Solid	8021B	63969

Prep Batch: 64288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-33915-1	TH-1 (0-6")	Total/NA	Solid	5035	
880-33915-2	TH-1 (5')	Total/NA	Solid	5035	
MB 880-64288/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-64288/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-64288/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 64326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-33915-1	TH-1 (0-6")	Total/NA	Solid	8021B	64288
880-33915-2	TH-1 (5')	Total/NA	Solid	8021B	64288
MB 880-64288/5-A	Method Blank	Total/NA	Solid	8021B	64288
LCS 880-64288/1-A	Lab Control Sample	Total/NA	Solid	8021B	64288

QC Association Summary

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

GC VOA (Continued)

Analysis Batch: 64326 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-64288/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	64288

Analysis Batch: 64419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-33915-1	TH-1 (0-6")	Total/NA	Solid	Total BTEX	
880-33915-2	TH-1 (5')	Total/NA	Solid	Total BTEX	
880-33915-3	TH-1 (10')	Total/NA	Solid	Total BTEX	
880-33915-4	TH-2 (0-6")	Total/NA	Solid	Total BTEX	
880-33915-5	TH-2 (5')	Total/NA	Solid	Total BTEX	
880-33915-6	TH-2 (9')	Total/NA	Solid	Total BTEX	
880-33915-7	TH-3 (0-6")	Total/NA	Solid	Total BTEX	
880-33915-8	TH-3 (3')	Total/NA	Solid	Total BTEX	
880-33915-9	TH-3 (5')	Total/NA	Solid	Total BTEX	
880-33915-10	TH-4 (0-6")	Total/NA	Solid	Total BTEX	
880-33915-11	TH-4 (5')	Total/NA	Solid	Total BTEX	
880-33915-12	TH-5 (0-6")	Total/NA	Solid	Total BTEX	
880-33915-13	TH-5 (2.5')	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 63937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-33915-1	TH-1 (0-6")	Total/NA	Solid	8015NM Prep	
880-33915-2	TH-1 (5')	Total/NA	Solid	8015NM Prep	
880-33915-3	TH-1 (10')	Total/NA	Solid	8015NM Prep	
880-33915-4	TH-2 (0-6")	Total/NA	Solid	8015NM Prep	
880-33915-5	TH-2 (5')	Total/NA	Solid	8015NM Prep	
880-33915-6	TH-2 (9')	Total/NA	Solid	8015NM Prep	
880-33915-7	TH-3 (0-6")	Total/NA	Solid	8015NM Prep	
880-33915-8	TH-3 (3')	Total/NA	Solid	8015NM Prep	
880-33915-9	TH-3 (5')	Total/NA	Solid	8015NM Prep	
880-33915-10	TH-4 (0-6")	Total/NA	Solid	8015NM Prep	
880-33915-11	TH-4 (5')	Total/NA	Solid	8015NM Prep	
880-33915-12	TH-5 (0-6")	Total/NA	Solid	8015NM Prep	
880-33915-13	TH-5 (2.5')	Total/NA	Solid	8015NM Prep	
MB 880-63937/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-63937/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-63937/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 64070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-33915-1	TH-1 (0-6")	Total/NA	Solid	8015B NM	63937
880-33915-2	TH-1 (5')	Total/NA	Solid	8015B NM	63937
880-33915-3	TH-1 (10')	Total/NA	Solid	8015B NM	63937
880-33915-4	TH-2 (0-6")	Total/NA	Solid	8015B NM	63937
880-33915-5	TH-2 (5')	Total/NA	Solid	8015B NM	63937
880-33915-6	TH-2 (9')	Total/NA	Solid	8015B NM	63937
880-33915-7	TH-3 (0-6")	Total/NA	Solid	8015B NM	63937
880-33915-8	TH-3 (3')	Total/NA	Solid	8015B NM	63937
880-33915-9	TH-3 (5')	Total/NA	Solid	8015B NM	63937
880-33915-10	TH-4 (0-6")	Total/NA	Solid	8015B NM	63937

QC Association Summary

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

GC Semi VOA (Continued)

