

Maralo Federal Com 1 (30-015-22958)
Specific Justification for Volumes

The total volume released was incorrectly reported on the initial C-141as 95.7 bbls crude oil and 43 bbls produced water. The 210 bbl production tank contains both oil and water and the total volume released per the tank gauge was 95.7 bbls. The 43 bbls of water should have been subtracted from 95.7 bbls leaving 52.7 bbls of oil.

210 bbl tank (1.167 bbl/in)

Date	Gauge	Bbbls	Lost
1/4/2022	1' 0'	14	95.7
1/2/2022	7'10"	109.7	



Site Assessment and Remediation Work Plan

Murchison Oil & Gas, LLC

Maralo Federal Com #1

Eddy County, New Mexico

Unit Letter "L", Section 22, Township 17 South, Range 27 East

Latitude 32.817825 North, Longitude 104.272827 West

NMOCD Incident # nAPP2202451213

Prepared For:

Murchison Oil & Gas

5325 Sierra Vista

Carlsbad, NM 88230

Prepared By:

Hungry Horse, LLC

4024 Plains Hwy

Lovington, NM 88260

Office: (575) 393-3386

June 2024

Bradley Wells

Bradley Wells

Project Manager

bwells@hungry-horse.com

Daniel Dominguez

Daniel Dominguez

Environmental Manager

ddominguez@hungry-horse.com

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HUNGRY HORSE, LLC

The following *Site Assessment and Remediation Work Plan* serves as a condensed update on proposed reclamation activities at the afore referenced Site.

Background:

The site is located in Unit Letter L (NW/SW), Section 22, Township 17 South, Range 27 East, approximately 1 mile Southeast of Riverside, in Eddy County, New Mexico. The property is located on Bureau of Land Management land. Topographic Map, OSE POD Locations Map, and USGS Well Locations Map are included as Figure 1, Figure 2, and Figure 3, respectively.

The release occurred on an active tank battery and well pad; Latitude 32.817825 North, Longitude 104.272827 West. The NMOCD Form C-141 indicated that on January 3, 2022 approximately 53 bbls of crude oil and 43 bbls of produced water were released due to a load line that froze and burst. A crew was dispatched to the release site and the line was repaired. No fluid was recovered. Previously submitted NMOCD Form C-141 are available on the NMOCD Permitting Portal.

NMOCD Site Classification:

A search of the New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey (USGS) groundwater databases was completed in an effort to determine the horizontal distance to known water sources within a half mile radius of the Release Site. Approximate depth to groundwater was determined using maintained and published water well data. Karst mapping indicates the site is located in a Gypsum Karst designated area. Depth to groundwater information is provided as Attachment III and the results are depicted on Figures 2 and 3.

No water wells were located within a half mile of the release area. In addition, as the site is located in a Gypsum Karst designated area, the site will be remediated according to the strictest NMOCD Closure Criteria. Utilizing this information, the NMOCD Closure Criteria for the Site were determined as follows:

Depth to Groundwater	Constituent	Method	Limit
<50'	Chloride	EPA 300.0 or SM4500 CLB	600 mg/kg
	TPH (GRO + DRO + MRO)	EPA SW-846 Method 8015M Ext	100 mg/kg
	BTEX	EPA SW-846 Methods 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Methods 8021B or 8260B	10 mg/kg

A United States Department of Agriculture (USDA) Web Soil Survey was completed to determine soil types in the area of remediation. Web Soil Survey indicates the area is located in the Reeves-Gypsum land complex comprised of loam and clay loam soils with 0 to 3 percent slopes. As the affected area is located on an active well pad and lease road, no re-seeding will be required. Karst, Wetland, and Soil Maps are provided as Attachment I.



Initial Site Assessment and Delineation:

On January 19, 2022, RT Hicks Consultants, Ltd. conducted an initial site assessment and sampling activities of the release area. Based on these sampling activities, twenty-six representative soil samples were selected for laboratory analysis. Soil samples SSA-1 through SSA-10, as well as a Background sample, were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated contaminant concentrations were below the NMOCD Closure Criteria in each of the submitted samples, with the exception of SSA-1, SSA-2, SSA-5, SSA-7, and SSA8, which exhibited TPH and/or chloride concentrations in excess of NMOCD Closure Criteria to a depth of approximately four feet two inches bgs.

On June 6, 2024, Hungry Horse, LLC conducted delineation sampling of the release area. During sampling, sample test trenches were advanced throughout the release area in an effort to determine the vertical extent of contamination. These sample locations are identified by SP designation. In addition, sample test trenches were advanced along the outside edges of the release area in an effort to determine the horizontal extent of contamination. These sample locations are identified by HZ designation. During the advancement of sample test trenches, soil samples were collected and field screened for the presence of chloride concentrations utilizing a Hach Quantab® chloride test kit.

Based on field observations and field test data noted above and provided in Attachment IV, forty representative soil samples were selected for laboratory analysis. Delineation soil samples SP1 through SP10, HZ1 through HZ10, were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated contaminant concentrations were below the NMOCD Closure Criteria in each of the submitted samples, with the exception of SP2 through SP6, SP8 and SP9, each at Surface, and SP3 at four feet bgs, SP7 at two feet bgs, and SP8 at one-foot bgs, which exhibited TPH and/or chloride concentrations in excess of the NMOCD Closure Criteria.

January 19, 2022 Sample Map and Delineation Sample Map are provided as Figure 4 and Figure 5, respectively. Laboratory Analytical Data is provided as Attachment IV.

Proposed Remediation Activities:

In accordance with NMOCD Regulations, NMBLM Reclamation Objectives and Procedures, and based upon laboratory analytical results, site characteristics, and field observations made during the initial site assessment, the following remediation activities are proposed in an effort to advance the site toward approved closure.

- Based upon laboratory analytical results received from RT Hicks Consultants, Ltd. sampling activities and Hungry Horse delineation sampling, the release area will be excavated to approximate depths ranging from one to four and half feet bgs.
- The areas characterized by sample locations SP1 and SP2 will be excavated to an approximate depth of four feet bgs.
- The area characterized by sample location SP3 will be excavated to an approximate depth of four and half feet bgs.



-
- The areas characterized by sample locations SP4 and SP8 will be excavated to an approximate depth of two feet bgs.
 - The areas characterized by sample locations SP5, SP6, and SP9 will be excavated to an approximate depth of one-foot bgs.
 - The area characterized by sample location SP7 will be excavated to an approximate depth of three feet bgs.
 - The area characterized by sample location SP10 will not be excavated as field data and laboratory analytical data indicate contaminate concentrations are below the NMOCD Closure Criteria.
 - The release area, approximately 5,500 sq. ft., is depicted on Figure 5.
 - Excavated contaminated soil, approximately 650 cy, will be temporarily stockpiled onsite, atop plastic, before transport to an NMOCD approved disposal facility.
 - Stormwater protection (i.e. berms, waddles, etc.) will be installed around the contaminated soil stockpile to prevent transportation of contaminated soils due to precipitation events. If the plastic is found to be damaged during remediation activities, five-point composite samples, representing no more than 200 square feet, will be collected from beneath the plastic and analyzed for BTEX, TPH, and chloride to ensure surface soil has not been contaminated.
 - Upon completion of excavation activities, five-point composite confirmation samples will be collected from the excavation floor and sidewalls; each sample representing no more than 200 square feet. Confirmation soil samples will be submitted to the laboratory for analysis of BTEX, TPH, and chloride.
 - Upon receipt of laboratory analytical results from confirmation soil samples, demonstrating constituent contaminant levels are in excess of the strictest NMOCD Closure Criteria in the excavation floor and/or sidewalls, the area will be further excavated, vertically and/or horizontally, until laboratory analytical data indicates constituent contaminant levels are equal to or below the strictest NMOCD Closure Criteria in the excavation floor and sidewalls.
 - Upon receiving laboratory analytical results from confirmation soil samples, demonstrating constituent contaminant levels are equal to or below NMOCD Closure Criteria, the excavation will be backfilled with locally sourced, clean, non-impacted, material.
 - Remediation activities are expected to be completed within 30 days of receiving NMOCD and NMBLM approval of this Site Assessment and Remediation Work Plan.

Sampling Plan:

Upon completion of excavation activities, NMOCD will be notified via C-141N (Notification of Sampling) two business days prior to collection of confirmation samples. Confirmation five-point composite soil samples will then be collected from the excavation floor and sidewalls; each sample representing no more than 200 square feet. Confirmation soil samples will be submitted to the laboratory for analysis of BTEX, TPH, and chloride.



Restoration, Reclamation, and Re-Vegetation:

Based upon laboratory analytical results from confirmation soil samples, the excavation will be backfilled with locally sourced, clean, non-impacted material. The area will be contoured to achieve erosion control and preserve surface water flow.

As the affected area is located on an active well pad and lease road, no re-seeding will be required.

Limitations:

Hungry Horse, LLC, has prepared this *Site Assessment and Remediation Work Plan* to the best of its ability. No other warranty, expressed or implied, is made or intended. Hungry Horse has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Hungry Horse has not conducted an independent examination of the facts contained in referenced materials and statements. Hungry Horse has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Hungry Horse notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.



Distribution:

Murchison Oil & Gas

5325 Sierra Vista
Carlsbad, NM 88230

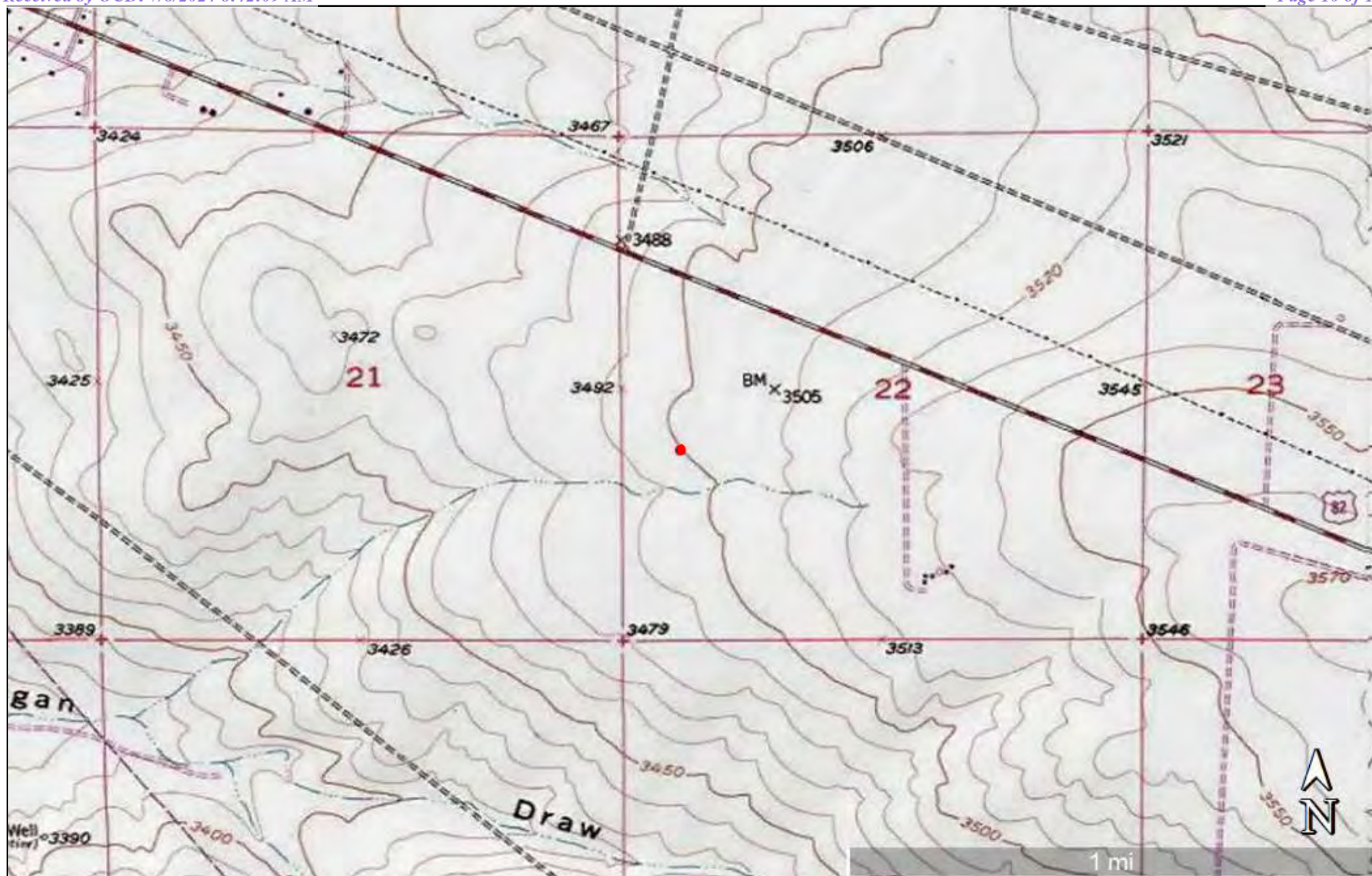
New Mexico Energy, Minerals and Natural Resources Department

Oil Conservation Division, District 2
811 S. First St.
Artesia, NM 88210

New Mexico Bureau of Land Management

620 E. Greene St
Carlsbad, NM 88220

Figures

**Figure 1**

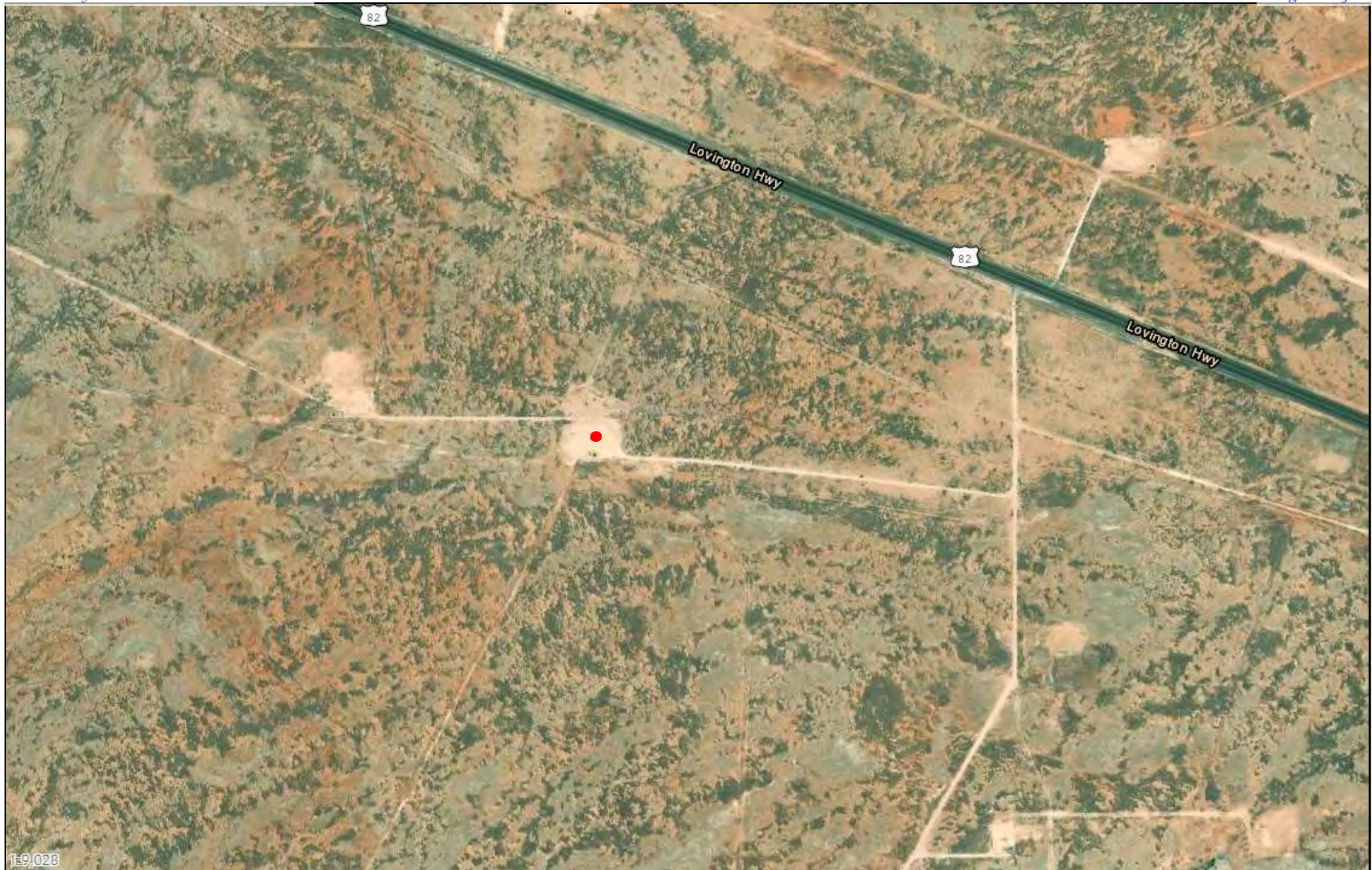
Topographic Map
 Murchison Oil & Gas
 Maralo Federal Com #1
 GPS: 32.8178253, -104.2728271
 Eddy County

Legend:

- Maralo Federal Com #1 Location

Drafted: dd
 Checked: bw
 Date: 4/15/24



**Figure 2**

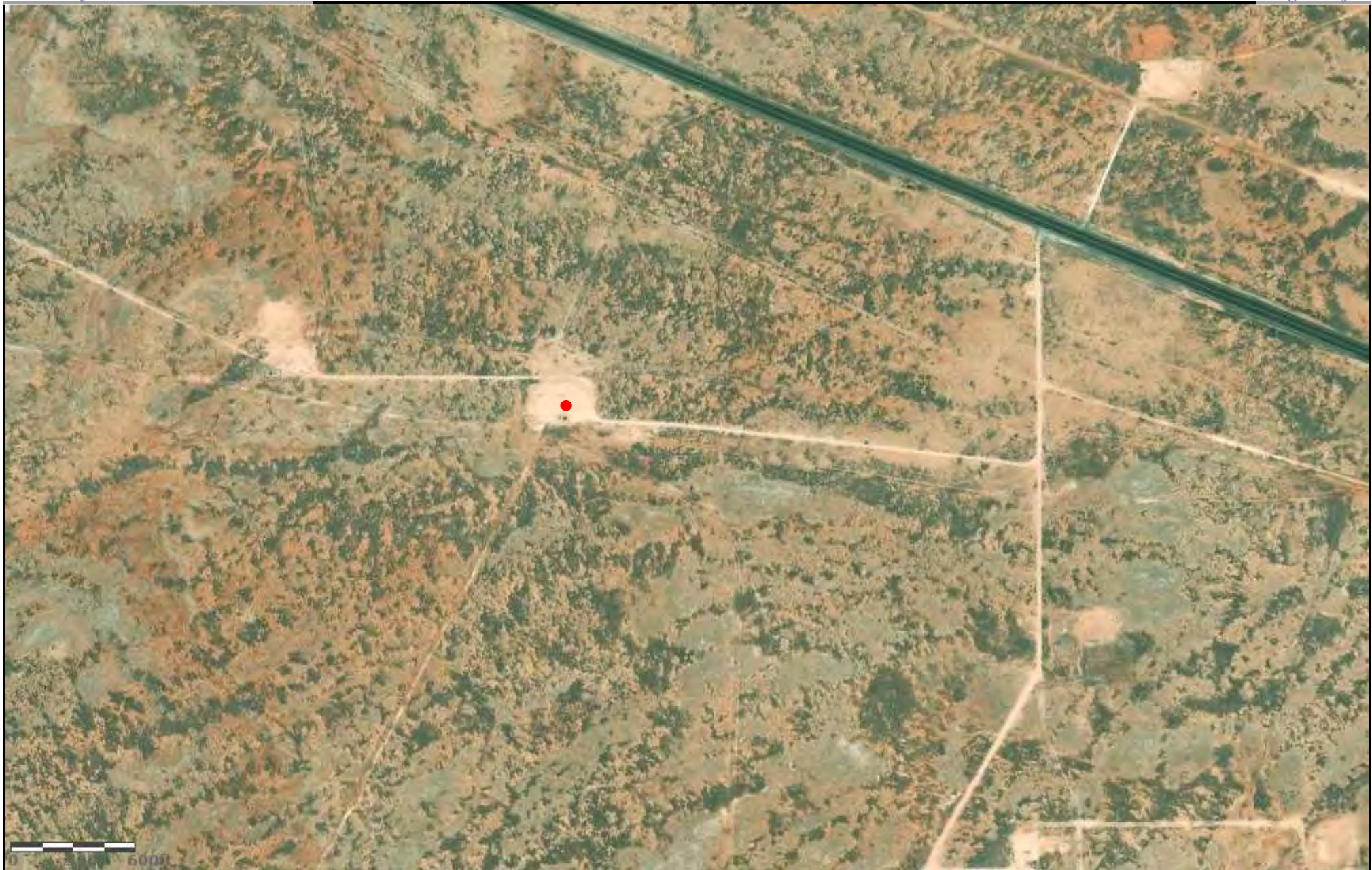
OSE POD Locations Map
Murchison Oil & Gas
Maralo Federal Com #1
GPS: 32.8178253, -104.2728271
Eddy County

Legend:

● Maralo Federal Com #1 Location

Drafted: dd
Checked: bw
Date: 4/15/24



**Figure 3**

USGS Well Locations Map
Murchison Oil & Gas
Maralo Federal Com #1
GPS: 32.8178253, -104.2728271
Eddy County

Legend:

● Maralo Federal Com #1 Location

Drafted: dd
Checked: bw
Date: 4/15/24



**Figure 4**

January 19, 2022 Sample Map
Murchison Oil & Gas
Maralo Federal Com #1
GPS: 32.8178253, -104.2728271
Eddy County

Legend:

- Release Area
SSA-1 Sample Location



Drafted: dd
Checked: bw
Date: 4/15/24

**Figure 5**

Delineation Sample Map
 Murchison Oil & Gas
 Maralo Federal Com #1
 GPS: 32.8178253, -104.2728271
 Eddy County

Legend:

- Release Area
- SP1 Delineation Sample Location
- HZ1 Horizontal Sample Location

Drafted: dd
 Checked: bw
 Date: 6/5/24



Table

TABLE 1
Summary of Soil Sample Laboratory Analytical Results
Murchison Oil & Gas
Maralo Federal Com #1
NMOCD Ref. #: nAPP2202451213

Sample ID	Date	Depth (ft)	Soil Status	Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
SSA-1	1/19/22	0-4	In-Situ	<2.00	310	6,900	2,010	8,910	<10.0	8,910	48.0
	1/19/22	0-2	In-Situ	0.124	115	3,220	1,010	4,230	<10.0	4,230	32.0
	1/19/22	2-4	In-Situ	<0.050	16.0	217	317	534	<10.0	534	48.0
	1/19/22	4.2	In-Situ	<1.00	135	2,230	776	3,006	<10.0	3,006	48.0
SSA-2	1/19/22	0-4	In-Situ	<2.00	70.6	576	143	719	<10.0	719	224
	1/19/22	0-2	In-Situ	2.17	305	2,640	271	2,911	<10.0	2,911	192
	1/19/22	2-4	In-Situ	<0.050	3.32	14.1	16.8	30.9	<10.0	30.9	240
	1/19/22	4.2	In-Situ	<0.050	17.0	133	125	258	<10.0	258	80.0
SSA-3	1/19/22	0-4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
	1/19/22	4.2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
SSA-4	1/19/22	0-4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	480
	1/19/22	4.2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	352
SSA-5	1/19/22	0-4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,920
	1/19/22	4.2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	448
SSA-6	1/19/22	0-4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	160
	1/19/22	4.2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
SSA-7	1/19/22	0-4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	608
	1/19/22	4.2	In-Situ	<0.050	0.996	<10.0	<10.0	<20.0	<10.0	<30.0	848
SSA-8	1/19/22	0-4	In-Situ	<0.050	12.1	451	365	816	<10.0	816	32.0
	1/19/22	4.2	In-Situ	<0.050	3.77	98.3	160	258.3	<10.0	258.3	64.0
SSA-9	1/19/22	0-4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
	1/19/22	4.2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
SSA-10	1/19/22	0-4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
	1/19/22	4.2	In-Situ	<0.050	<0.300	17.6	22.6	40.2	<10.0	40.2	256
Background	1/19/22	0-4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
	1/19/22	4.2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
NMOCD Closure Criteria				10	50	-	-	N/A	-	100	600

NOTES:

- = Sample not analyzed for that constituent.

Bold text denotes a concentration that exceeds the NMOCD Closure Criteria

TABLE 1
Summary of Soil Sample Laboratory Analytical Results
Murchison Oil & Gas
Maralo Federal Com #1
NMOCD Ref. #: nAPP2202451213

Sample ID	Date	Depth (ft)	Soil Status	Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
SP1	6/6/24	Surf	In-Situ	<0.050	<0.300	<10.0	90.2	90.2	<10.0	90.2	64.0
	6/6/24	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
SP2	6/6/24	Surf	In-Situ	<0.050	<0.300	<10.0	13.1	<20.0	<10.0	<30.0	1,880
	6/6/24	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
SP3	6/6/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	4,160
	6/6/24	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	656
SP4	6/6/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	5,300
	6/6/24	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	416
SP5	6/6/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,540
	6/6/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	304
SP6	6/6/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	2,080
	6/6/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	304
SP7	6/6/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
	6/6/24	2	In-Situ	<0.050	<0.300	<10.0	119	119	<10.0	119	112
SP8	6/6/24	Surf	In-Situ	<0.050	<0.300	<10.0	129	129	<10.0	129	112
	6/6/24	1	In-Situ	<0.050	<0.300	<10.0	139	139	<10.0	139	48.0
SP9	6/6/24	Surf	In-Situ	<0.050	<0.300	<10.0	124	124	<10.0	124	64.0
	6/6/24	1	In-Situ	<0.050	<0.300	<10.0	20.5	20.5	<10.0	<30.0	208
SP10	6/6/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
	6/6/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	208
HZ1	6/6/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
	6/6/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
HZ2	6/6/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
	6/6/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
HZ3	6/6/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
	6/6/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
HZ4	6/6/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
	6/6/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
HZ5	6/6/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
	6/6/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
HZ6	6/6/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
	6/6/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
HZ7	6/6/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
	6/6/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
HZ8	6/6/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
	6/6/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
HZ9	6/6/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
	6/6/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
HZ10	6/6/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
	6/6/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
NMOCD Closure Criteria				10	50	-	-	N/A	-	100	600

NOTES:

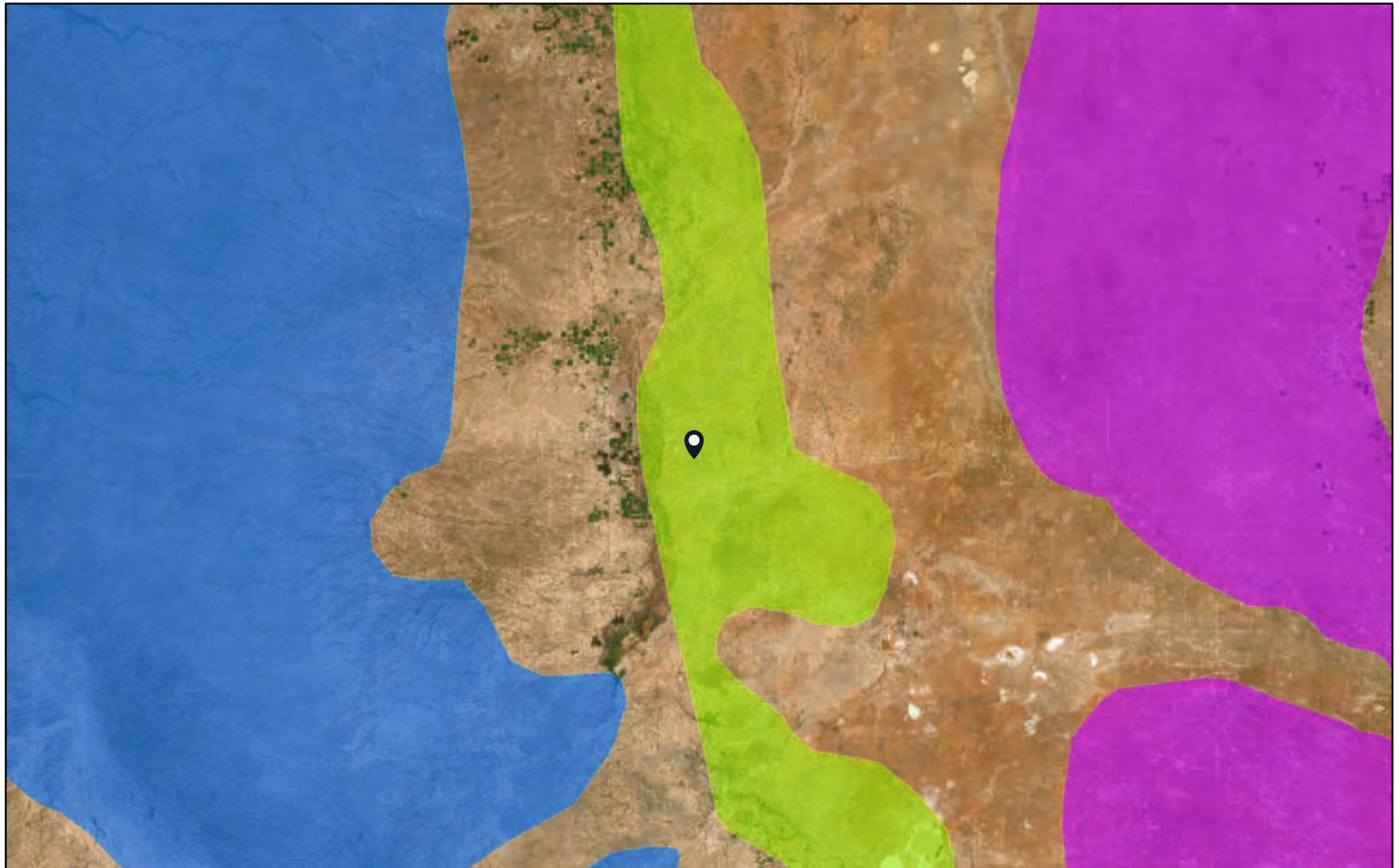
- = Sample not analyzed for that constituent.