Analysis Batch: 64070 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-33915-11	TH-4 (5')	Total/NA	Solid	8015B NM	63937
880-33915-12	TH-5 (0-6")	Total/NA	Solid	8015B NM	63937
880-33915-13	TH-5 (2.5')	Total/NA	Solid	8015B NM	63937
MB 880-63937/1-A	Method Blank	Total/NA	Solid	8015B NM	63937
LCS 880-63937/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	63937
LCSD 880-63937/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	63937

Analysis Batch: 64241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-33915-1	TH-1 (0-6")	Total/NA	Solid	8015 NM	
880-33915-2	TH-1 (5')	Total/NA	Solid	8015 NM	
880-33915-3	TH-1 (10')	Total/NA	Solid	8015 NM	
880-33915-4	TH-2 (0-6")	Total/NA	Solid	8015 NM	
880-33915-5	TH-2 (5')	Total/NA	Solid	8015 NM	
880-33915-6	TH-2 (9')	Total/NA	Solid	8015 NM	
880-33915-7	TH-3 (0-6")	Total/NA	Solid	8015 NM	
880-33915-8	TH-3 (3')	Total/NA	Solid	8015 NM	
880-33915-9	TH-3 (5')	Total/NA	Solid	8015 NM	
880-33915-10	TH-4 (0-6")	Total/NA	Solid	8015 NM	
880-33915-11	TH-4 (5')	Total/NA	Solid	8015 NM	
880-33915-12	TH-5 (0-6")	Total/NA	Solid	8015 NM	
880-33915-13	TH-5 (2.5')	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 64003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-33915-1	TH-1 (0-6")	Soluble	Solid	DI Leach	
880-33915-2	TH-1 (5')	Soluble	Solid	DI Leach	
880-33915-3	TH-1 (10')	Soluble	Solid	DI Leach	
880-33915-4	TH-2 (0-6")	Soluble	Solid	DI Leach	
880-33915-5	TH-2 (5')	Soluble	Solid	DI Leach	
880-33915-6	TH-2 (9')	Soluble	Solid	DI Leach	
880-33915-7	TH-3 (0-6")	Soluble	Solid	DI Leach	
880-33915-8	TH-3 (3')	Soluble	Solid	DI Leach	
880-33915-9	TH-3 (5')	Soluble	Solid	DI Leach	
880-33915-10	TH-4 (0-6")	Soluble	Solid	DI Leach	
880-33915-11	TH-4 (5')	Soluble	Solid	DI Leach	
880-33915-12	TH-5 (0-6")	Soluble	Solid	DI Leach	
880-33915-13	TH-5 (2.5')	Soluble	Solid	DI Leach	
MB 880-64003/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-64003/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-64003/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-33915-1 MS	TH-1 (0-6")	Soluble	Solid	DI Leach	
880-33915-1 MSD	TH-1 (0-6")	Soluble	Solid	DI Leach	
880-33915-11 MS	TH-4 (5')	Soluble	Solid	DI Leach	
880-33915-11 MSD	TH-4 (5')	Soluble	Solid	DI Leach	

Analysis Batch: 64045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-33915-1	TH-1 (0-6")	Soluble	Solid	300.0	64003

QC Association Summary

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

HPLC/IC (Continued)

Analysis Batch: 64045 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-33915-2	TH-1 (5')	Soluble	Solid	300.0	64003
880-33915-3	TH-1 (10')	Soluble	Solid	300.0	64003
880-33915-4	TH-2 (0-6")	Soluble	Solid	300.0	64003
880-33915-5	TH-2 (5')	Soluble	Solid	300.0	64003
880-33915-6	TH-2 (9')	Soluble	Solid	300.0	64003
880-33915-7	TH-3 (0-6")	Soluble	Solid	300.0	64003
880-33915-8	TH-3 (3')	Soluble	Solid	300.0	64003
880-33915-9	TH-3 (5')	Soluble	Solid	300.0	64003
880-33915-10	TH-4 (0-6")	Soluble	Solid	300.0	64003
880-33915-11	TH-4 (5')	Soluble	Solid	300.0	64003
880-33915-12	TH-5 (0-6")	Soluble	Solid	300.0	64003
880-33915-13	TH-5 (2.5')	Soluble	Solid	300.0	64003
MB 880-64003/1-A	Method Blank	Soluble	Solid	300.0	64003
LCS 880-64003/2-A	Lab Control Sample	Soluble	Solid	300.0	64003
LCSD 880-64003/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	64003
880-33915-1 MS	TH-1 (0-6")	Soluble	Solid	300.0	64003
880-33915-1 MSD	TH-1 (0-6")	Soluble	Solid	300.0	64003
880-33915-11 MS	TH-4 (5')	Soluble	Solid	300.0	64003
880-33915-11 MSD	TH-4 (5')	Soluble	Solid	300.0	64003

Lab Chronicle

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

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

Lab Sample ID: 880-33915-1
Matrix: Solid
Date Collected: 09/29/23 13:10
Date Received: 10/02/23 16:07

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	64288	10/09/23 15:31	MNR	EET MID
Total/NA	Analysis	8021B		10	5 mL	5 mL	64326	10/10/23 16:51	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64419	10/10/23 16:51	SM	EET MID
Total/NA	Analysis	8015 NM		1			64241	10/07/23 01:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	63937	10/04/23 10:00	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64070	10/07/23 01:58	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	64003	10/05/23 10:21	AG	EET MID
Soluble	Analysis	300.0		5			64045	10/06/23 08:49	CH	EET MID

Client Sample ID: TH-1 (5')

Lab Sample ID: 880-33915-2
Matrix: Solid
Date Collected: 09/29/23 13:15
Date Received: 10/02/23 16:07

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	64288	10/09/23 15:31	MNR	EET MID
Total/NA	Analysis	8021B		10	5 mL	5 mL	64326	10/10/23 17:11	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64419	10/10/23 17:11	SM	EET MID
Total/NA	Analysis	8015 NM		1			64241	10/07/23 03:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	63937	10/04/23 10:00	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64070	10/07/23 03:06	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	64003	10/05/23 10:21	AG	EET MID
Soluble	Analysis	300.0		5			64045	10/06/23 09:09	CH	EET MID

Client Sample ID: TH-1 (10')

Lab Sample ID: 880-33915-3
Matrix: Solid
Date Collected: 09/29/23 13:30
Date Received: 10/02/23 16:07

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	63969	10/04/23 16:36	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64254	10/09/23 23:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64419	10/09/23 23:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			64241	10/06/23 23:41	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	63937	10/04/23 11:48	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64070	10/06/23 23:41	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	64003	10/05/23 10:21	AG	EET MID
Soluble	Analysis	300.0		5			64045	10/06/23 09:16	CH	EET MID

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

Lab Sample ID: 880-33915-4
Matrix: Solid
Date Collected: 09/29/23 13:32
Date Received: 10/02/23 16:07

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	63969	10/04/23 16:36	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64254	10/10/23 00:13	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64419	10/10/23 00:13	SM	EET MID

Lab Chronicle

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

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

Lab Sample ID: 880-33915-4
Matrix: Solid
Date Collected: 09/29/23 13:32
Date Received: 10/02/23 16:07

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			64241	10/07/23 01:35	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	63937	10/04/23 11:48	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64070	10/07/23 01:35	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	64003	10/05/23 10:21	AG	EET MID
Soluble	Analysis	300.0		5			64045	10/06/23 09:22	CH	EET MID

Client Sample ID: TH-2 (5')

Lab Sample ID: 880-33915-5
Matrix: Solid
Date Collected: 09/29/23 13:36
Date Received: 10/02/23 16:07

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	63969	10/04/23 16:36	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64254	10/10/23 00:33	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64419	10/10/23 00:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			64241	10/07/23 03:51	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	63937	10/04/23 11:48	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64070	10/07/23 03:51	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	64003	10/05/23 10:21	AG	EET MID
Soluble	Analysis	300.0		5			64045	10/06/23 09:29	CH	EET MID

Client Sample ID: TH-2 (9')

Lab Sample ID: 880-33915-6
Matrix: Solid
Date Collected: 09/29/23 13:40
Date Received: 10/02/23 16:07