Bold text denotes a concentration that exceeds the NMOCD Closure Criteria

Attachment I

Karst, Wetland, and Soil Maps

Maralo Federal Com #1



4/16/2024

Karst Type

- Carbonate
- Erosional
- Gypsum



Volcanic

World Imagery

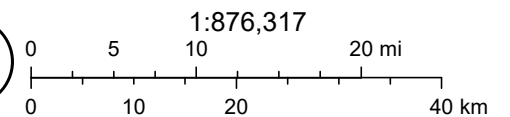
Low Resolution 15m Imagery

High Resolution 60cm Imagery

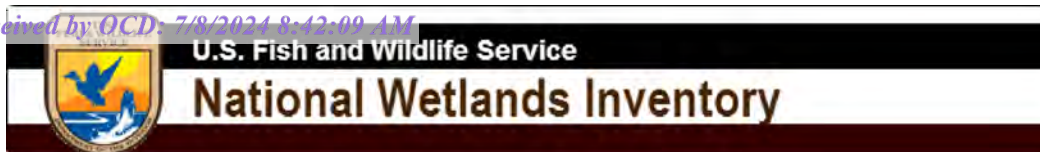
High Resolution 30cm Imagery

Citations

150m Resolution Metadata



U.S. Geological Survey Open-File Report 2004-1352, Caves and Karst in the U.S. National Park Service, AGI Karst Map of the U.S., Earthstar Geographics



Maralo Federal Com #1



April 17, 2024

Wetlands

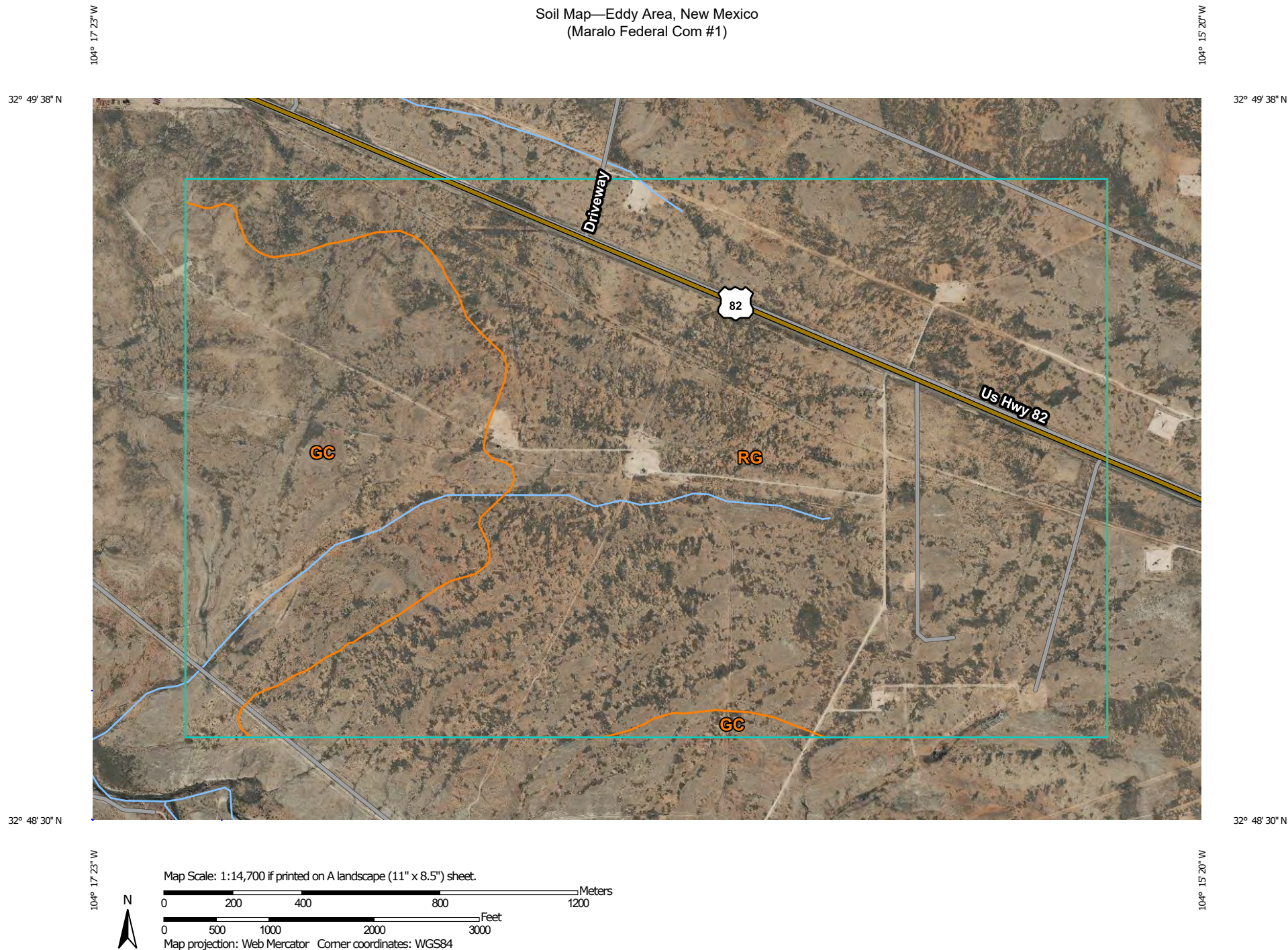
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Soil Map—Eddy Area, New Mexico
(Maralo Federal Com #1)



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

4/17/2024
Page 1 of 3

Soil Map—Eddy Area, New Mexico
(Maralo Federal Com #1)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Eddy Area, New Mexico

Survey Area Data: Version 19, Sep 7, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 12, 2022—Dec 2, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
GC	Gypsum land-Cottonwood complex, 0 to 3 percent slopes	267.7	24.9%
RG	Reeves-Gypsum land complex, 0 to 3 percent slopes	806.1	75.1%
Totals for Area of Interest		1,073.9	100.0%

Map Unit Description: Reeves-Gypsum land complex, 0 to 3 percent slopes---Eddy Area, New Mexico

Maralo Federal Com #1

Eddy Area, New Mexico

RG—Reeves-Gypsum land complex, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 1w5f

Elevation: 1,250 to 5,000 feet

Mean annual precipitation: 10 to 25 inches

Mean annual air temperature: 57 to 70 degrees F

Frost-free period: 190 to 235 days

Farmland classification: Not prime farmland

Map Unit Composition

Reeves and similar soils: 55 percent

Gypsum land: 30 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Reeves

Setting

Landform: Ridges, plains, hills

Landform position (two-dimensional): Shoulder, backslope, footslope, toeslope

Landform position (three-dimensional): Side slope, head slope, nose slope, crest

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Residuum weathered from gypsum

Typical profile

H1 - 0 to 8 inches: loam

H2 - 8 to 32 inches: clay loam

H3 - 32 to 60 inches: gypsiferous material

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 25 percent

Gypsum, maximum content: 80 percent

Maximum salinity: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)

Sodium adsorption ratio, maximum: 4.0

Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Map Unit Description: Reeves-Gypsum land complex, 0 to 3 percent slopes---Eddy Area, New Mexico

Maralo Federal Com #1

Interpretive groups

Land capability classification (irrigated): 3s

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: B

Ecological site: R070BC007NM - Loamy

Hydric soil rating: No

Description of Gypsum Land

Setting

Landform: Ridges, plains, hills

Landform position (two-dimensional): Shoulder, backslope, footslope, toeslope

Landform position (three-dimensional): Side slope, head slope, nose slope, crest

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Residuum weathered from gypsum

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8s

Hydric soil rating: No

Minor Components

Reagan

Percent of map unit: 5 percent

Ecological site: R070BC007NM - Loamy

Hydric soil rating: No

Largo

Percent of map unit: 5 percent

Ecological site: R070BC007NM - Loamy

Hydric soil rating: No

Cottonwood

Percent of map unit: 5 percent

Ecological site: R070BC033NM - Salty Bottomland

Hydric soil rating: No

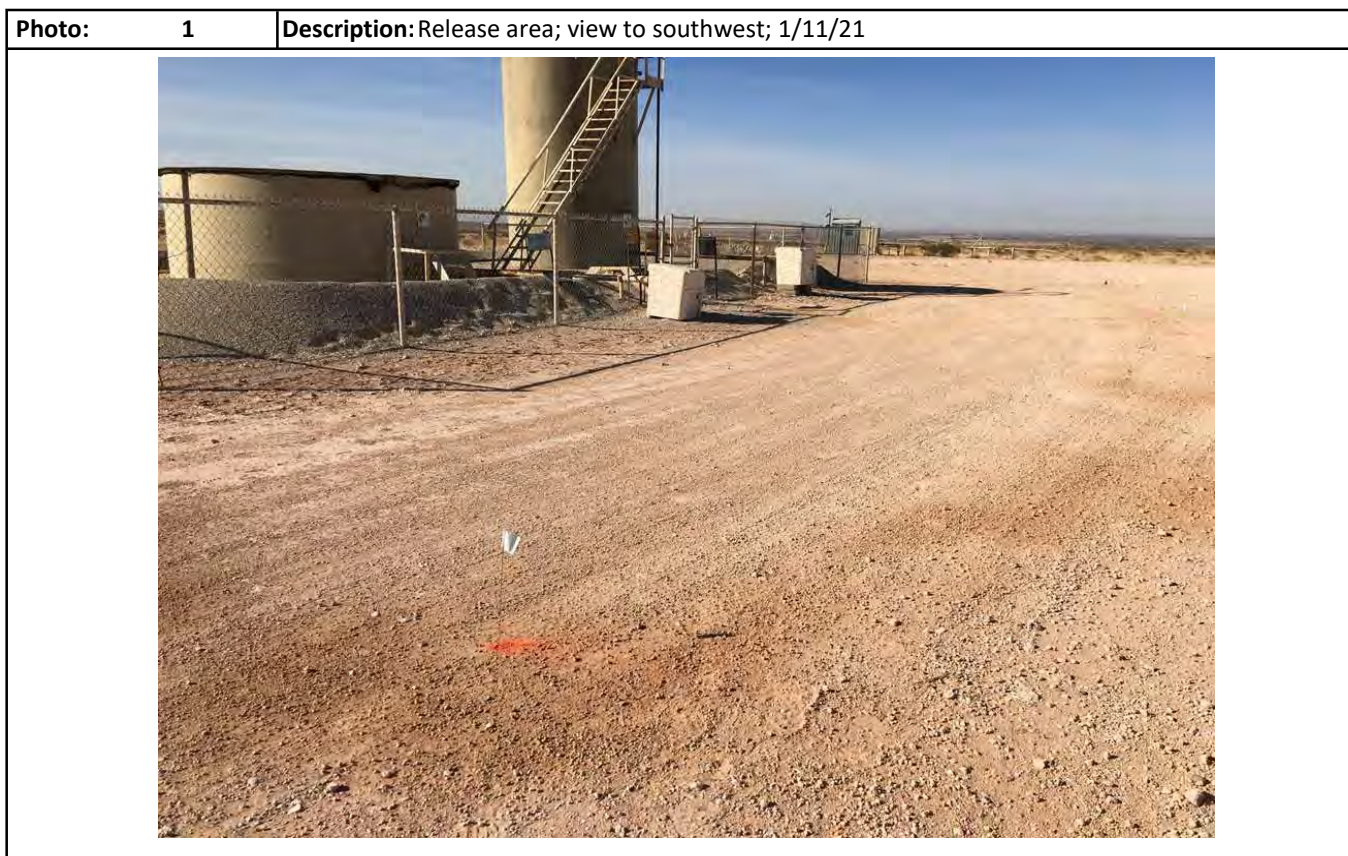
Data Source Information

Soil Survey Area: Eddy Area, New Mexico

Survey Area Data: Version 19, Sep 7, 2023

Attachment II Site Photographs

Photographs



Photographs

Photo:	3	Description: Release area; view to northeast; 1/2/21
		

Attachment III

Depth to Groundwater



New Mexico Office of the State Engineer
Wells with Well Log Information

No wells found.

UTMNA83 Radius Search (in meters):

Easting (X): 568069.48 Northing (Y): 3631325.45 Radius: 805

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for particular purpose of the data.