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	63969	10/04/23 16:36	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64254	10/10/23 00:54	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64419	10/10/23 00:54	SM	EET MID
Total/NA	Analysis	8015 NM		1			64241	10/07/23 00:04	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	63937	10/04/23 11:48	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64070	10/07/23 00:04	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	64003	10/05/23 10:21	AG	EET MID
Soluble	Analysis	300.0		1			64045	10/06/23 10:22	CH	EET MID

Client Sample ID: TH-3 (0-6")

Lab Sample ID: 880-33915-7
Matrix: Solid
Date Collected: 09/29/23 14:08
Date Received: 10/02/23 16:07

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	63969	10/04/23 16:36	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64254	10/10/23 01:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64419	10/10/23 01:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			64241	10/07/23 03:28	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	63937	10/04/23 11:48	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64070	10/07/23 03:28	SM	EET MID

Lab Chronicle

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

Client Sample ID: TH-3 (0-6")

Lab Sample ID: 880-33915-7
Matrix: Solid
Date Collected: 09/29/23 14:08
Date Received: 10/02/23 16:07

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.02 g	50 mL	64003	10/05/23 10:21	AG	EET MID
Soluble	Analysis	300.0		1			64045	10/06/23 10:29	CH	EET MID

Client Sample ID: TH-3 (3')

Lab Sample ID: 880-33915-8
Matrix: Solid
Date Collected: 09/29/23 14:10
Date Received: 10/02/23 16:07

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	63969	10/04/23 16:36	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64254	10/10/23 01:34	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64419	10/10/23 01:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			64241	10/07/23 02:43	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	63937	10/04/23 11:48	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64070	10/07/23 02:43	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	64003	10/05/23 10:21	AG	EET MID
Soluble	Analysis	300.0		5			64045	10/06/23 10:35	CH	EET MID

Client Sample ID: TH-3 (5')

Lab Sample ID: 880-33915-9
Matrix: Solid
Date Collected: 09/29/23 14:20
Date Received: 10/02/23 16:07

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	63969	10/04/23 16:36	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64254	10/10/23 01:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64419	10/10/23 01:55	SM	EET MID
Total/NA	Analysis	8015 NM		1			64241	10/07/23 00:26	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	63937	10/04/23 11:48	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64070	10/07/23 00:26	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	64003	10/05/23 10:21	AG	EET MID
Soluble	Analysis	300.0		1			64045	10/06/23 10:42	CH	EET MID

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

Lab Sample ID: 880-33915-10
Matrix: Solid
Date Collected: 09/29/23 13:55
Date Received: 10/02/23 16:07

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	63969	10/04/23 16:36	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64254	10/10/23 02:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64419	10/10/23 02:15	SM	EET MID
Total/NA	Analysis	8015 NM		1			64241	10/07/23 01:12	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	63937	10/04/23 11:48	TKC	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	64070	10/07/23 01:12	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	64003	10/05/23 10:21	AG	EET MID
Soluble	Analysis	300.0		1			64045	10/06/23 10:48	CH	EET MID

Lab Chronicle

Client: Crain Environmental
Project/Site: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

Client Sample ID: TH-4 (5')

Lab Sample ID: 880-33915-11
Matrix: Solid
Date Collected: 09/29/23 14:05
Date Received: 10/02/23 16:07

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	63969	10/04/23 16:36	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64254	10/10/23 04:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64419	10/10/23 04:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			64241	10/07/23 02:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	63937	10/04/23 11:48	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64070	10/07/23 02:21	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	64003	10/05/23 10:21	AG	EET MID
Soluble	Analysis	300.0		1			64045	10/06/23 10:55	CH	EET MID

Client Sample ID: TH-5 (0-6")

Lab Sample ID: 880-33915-12
Matrix: Solid
Date Collected: 09/29/23 13:45
Date Received: 10/02/23 16:07

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	63969	10/04/23 16:36	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64254	10/10/23 05:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64419	10/10/23 05:06	SM	EET MID
Total/NA	Analysis	8015 NM		1			64241	10/07/23 04:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	63937	10/04/23 11:48	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64070	10/07/23 04:13	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	64003	10/05/23 10:21	AG	EET MID
Soluble	Analysis	300.0		1			64045	10/06/23 11:15	CH	EET MID

Client Sample ID: TH-5 (2.5')

Lab Sample ID: 880-33915-13
Matrix: Solid
Date Collected: 09/29/23 13:50
Date Received: 10/02/23 16:07

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	63969	10/04/23 16:36	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64254	10/10/23 05:27	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64419	10/10/23 05:27	SM	EET MID
Total/NA	Analysis	8015 NM		1			64241	10/07/23 04:34	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	63937	10/04/23 11:48	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64070	10/07/23 04:34	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	64003	10/05/23 10:21	AG	EET MID
Soluble	Analysis	300.0		1			64045	10/06/23 11:22	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: Anderson Ranch #017H

Job ID: 880-33915-1
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: Anderson Ranch #017H

Job ID: 880-33915-1
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: Anderson Ranch #017H

Job ID: 880-33915-1
SDG: Lea Co NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-33915-1	TH-1 (0-6")	Solid	09/29/23 13:10	10/02/23 16:07	0-6"
880-33915-2	TH-1 (5')	Solid	09/29/23 13:15	10/02/23 16:07	5'
880-33915-3	TH-1 (10')	Solid	09/29/23 13:30	10/02/23 16:07	10'
880-33915-4	TH-2 (0-6")	Solid	09/29/23 13:32	10/02/23 16:07	0-6"
880-33915-5	TH-2 (5')	Solid	09/29/23 13:36	10/02/23 16:07	5'
880-33915-6	TH-2 (9')	Solid	09/29/23 13:40	10/02/23 16:07	9'
880-33915-7	TH-3 (0-6")	Solid	09/29/23 14:08	10/02/23 16:07	0-6"
880-33915-8	TH-3 (3')	Solid	09/29/23 14:10	10/02/23 16:07	3'
880-33915-9	TH-3 (5')	Solid	09/29/23 14:20	10/02/23 16:07	5'
880-33915-10	TH-4 (0-6")	Solid	09/29/23 13:55	10/02/23 16:07	0-6"
880-33915-11	TH-4 (5')	Solid	09/29/23 14:05	10/02/23 16:07	5'
880-33915-12	TH-5 (0-6")	Solid	09/29/23 13:45	10/02/23 16:07	0-6"
880-33915-13	TH-5 (2.5')	Solid	09/29/23 13:50	10/02/23 16:07	2.5'

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Chain of Custody

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

Work Order: 880-33915 Chain of Custody

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Project Manager:	Cindy Crain	Bill to: (if different)	Chris Gaddy
Company Name:	Crain Environmental	Company Name:	Octane Energy
Address:	2925 E. 17th St.	Address:	310 W. Wall
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	Anderson Ranch #017H	Turn Around	☒ Routine ☐ Rush
Project Number:	—	Due Date:	10/9/23
Project Location	Lea Co., NM	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Cindy Crain		
PO #	—		

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	IR2
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-.30
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	5.7
Total Containers:		Corrected Temperature:	5.4

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
TH-1 (0-6")	S	9/29/23	1310	0-6"	C	1		X	X	X	
TH-1 (5')			1315	5'				X	X	X	
TH-1 (10')			1330	10'				X	X	X	
TH-2 (0-6")			1332	0-6"				X	X	X	
TH-2 (5')			1336	5'				X	X	X	
TH-2 (9')			1340	9'				X	X	X	
TH-3 (0-6")			1408	0-6"				X	X	X	
TH-3 (3')			1410	3'				X	X	X	
TH-3 (5')			1420	5'				X	X	X	
TH-4 (0-6")	↓	↓	1355	0-6"	↓	↓		X	X	X	

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		10/2/23 1609	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

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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

Loc: 880
33915

Work Order No: _____

www.xenco.com Page 2 of 2

Project Manager:	Cindy Crain	Bill to (if different)	Chris Gaddy
Company Name:	Crain Environmental	Company Name:	Octane Energy
Address:	2925 E. 17th St.	Address:	310 W. Wall
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:	Anderson Ranch #017H	Turn Around	☒ Routine ☐ Rush
Project Number:	—	Due Date:	10/9/23
Project Location	Lea Co. NM	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Cindy Crain		
PO #	—		