4/17/24 8:07 AM

WELLS WITH WELL LOG INFORMATION

Attachment IV

Laboratory Analytical Results



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

June 13, 2024

DANIEL DOMINGUEZ

Hungry Horse Environmental

P.O. Box 1058

Hobbs, NM 88240

RE: MARALO FEDERAL COM #1

Enclosed are the results of analyses for samples received by the laboratory on 06/07/24 13:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received:	06/07/2024	Sampling Date:	06/06/2024
Reported:	06/13/2024	Sampling Type:	Soil
Project Name:	MARALO FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	UL/L SEC 22 T17S - R27E		

Sample ID: HZ 1 - SURF (H243275-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/11/2024	ND	1.85	92.4	2.00	0.392	
Toluene*	<0.050	0.050	06/11/2024	ND	1.83	91.7	2.00	2.12	
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	1.87	93.7	2.00	3.46	
Total Xylenes*	<0.150	0.150	06/11/2024	ND	5.43	90.5	6.00	3.64	
Total BTEX	<0.300	0.300	06/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 88.4 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/11/2024	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	187	93.7	200	1.78	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	187	93.3	200	0.349	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 84.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.1 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HZ 1 - 1' (H243275-02)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	1.85	92.4	2.00	0.392		
Toluene*	<0.050	0.050	06/11/2024	ND	1.83	91.7	2.00	2.12		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	1.87	93.7	2.00	3.46		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	5.43	90.5	6.00	3.64		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 90.4 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/11/2024	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	187	93.7	200	1.78	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	187	93.3	200	0.349	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 88.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HZ 2 - SURF (H243275-03)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	1.85	92.4	2.00	0.392		
Toluene*	<0.050	0.050	06/11/2024	ND	1.83	91.7	2.00	2.12		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	1.87	93.7	2.00	3.46		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	5.43	90.5	6.00	3.64		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 86.9 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	06/11/2024	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	187	93.7	200	1.78	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	187	93.3	200	0.349	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 83.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HZ 2 - 1' (H243275-04)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	1.85	92.4	2.00	0.392		
Toluene*	<0.050	0.050	06/11/2024	ND	1.83	91.7	2.00	2.12		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	1.87	93.7	2.00	3.46		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	5.43	90.5	6.00	3.64		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 88.3 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/11/2024	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	187	93.7	200	1.78	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	187	93.3	200	0.349	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 90.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HZ 3 - SURF (H243275-05)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	1.85	92.4	2.00	0.392		
Toluene*	<0.050	0.050	06/11/2024	ND	1.83	91.7	2.00	2.12		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	1.87	93.7	2.00	3.46		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	5.43	90.5	6.00	3.64		
Total BTEx	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 89.5 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/11/2024	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	187	93.7	200	1.78	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	187	93.3	200	0.349	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 87.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HZ 3 - 1' (H243275-06)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	1.85	92.4	2.00	0.392		
Toluene*	<0.050	0.050	06/11/2024	ND	1.83	91.7	2.00	2.12		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	1.87	93.7	2.00	3.46		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	5.43	90.5	6.00	3.64		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 89.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	06/11/2024	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	187	93.7	200	1.78	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	187	93.3	200	0.349	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 87.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HZ 4 - SURF (H243275-07)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	1.85	92.4	2.00	0.392		
Toluene*	<0.050	0.050	06/11/2024	ND	1.83	91.7	2.00	2.12		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	1.87	93.7	2.00	3.46		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	5.43	90.5	6.00	3.64		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 89.2 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/11/2024	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	187	93.7	200	1.78	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	187	93.3	200	0.349	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 86.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received: 06/07/2024
Reported: 06/13/2024
Project Name: MARALO FEDERAL COM #1
Project Number: NONE GIVEN
Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: HZ 4 - 1' (H243275-08)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	1.85	92.4	2.00	0.392		
Toluene*	<0.050	0.050	06/11/2024	ND	1.83	91.7	2.00	2.12		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	1.87	93.7	2.00	3.46		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	5.43	90.5	6.00	3.64		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 89.2 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/11/2024	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	187	93.7	200	1.78	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	187	93.3	200	0.349	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 80.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HZ 5 - SURF (H243275-09)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	1.85	92.4	2.00	0.392		
Toluene*	<0.050	0.050	06/11/2024	ND	1.83	91.7	2.00	2.12		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	1.87	93.7	2.00	3.46		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	5.43	90.5	6.00	3.64		
Total BTEx	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 89.5 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	06/11/2024	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	187	93.7	200	1.78	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	187	93.3	200	0.349	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 78.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HZ 5 - 1' (H243275-10)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	2.03	101	2.00	4.47		
Toluene*	<0.050	0.050	06/11/2024	ND	2.15	107	2.00	3.75		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	2.14	107	2.00	2.70		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	6.59	110	6.00	2.81		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/11/2024	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	187	93.7	200	1.78	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	187	93.3	200	0.349	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 88.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HZ 6 - SURF (H243275-11)

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	2.03	101	2.00	4.47		
Toluene*	<0.050	0.050	06/11/2024	ND	2.15	107	2.00	3.75		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	2.14	107	2.00	2.70		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	6.59	110	6.00	2.81		
Total BTX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	06/11/2024	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	187	93.7	200	1.78	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	187	93.3	200	0.349	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 86.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HZ 6 - 1' (H243275-12)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	2.03	101	2.00	4.47		
Toluene*	<0.050	0.050	06/11/2024	ND	2.15	107	2.00	3.75		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	2.14	107	2.00	2.70		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	6.59	110	6.00	2.81		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/11/2024	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	187	93.7	200	1.78	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	187	93.3	200	0.349	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 84.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HZ 7 - SURF (H243275-13)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	2.03	101	2.00	4.47		
Toluene*	<0.050	0.050	06/11/2024	ND	2.15	107	2.00	3.75		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	2.14	107	2.00	2.70		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	6.59	110	6.00	2.81		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/11/2024	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	187	93.7	200	1.78	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	187	93.3	200	0.349	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 79.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HZ 7 - 1' (H243275-14)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	2.03	101	2.00	4.47		
Toluene*	<0.050	0.050	06/11/2024	ND	2.15	107	2.00	3.75		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	2.14	107	2.00	2.70		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	6.59	110	6.00	2.81		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/11/2024	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	187	93.7	200	1.78	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	187	93.3	200	0.349	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 90.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HZ 8 - SURF (H243275-15)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	2.03	101	2.00	4.47		
Toluene*	<0.050	0.050	06/11/2024	ND	2.15	107	2.00	3.75		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	2.14	107	2.00	2.70		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	6.59	110	6.00	2.81		
Total BTEx	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/11/2024	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	187	93.7	200	1.78	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	187	93.3	200	0.349	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 88.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HZ 8 - 1' (H243275-16)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	2.03	101	2.00	4.47		
Toluene*	<0.050	0.050	06/11/2024	ND	2.15	107	2.00	3.75		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	2.14	107	2.00	2.70		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	6.59	110	6.00	2.81		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	06/11/2024	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	187	93.7	200	1.78	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	187	93.3	200	0.349	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 85.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HZ 9 - SURF (H243275-17)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	2.03	101	2.00	4.47		
Toluene*	<0.050	0.050	06/11/2024	ND	2.15	107	2.00	3.75		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	2.14	107	2.00	2.70		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	6.59	110	6.00	2.81		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	06/11/2024	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	204	102	200	0.503	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	185	92.3	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 88.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HZ 9 - 1' (H243275-18)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	2.03	101	2.00	4.47		
Toluene*	<0.050	0.050	06/11/2024	ND	2.15	107	2.00	3.75		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	2.14	107	2.00	2.70		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	6.59	110	6.00	2.81		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	204	102	200	0.503	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	185	92.3	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 81.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 73.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HZ 10 - SURF (H243275-19)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	2.03	101	2.00	4.47		
Toluene*	<0.050	0.050	06/11/2024	ND	2.15	107	2.00	3.75		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	2.14	107	2.00	2.70		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	6.59	110	6.00	2.81		
Total BTEx	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	204	102	200	0.503	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	185	92.3	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 78.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 73.3 % 49.1-148

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Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HZ 10 - 1' (H243275-20)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/11/2024	ND	2.03	101	2.00	4.47	
Toluene*	<0.050	0.050	06/11/2024	ND	2.15	107	2.00	3.75	
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	2.14	107	2.00	2.70	
Total Xylenes*	<0.150	0.150	06/11/2024	ND	6.59	110	6.00	2.81	
Total BTEX	<0.300	0.300	06/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	204	102	200	0.503	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	185	92.3	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 74.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 74.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 - SURF (H243275-21)

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	2.03	101	2.00	4.47		
Toluene*	<0.050	0.050	06/11/2024	ND	2.15	107	2.00	3.75		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	2.14	107	2.00	2.70		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	6.59	110	6.00	2.81		
Total BTX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	06/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	204	102	200	0.503	
DRO >C10-C28*	90.2	10.0	06/10/2024	ND	185	92.3	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 90.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 - 4' (H243275-22)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	2.03	101	2.00	4.47		
Toluene*	<0.050	0.050	06/11/2024	ND	2.15	107	2.00	3.75		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	2.14	107	2.00	2.70		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	6.59	110	6.00	2.81		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	06/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	204	102	200	0.503	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	185	92.3	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 83.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 2 - SURF (H243275-23)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	2.03	101	2.00	4.47		
Toluene*	<0.050	0.050	06/11/2024	ND	2.15	107	2.00	3.75		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	2.14	107	2.00	2.70		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	6.59	110	6.00	2.81		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1880	16.0	06/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	204	102	200	0.503	
DRO >C10-C28*	13.1	10.0	06/10/2024	ND	185	92.3	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 79.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 2 - 4' (H243275-24)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	2.03	101	2.00	4.47		
Toluene*	<0.050	0.050	06/11/2024	ND	2.15	107	2.00	3.75		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	2.14	107	2.00	2.70		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	6.59	110	6.00	2.81		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	204	102	200	0.503	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	185	92.3	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 81.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 3 - SURF (H243275-25)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/11/2024	ND	2.03	101	2.00	4.47	
Toluene*	<0.050	0.050	06/11/2024	ND	2.15	107	2.00	3.75	
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	2.14	107	2.00	2.70	
Total Xylenes*	<0.150	0.150	06/11/2024	ND	6.59	110	6.00	2.81	
Total BTEX	<0.300	0.300	06/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4160	16.0	06/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	204	102	200	0.503	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	185	92.3	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 93.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 3 - 4' (H243275-26)