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

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
TH-4 (5')	S	9/29/23	1405	5'	C	1		X	X	X	
TH-5 (0-6")	↓	↓	1345	0-6"	↓	↓		X	X	X	
TH-5 (2.5')	↓	↓	1350	2.5'	↓	↓		X	X	X	

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		10/2/23 1604	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Crain Environmental

Job Number: 880-33915-1
SDG Number: Lea Co NM

Login Number: 33915
List Number: 1
Creator: Kramer, Jessica

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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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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

Action 383640

QUESTIONS

Operator: GRAND BANKS ENERGY CO 10 Desta Drive Midland, TX 79705	OGRID: 155471
	Action Number: 383640
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2321553613**
Incident Name	**NAPP2321553613 ANDERSON RANCH UNIT #017H BATTERY @ 30-025-00367**
Incident Type	**Fire**
Incident Status	**Remediation Plan Received**
Incident Well	**[30-025-00367] ANDERSON RANCH UNIT #017H**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	ANDERSON RANCH UNIT #017H BATTERY
Date Release Discovered	08/01/2023
Surface Owner	State

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

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Fire | Production Tank | Crude Oil | Released: 46 BBL | Recovered: 0 BBL | Lost: 46 BBL.
Produced Water Released (bbls) Details	Cause: Fire | Water Tank | Produced Water | Released: 979 BBL | Recovered: 500 BBL | Lost: 479 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	No

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QUESTIONS (continued)

Operator: GRAND BANKS ENERGY CO 10 Desta Drive Midland, TX 79705	OGRID: 155471
	Action Number: 383640
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**Yes**
Reasons why this would be considered a submission for a notification of a major release	**From paragraph A. "Major release" determine using:** **(1) an unauthorized release of a volume, excluding gases, of 25 barrels or more;** **(2) an unauthorized release of a volume that:** **(a) results in a fire or is the result of a fire.**
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: 09/15/2024

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QUESTIONS (continued)

Operator: GRAND BANKS ENERGY CO 10 Desta Drive Midland, TX 79705	OGRID: 155471
	Action Number: 383640
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	Attached Document
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Greater than 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 100 (ft.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Greater than 5 (mi.)
Any other fresh water well or spring	Greater than 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Greater than 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	3160
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	3770
GRO+DRO (EPA SW-846 Method 8015M)	3770
BTEX (EPA SW-846 Method 8021B or 8260B)	0.2
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	10/07/2024
On what date will (or did) the final sampling or liner inspection occur	03/10/2025
On what date will (or was) the remediation complete(d)	04/07/2025
What is the estimated surface area (in square feet) that will be reclaimed	11400
What is the estimated volume (in cubic yards) that will be reclaimed	2000
What is the estimated surface area (in square feet) that will be remediated	11400
What is the estimated volume (in cubic yards) that will be remediated	2000
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: GRAND BANKS ENERGY CO 10 Desta Drive Midland, TX 79705	OGRID: 155471
	Action Number: 383640
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	MONUMENT SITE #15 (TNM-94-58) [fAB0000000056]
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	No
OR is the **off-site** disposal site, to be used, an NMED facility	No
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	Yes
Which OCD approved facility will be used for **on-site** disposal	*Not answered.*
OR which OCD approved well (API) will be used for **on-site** disposal	30-025-00367 ANDERSON RANCH UNIT #017H
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Yes
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No
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: 09/15/2024

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS (continued)

Operator: GRAND BANKS ENERGY CO 10 Desta Drive Midland, TX 79705	OGRID: 155471
	Action Number: 383640
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

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

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QUESTIONS (continued)

Operator: GRAND BANKS ENERGY CO 10 Desta Drive Midland, TX 79705	OGRID: 155471
	Action Number: 383640
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

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

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

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CONDITIONS

Action 383640

CONDITIONS

Operator: GRAND BANKS ENERGY CO 10 Desta Drive Midland, TX 79705	OGRID: 155471
	Action Number: 383640
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

CONDITIONS

Created By	Condition	Condition Date
nvelez	The remediation plan is approved as written. Grand Banks Energy has 90-days (January 2, 2025) to submit to OCD its appropriate or final remediation closure report.	10/4/2024