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	2.03	101	2.00	4.47		
Toluene*	<0.050	0.050	06/11/2024	ND	2.15	107	2.00	3.75		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	2.14	107	2.00	2.70		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	6.59	110	6.00	2.81		
Total BTX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	656	16.0	06/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	204	102	200	0.503	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	185	92.3	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 94.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 4 - SURF (H243275-27)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	2.03	101	2.00	4.47		
Toluene*	<0.050	0.050	06/11/2024	ND	2.15	107	2.00	3.75		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	2.14	107	2.00	2.70		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	6.59	110	6.00	2.81		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5300	16.0	06/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	204	102	200	0.503	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	185	92.3	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 93.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 4 - 2' (H243275-28)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	2.03	101	2.00	4.47		
Toluene*	<0.050	0.050	06/11/2024	ND	2.15	107	2.00	3.75		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	2.14	107	2.00	2.70		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	6.59	110	6.00	2.81		
Total BTEx	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	416	16.0	06/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	204	102	200	0.503	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	185	92.3	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 87.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 5 - SURF (H243275-29)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/11/2024	ND	2.03	101	2.00	4.47	
Toluene*	<0.050	0.050	06/11/2024	ND	2.15	107	2.00	3.75	
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	2.14	107	2.00	2.70	
Total Xylenes*	<0.150	0.150	06/11/2024	ND	6.59	110	6.00	2.81	
Total BTEX	<0.300	0.300	06/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1540	16.0	06/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	204	102	200	0.503	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	185	92.3	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 87.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 5 - 1' (H243275-30)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	1.82	90.8	2.00	2.11		
Toluene*	<0.050	0.050	06/11/2024	ND	1.84	91.8	2.00	1.42		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	1.74	86.8	2.00	0.686		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	5.42	90.3	6.00	0.273		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.9 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	304	16.0	06/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	204	102	200	0.503	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	185	92.3	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 87.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 6 - SURF (H243275-31)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	1.82	90.8	2.00	2.11		
Toluene*	<0.050	0.050	06/11/2024	ND	1.84	91.8	2.00	1.42		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	1.74	86.8	2.00	0.686		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	5.42	90.3	6.00	0.273		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2080	16.0	06/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	204	102	200	0.503	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	185	92.3	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 92.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 6 - 1' (H243275-32)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	1.82	90.8	2.00	2.11		
Toluene*	<0.050	0.050	06/11/2024	ND	1.84	91.8	2.00	1.42		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	1.74	86.8	2.00	0.686		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	5.42	90.3	6.00	0.273		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	304	16.0	06/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	204	102	200	0.503	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	185	92.3	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 81.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 7 - SURF (H243275-33)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	1.82	90.8	2.00	2.11		
Toluene*	<0.050	0.050	06/11/2024	ND	1.84	91.8	2.00	1.42		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	1.74	86.8	2.00	0.686		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	5.42	90.3	6.00	0.273		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.2 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/11/2024	ND	204	102	200	0.503	
DRO >C10-C28*	<10.0	10.0	06/11/2024	ND	185	92.3	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	06/11/2024	ND					

Surrogate: 1-Chlorooctane 82.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Hungry Horse Environmental
DANIEL DOMINGUEZ
P.O. Box 1058
Hobbs NM, 88240
Fax To: (505) 391-4585

Received: 06/07/2024
Reported: 06/13/2024
Project Name: MARALO FEDERAL COM #1
Project Number: NONE GIVEN
Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 7 - 2' (H243275-34)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	1.82	90.8	2.00	2.11		
Toluene*	<0.050	0.050	06/11/2024	ND	1.84	91.8	2.00	1.42		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	1.74	86.8	2.00	0.686		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	5.42	90.3	6.00	0.273		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	06/11/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/11/2024	ND	204	102	200	0.503	
DRO >C10-C28*	119	10.0	06/11/2024	ND	185	92.3	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	06/11/2024	ND					

Surrogate: 1-Chlorooctane 62.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 63.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 8 - SURF (H243275-35)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	1.82	90.8	2.00	2.11		
Toluene*	<0.050	0.050	06/11/2024	ND	1.84	91.8	2.00	1.42		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	1.74	86.8	2.00	0.686		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	5.42	90.3	6.00	0.273		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	06/11/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/11/2024	ND	204	102	200	0.503	
DRO >C10-C28*	129	10.0	06/11/2024	ND	185	92.3	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	06/11/2024	ND					

Surrogate: 1-Chlorooctane 74.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 74.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 8 - 1' (H243275-36)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	1.82	90.8	2.00	2.11		
Toluene*	<0.050	0.050	06/11/2024	ND	1.84	91.8	2.00	1.42		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	1.74	86.8	2.00	0.686		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	5.42	90.3	6.00	0.273		
Total BTEx	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	06/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/11/2024	ND	204	102	200	0.503	
DRO >C10-C28*	139	10.0	06/11/2024	ND	185	92.3	200	1.70	
EXT DRO >C28-C36	<10.0	10.0	06/11/2024	ND					

Surrogate: 1-Chlorooctane 80.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 9 - SURF (H243275-37)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	1.82	90.8	2.00	2.11		
Toluene*	<0.050	0.050	06/11/2024	ND	1.84	91.8	2.00	1.42		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	1.74	86.8	2.00	0.686		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	5.42	90.3	6.00	0.273		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	06/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	207	103	200	0.268	
DRO >C10-C28*	124	10.0	06/10/2024	ND	203	101	200	0.162	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 76.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 9 - 1' (H243275-38)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	1.82	90.8	2.00	2.11		
Toluene*	<0.050	0.050	06/11/2024	ND	1.84	91.8	2.00	1.42		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	1.74	86.8	2.00	0.686		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	5.42	90.3	6.00	0.273		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	06/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	207	103	200	0.268	
DRO >C10-C28*	20.5	10.0	06/10/2024	ND	203	101	200	0.162	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 74.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 72.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 10 - SURF (H243275-39)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	1.82	90.8	2.00	2.11		
Toluene*	<0.050	0.050	06/11/2024	ND	1.84	91.8	2.00	1.42		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	1.74	86.8	2.00	0.686		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	5.42	90.3	6.00	0.273		
Total BTEx	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.6 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	207	103	200	0.268	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	203	101	200	0.162	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 83.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Hungry Horse Environmental
 DANIEL DOMINGUEZ
 P.O. Box 1058
 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/07/2024
 Reported: 06/13/2024
 Project Name: MARALO FEDERAL COM #1
 Project Number: NONE GIVEN
 Project Location: UL/L SEC 22 T17S - R27E

Sampling Date: 06/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 10 - 1' (H243275-40)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2024	ND	1.82	90.8	2.00	2.11		
Toluene*	<0.050	0.050	06/11/2024	ND	1.84	91.8	2.00	1.42		
Ethylbenzene*	<0.050	0.050	06/11/2024	ND	1.74	86.8	2.00	0.686		
Total Xylenes*	<0.150	0.150	06/11/2024	ND	5.42	90.3	6.00	0.273		
Total BTEX	<0.300	0.300	06/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.0 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	06/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/10/2024	ND	207	103	200	0.268	
DRO >C10-C28*	<10.0	10.0	06/10/2024	ND	203	101	200	0.162	
EXT DRO >C28-C36	<10.0	10.0	06/10/2024	ND					

Surrogate: 1-Chlorooctane 84.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.0 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- BS-3 Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Hungry Horse LLC		P.O. #:		BILL TO		ANALYSIS REQUEST																			
Project Manager: Daniel Dominguez		Company:		Murchison Oil & Gas																					
Address: 4024 Plains Hwy		Attn: Greg Boans																							
City: Lovington	State: NM	Zip: 88260	Address: 5325 Sierra Vista																						
Phone #: 575 393-3386	Fax #:	City: Carlsbad																							
Project #:	Project Owner: Murchison Oil & Gas	State: NM		Zip: 88230																					
Project Name: Maralo Federal Com #1		State: NM		Phone #: 575 706-0667																					
Project Location: U/L L Sec 22 T17S - R27E		Fax #:																							
Sampler Name: Jerry Heidelberg																									
FOR LAB USE ONLY																									
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.		PRESERV.		SAMPLING																			
		# CONTAINERS																							
		GROUNDWATER																							
		WASTEWATER																							
		SOIL																							
		OIL																							
		SLUDGE																							
		OTHER																							
		ACID/BASE																							
		ICE / COOL																							
		OTHER																							
		DATE		TIME																					
1 HZ1 - Surf		G 1		X		6/6/24		X		Chloride		TPH		BTEX 8021											
2 HZ1 -1'		G 1		X		6/6/24		X		X		X		X											
3 HZ2 - Surf		G 1		X		6/6/24		X		X		X		X											
4 HZ2 -1'		G 1		X		6/6/24		X		X		X		X											
5 HZ3 - Surf		G 1		X		6/6/24		X		X		X		X											
6 HZ3 -1'		G 1		X		6/6/24		X		X		X		X											
7 HZ4 - Surf		G 1		X		6/6/24		X		X		X		X											
8 HZ4 -1'		G 1		X		6/6/24		X		X		X		X											
9 HZ5 - Surf		G 1		X		6/6/24		X		X		X		X											
10 HZ5 -1'		G 1		X		6/6/24		X		X		X		X											
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Relinquished By: [Signature]		Date: 8-7-24		Received By: [Signature]		Phone Result: [] Yes [] No		Add'l Phone #: []																	
Relinquished By: [Signature]		Date: 1-3-25		Received By: [Signature]		Fax Result: [] Yes [] No		Add'l Fax #: []																	
Delivered By: (Circle One)		#140		Sample Condition		CHECKED BY: (Initials)																			
Sampler - UPS - Bus - Other:		09:		Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																			
		90:		Yes <input type="checkbox"/> No <input type="checkbox"/>		90:																			
Cardinal cannot accept verbal changes. Please fax written changes to: 575 202 2475																									



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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Hungry Horse LLC		P.O. #:		BILL TO										ANALYSIS REQUEST																													
Project Manager: Daniel Dominguez		Company: Murchison Oil & Gas																																									
Address: 4024 Plains Hwy		City: Lovington		State: NM		Zip: 88260		Attn: Greg Boans		Address: 5325 Sierra Vista																																	
Phone #: 575 393-3386		Fax #:		Project Owner: Murchison Oil & Gas		City: Carlsbad		State: NM		Zip: 88230																																	
Project Name: Maralo Federal Com #1		Project Location: U/L L Sec 22 T17S - R27E		Phone #: 575 706-0667		Fax #:																																					
Sampler Name: Jerry Heidelberg		FOR LAB USE ONLY		Matrix		PRESERV.		SAMPLING																																			
Lab I.D. Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME		Chloride		TPH		BTEX 8021											
31 SP1-Surf		G		1		X																		6/6/24		X		X		X													
32 SP1-4'		G		1		X																		6/6/24		X		X		X													
33 SP2-Surf		G		1		X																		6/6/24		X		X		X													
34 SP2-4'		G		1		X																		6/6/24		X		X		X													
35 SP3-Surf		G		1		X																		6/6/24		X		X		X													
36 SP3-4'		G		1		X																		6/6/24		X		X		X													
37 SP4-Surf		G		1		X																		6/6/24		X		X		X													
38 SP4-2'		G		1		X																		6/6/24		X		X		X													
39 SP5-Surf		G		1		X																		6/6/24		X		X		X													
30 SP5-1'		G		1		X																		6/6/24		X		X		X													
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Delivered By: (Circle One) Sampler - UPS - Bus - Other: 0.9c		#140		Sample Condition Cool [] Intact [] Yes [] No []		CHECKED BY: (Initials) [Signature]																																					







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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:		Hungry Hois LLC		BILL TO		ANALYSIS REQUEST					
Project Manager:		Daniel Dominguez									
Address:		4024 Plains Hwy		P.O. #:							
				Company		Murchison Oil & Gas					
City:	Lovington	State:	NM	Zip:	88260	Attn:	Greg Boans				
Phone #:	575 393-3386	Fax #:		Address:			5325 Sierra Vista				
Project #:		Project Owner:	Murchison Oil & Gas			City:	Carlsbad				
Project Name:	Maralo Federal Com #1			State:	NM	Zip:	88230				
Project Location:	UL/L Sec 22 T17S - R27E			Phone #:	575 706-0667						
Sampler Name:	Jerry Heidelberg			Fax #:							

FOR LAB USE ONLY																			
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER	PRESERV. ACID/BASE: ICE / COOL OTHER	SAMPLING DATE TIME	Chloride	TPH	BTEX 8021										
H2438X	SP6-Surf	G	1	X			DATE	TIME	X	X	X								
31	SP6-1'	G	1	X		X	6/6/24		X	X	X								
32	SP7-Surf	G	1	X		X	6/6/24		X	X	X								
33	SP7-2'	G	1	X		X	6/6/24		X	X	X								
34	SP8-Surf	G	1	X		X	6/6/24		X	X	X								
35	SP9-Surf	G	1	X		X	6/6/24		X	X	X								
36	SP10-Surf	G	1	X		X	6/6/24		X	X	X								
37	SP10-1'	G	1	X		X	6/6/24		X	X	X								
38		G	1	X		X	6/6/24		X	X	X								
39		G	1	X		X	6/6/24		X	X	X								
40		G	1	X		X	6/6/24		X	X	X								

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Relinquished By:		Date:	6-7-24	Received By:	
Time:	1:30:35				
Relinquished By:		Date:		Received By:	
Time:					

Phone Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Phone #:
Fax Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Fax #:

REMARKS:

Email results to: pm@hungry-horse.com
gboans@jdmii.com

Delivered By: (Circle One)	#/40	Sample Condition	CHECKED BY
Sampler - UPS - Bus - Other:	0.9c	<input checked="" type="checkbox"/> Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No	(Initials)

Phone Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Phone #
Fax Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Fax #:

REMARKS:

Email results to: pm@hungry-horse.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

January 31, 2022

KRISTIN POPE

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: MARALO FED #1 RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 01/27/22 9:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

R T HICKS CONSULTANTS
KRISTIN POPE
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received: 01/27/2022
Reported: 01/31/2022
Project Name: MARALO FED #1 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 1 @ 0-4' BGS (H220316-01)

BTEX 8021B	mg/kg	Analyzed By: MS/						S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<2.00	2.00	01/29/2022	ND	2.03	102	2.00	2.58	
Toluene*	25.3	2.00	01/29/2022	ND	1.96	97.9	2.00	0.624	GC-NC1
Ethylbenzene*	29.3	2.00	01/29/2022	ND	1.96	98.0	2.00	1.09	
Total Xylenes*	255	6.00	01/29/2022	ND	5.97	99.5	6.00	0.350	
Total BTEX	310	12.0	01/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 159 % 69.9-140

Chloride, SM4500Cl-B	mg/kg	Analyzed By: GM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	01/28/2022	ND	400	100	400	0.00	

TPH 8015M	mg/kg	Analyzed By: MS						S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	6900	10.0	01/28/2022	ND	201	100	200	1.03	
DRO >C10-C28*	2010	10.0	01/28/2022	ND	207	103	200	3.51	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 376 % 66.9-136

Surrogate: 1-Chlorooctadecane 96.8 % 59.5-142

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

R T HICKS CONSULTANTS
KRISTIN POPE
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received: 01/27/2022
Reported: 01/31/2022
Project Name: MARALO FED #1 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 2 @ 0-4' BGS (H220316-02)

BTEx 8021B		mg/kg		Analyzed By: MS/				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	01/29/2022	ND	2.03	102	2.00	2.58	
Toluene*	10.8	0.200	01/29/2022	ND	1.96	97.9	2.00	0.624	GC-NC1
Ethylbenzene*	6.92	0.200	01/29/2022	ND	1.96	98.0	2.00	1.09	
Total Xylenes*	52.9	0.600	01/29/2022	ND	5.97	99.5	6.00	0.350	
Total BTEX	70.6	1.20	01/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 193 % 69.9-140

Chloride, SM4500Cl-B			mg/kg					Analyzed By: GM	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	01/28/2022	ND	400	100	400	0.00	

TPH 8015M			mg/kg					Analyzed By: MS	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	576	10.0	01/28/2022	ND	201	100	200	1.03	
DRO >C10-C28*	143	10.0	01/28/2022	ND	207	103	200	3.51	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 102 % 66.9-136

Surrogate: 1-Chlorooctadecane 82.5 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

R T HICKS CONSULTANTS
KRISTIN POPE
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received: 01/27/2022
Reported: 01/31/2022
Project Name: MARALO FED #1 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 3 @ 0-4' BGS (H220316-03)

BTEx 8021B		mg/kg		Analyzed By: MS/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/28/2022	ND	2.03	102	2.00	2.58	
Toluene*	<0.050	0.050	01/28/2022	ND	1.96	97.9	2.00	0.624	
Ethylbenzene*	<0.050	0.050	01/28/2022	ND	1.96	98.0	2.00	1.09	
Total Xylenes*	0.226	0.150	01/28/2022	ND	5.97	99.5	6.00	0.350	
Total BTEX	<0.300	0.300	01/28/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	01/28/2022	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2022	ND	201	100	200	1.03	
DRO >C10-C28*	<10.0	10.0	01/28/2022	ND	207	103	200	3.51	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 95.0 % 66.9-136

Surrogate: 1-Chlorooctadecane 94.0 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

R T HICKS CONSULTANTS
KRISTIN POPE
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received: 01/27/2022
Reported: 01/31/2022
Project Name: MARALO FED #1 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 4 @ 0-4' BGS (H220316-04)

BTEX 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/28/2022	ND	2.03	102	2.00	2.58		
Toluene*	<0.050	0.050	01/28/2022	ND	1.96	97.9	2.00	0.624		
Ethylbenzene*	<0.050	0.050	01/28/2022	ND	1.96	98.0	2.00	1.09		
Total Xylenes*	<0.150	0.150	01/28/2022	ND	5.97	99.5	6.00	0.350		
Total BTEX	<0.300	0.300	01/28/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	01/28/2022	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2022	ND	201	100	200	1.03	
DRO >C10-C28*	<10.0	10.0	01/28/2022	ND	207	103	200	3.51	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 95.7 % 66.9-136

Surrogate: 1-Chlorooctadecane 94.7 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

R T HICKS CONSULTANTS
KRISTIN POPE
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received: 01/27/2022
Reported: 01/31/2022
Project Name: MARALO FED #1 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 5 @ 0-4' BGS (H220316-05)

BTEX 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/29/2022	ND	2.03	102	2.00	2.58		
Toluene*	<0.050	0.050	01/29/2022	ND	1.96	97.9	2.00	0.624		
Ethylbenzene*	<0.050	0.050	01/29/2022	ND	1.96	98.0	2.00	1.09		
Total Xylenes*	<0.150	0.150	01/29/2022	ND	5.97	99.5	6.00	0.350		
Total BTEX	<0.300	0.300	01/29/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1920	16.0	01/28/2022	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2022	ND	201	100	200	1.03	
DRO >C10-C28*	<10.0	10.0	01/28/2022	ND	207	103	200	3.51	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 97.1 % 66.9-136

Surrogate: 1-Chlorooctadecane 96.4 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

R T HICKS CONSULTANTS
 KRISTIN POPE
 901 RIO GRANDE BLVD SUITE F-142
 ALBUQUERQUE NM, 87104
 Fax To: NONE

Received: 01/27/2022
 Reported: 01/31/2022
 Project Name: MARALO FED #1 RELEASE
 Project Number: NONE GIVEN
 Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SSA - 6 @ 0-4' BGS (H220316-06)

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/29/2022	ND	2.03	102	2.00	2.58		
Toluene*	<0.050	0.050	01/29/2022	ND	1.96	97.9	2.00	0.624		
Ethylbenzene*	<0.050	0.050	01/29/2022	ND	1.96	98.0	2.00	1.09		
Total Xylenes*	<0.150	0.150	01/29/2022	ND	5.97	99.5	6.00	0.350		
Total BTEX	<0.300	0.300	01/29/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	01/28/2022	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2022	ND	201	100	200	1.03	
DRO >C10-C28*	<10.0	10.0	01/28/2022	ND	207	103	200	3.51	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 114 % 66.9-136

Surrogate: 1-Chlorooctadecane 113 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

R T HICKS CONSULTANTS
KRISTIN POPE
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received: 01/27/2022
Reported: 01/31/2022
Project Name: MARALO FED #1 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 7 @ 0-4' BGS (H220316-07)

BTEX 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/29/2022	ND	2.03	102	2.00	2.58		
Toluene*	<0.050	0.050	01/29/2022	ND	1.96	97.9	2.00	0.624		
Ethylbenzene*	<0.050	0.050	01/29/2022	ND	1.96	98.0	2.00	1.09		
Total Xylenes*	<0.150	0.150	01/29/2022	ND	5.97	99.5	6.00	0.350		
Total BTEX	<0.300	0.300	01/29/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	608	16.0	01/28/2022	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2022	ND	201	100	200	1.03	
DRO >C10-C28*	<10.0	10.0	01/28/2022	ND	207	103	200	3.51	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 92.5 % 66.9-136

Surrogate: 1-Chlorooctadecane 91.5 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

R T HICKS CONSULTANTS
KRISTIN POPE
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received: 01/27/2022
Reported: 01/31/2022
Project Name: MARALO FED #1 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 8 @ 0-4' BGS (H220316-08)

BTEx 8021B		mg/kg		Analyzed By: MS/				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2022	ND	2.03	102	2.00	2.58	
Toluene*	0.602	0.050	01/29/2022	ND	1.96	97.9	2.00	0.624	GC-NC1
Ethylbenzene*	<0.050	0.050	01/29/2022	ND	1.96	98.0	2.00	1.09	
Total Xylenes*	11.5	0.150	01/29/2022	ND	5.97	99.5	6.00	0.350	
Total BTEX	12.1	0.300	01/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 379 % 69.9-140

Chloride, SM4500CI-B			mg/kg					Analyzed By: GM	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	01/28/2022	ND	400	100	400	0.00	

TPH 8015M			mg/kg					Analyzed By: MS	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	451	10.0	01/28/2022	ND	201	100	200	1.03	
DRO >C10-C28*	365	10.0	01/28/2022	ND	207	103	200	3.51	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 133 % 66.9-136

Surrogate: 1-Chlorooctadecane 90.0 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

R T HICKS CONSULTANTS
KRISTIN POPE
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received: 01/27/2022
Reported: 01/31/2022
Project Name: MARALO FED #1 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 9 @ 0-4' BGS (H220316-09)

BTEX 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/29/2022	ND	2.03	102	2.00	2.58		
Toluene*	<0.050	0.050	01/29/2022	ND	1.96	97.9	2.00	0.624		
Ethylbenzene*	<0.050	0.050	01/29/2022	ND	1.96	98.0	2.00	1.09		
Total Xylenes*	<0.150	0.150	01/29/2022	ND	5.97	99.5	6.00	0.350		
Total BTEX	<0.300	0.300	01/29/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	01/28/2022	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2022	ND	201	100	200	1.03	
DRO >C10-C28*	<10.0	10.0	01/28/2022	ND	207	103	200	3.51	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 89.4 % 66.9-136

Surrogate: 1-Chlorooctadecane 89.5 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

R T HICKS CONSULTANTS
 KRISTIN POPE
 901 RIO GRANDE BLVD SUITE F-142
 ALBUQUERQUE NM, 87104
 Fax To: NONE

Received: 01/27/2022
 Reported: 01/31/2022
 Project Name: MARALO FED #1 RELEASE
 Project Number: NONE GIVEN
 Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SSA - 10 @ 0-4' BGS (H220316-10)

BTEX 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/29/2022	ND	2.03	102	2.00	2.58		
Toluene*	<0.050	0.050	01/29/2022	ND	1.96	97.9	2.00	0.624		
Ethylbenzene*	<0.050	0.050	01/29/2022	ND	1.96	98.0	2.00	1.09		
Total Xylenes*	<0.150	0.150	01/29/2022	ND	5.97	99.5	6.00	0.350		
Total BTEX	<0.300	0.300	01/29/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	01/28/2022	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2022	ND	201	100	200	1.03	
DRO >C10-C28*	<10.0	10.0	01/28/2022	ND	207	103	200	3.51	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 87.5 % 66.9-136

Surrogate: 1-Chlorooctadecane 85.7 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- GC-NC1 8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
- Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "C. D. Keene".

Celey D. Keene, Lab Director/Quality Manager

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

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† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

February 15, 2022

KRISTIN POPE

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: MARALO FED #1 RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 02/14/22 11:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is fluid and cursive, with the first name "Celey" and last name "Keene" clearly distinguishable.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

R T HICKS CONSULTANTS
KRISTIN POPE
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received:	02/14/2022	Sampling Date:	01/19/2022
Reported:	02/15/2022	Sampling Type:	Soil
Project Name:	MARALO FED #1 RELEASE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	MURCHISON- EDDY CO.		

Sample ID: SSA - 1 @ 0-2' (H220562-01)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/15/2022	ND	432	108	400	0.00	

Sample ID: SSA - 1 @ 2-4' (H220562-02)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/15/2022	ND	432	108	400	0.00	

Sample ID: SSA - 2 @ 0-2' (H220562-03)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	02/15/2022	ND	432	108	400	0.00	

Sample ID: SSA - 2 @ 2-4' (H220562-04)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	02/15/2022	ND	432	108	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>RT Hicks Consultants</u>				BILL TO				ANALYSIS REQUEST																																	
Project Manager: <u>Kristin Pope</u>				P.O. #:																																					
Address: <u>901 Rio Grande Blvd NW, Suite F-142</u>				Company: <u>RT Hicks</u>																																					
City: <u>Albuquerque</u> State: <u>NM</u> Zip: <u>87104</u>				Attn: <u>Randy</u>																																					
Phone #: <u>575-302-6755</u> Fax #:				Address:																																					
Project #: _____ Project Owner: <u>Marchison</u>				City:																																					
Project Name: <u>Maralo Fed #1 Release</u>				State: _____ Zip: _____																																					
Project Location: <u>Eddy Co.</u>				Phone #: <u>505-266-5004</u>																																					
Sampler Name: <u>Kristin Pope</u>				Fax #:																																					
FOR LAB USE ONLY						MATRIX		PRESERV.		SAMPLING																															
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER:		ACID/BASE:		ICE / COOL		OTHER:		DATE		TIME													
<u>H220562</u>		<u>1 SSA-1 @ 0-2 ft</u>		<u>G</u>		<u>1</u>						<u>X</u>								<u>X</u>						<u>11-9-22</u>		<u>1225</u>		<u>Chloride</u>											
		<u>2 SSA-1 @ 2-4 ft</u>		<u>G</u>		<u>1</u>						<u>X</u>								<u>X</u>						<u>1230</u>		<u>X</u>													
		<u>3 SSA-2 @ 0-2 ft</u>		<u>G</u>		<u>1</u>						<u>X</u>								<u>X</u>						<u>1238</u>		<u>X</u>													
		<u>4 SSA-2 @ 2-4 ft</u>		<u>G</u>		<u>1</u>						<u>X</u>								<u>X</u>						<u>1246</u>		<u>X</u>													

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: <u>Kristin Pope</u>		Date: <u>2/14/22</u>		Received By: <u>[Signature]</u>		Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #:	
Time: <u>9:41</u>		Time: <u>2-14-22</u>		Time: <u>1105</u>		All Results are emailed. Please provide Email address:	
Relinquished By: _____		Date: _____		Received By: <u>[Signature]</u>		REMARKS: <u>kristin@rthicksconsult.com</u>	
Time: _____		Time: _____		Time: _____		Turnaround Time: <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush	
Delivered By: (Circle One)		Observed Temp. °C <u>3.3</u>		Sample Condition		Bacteria (only) Sample Condition	
Sampler - UPS - Bus - Other:		Corrected Temp. °C <u>2.8</u>		Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	
FORM-006 R 3.0				CHECKED BY: (Initials) <u>YO</u>		Thermometer ID #97-#113	
						Correction Factor <u>+0.4°C</u>	
						Observed Temp. °C	
						Corrected Temp. °C	

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

February 16, 2022

KRISTIN POPE

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: MARALO FED #1 RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 02/14/22 11:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

R T HICKS CONSULTANTS
KRISTIN POPE
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received: 02/14/2022
Reported: 02/16/2022
Project Name: MARALO FED #1 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 1 @ 0-2' (H220563-01)

BTEx 8021B		mg/kg		Analyzed By: MS				I-02, S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.124	0.050	02/15/2022	ND	1.84	92.0	2.00	7.59	
Toluene*	7.91	0.050	02/15/2022	ND	1.85	92.4	2.00	8.24	GC-NC1
Ethylbenzene*	<0.050	0.050	02/15/2022	ND	1.85	92.6	2.00	9.92	
Total Xylenes*	107	0.150	02/15/2022	ND	5.73	95.5	6.00	10.3	GC-NC1
Total BTEX	115	0.300	02/15/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 762 % 69.9-140

TPH 8015M	mg/kg		Analyzed By: CK					I-02, S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	3220	10.0	02/15/2022	ND	208	104	200	0.994	
DRO >C10-C28*	1010	10.0	02/15/2022	ND	225	112	200	3.80	
EXT DRO >C28-C36	<10.0	10.0	02/15/2022	ND					

Surrogate: 1-Chlorooctane 263 % 66.9-136

Surrogate: 1-Chlorooctadecane 140 % 59.5-142

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

R T HICKS CONSULTANTS
KRISTIN POPE
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received: 02/14/2022
Reported: 02/16/2022
Project Name: MARALO FED #1 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 1 @ 2-4' (H220563-02)

BTEx 8021B		mg/kg	Analyzed By: MS					I-02, S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/15/2022	ND	1.84	92.0	2.00	7.59	
Toluene*	0.993	0.050	02/15/2022	ND	1.85	92.4	2.00	8.24	GC-NC1
Ethylbenzene*	<0.050	0.050	02/15/2022	ND	1.85	92.6	2.00	9.92	
Total Xylenes*	15.0	0.150	02/15/2022	ND	5.73	95.5	6.00	10.3	GC-NC1
Total BTEx	16.0	0.300	02/15/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 407 % 69.9-140

TPH 8015M		mg/kg	Analyzed By: CK					I-02	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	217	10.0	02/15/2022	ND	208	104	200	0.994	
DRO >C10-C28*	317	10.0	02/15/2022	ND	225	112	200	3.80	
EXT DRO >C28-C36	<10.0	10.0	02/15/2022	ND					

Surrogate: 1-Chlorooctane 132 % 66.9-136

Surrogate: 1-Chlorooctadecane 128 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

R T HICKS CONSULTANTS
KRISTIN POPE
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received: 02/14/2022
Reported: 02/16/2022
Project Name: MARALO FED #1 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 2 @ 0-2' (H220563-03)

BTEx 8021B		mg/kg	Analyzed By: MS					I-02, S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	2.17	0.050	02/15/2022	ND	1.84	92.0	2.00	7.59	
Toluene*	63.3	1.00	02/16/2022	ND	1.85	92.4	2.00	8.24	GC-NC1
Ethylbenzene*	27.1	1.00	02/16/2022	ND	1.85	92.6	2.00	9.92	GC-NC1
Total Xylenes*	212	0.150	02/15/2022	ND	5.73	95.5	6.00	10.3	GC-NC1
Total BTEX	305	0.300	02/15/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 533 % 69.9-140

TPH 8015M		mg/kg	Analyzed By: CK					I-02, S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	2640	10.0	02/15/2022	ND	208	104	200	0.994	
DRO >C10-C28*	271	10.0	02/15/2022	ND	225	112	200	3.80	
EXT DRO >C28-C36	<10.0	10.0	02/15/2022	ND					

Surrogate: 1-Chlorooctane 164 % 66.9-136

Surrogate: 1-Chlorooctadecane 130 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

R T HICKS CONSULTANTS
KRISTIN POPE
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received: 02/14/2022
Reported: 02/16/2022
Project Name: MARALO FED #1 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 2 @ 2-4' (H220563-04)

BTEx 8021B		mg/kg	Analyzed By: MS					I-02, S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/15/2022	ND	1.84	92.0	2.00	7.59	
Toluene*	0.275	0.050	02/15/2022	ND	1.85	92.4	2.00	8.24	GC-NC1
Ethylbenzene*	<0.050	0.050	02/15/2022	ND	1.85	92.6	2.00	9.92	
Total Xylenes*	3.04	0.150	02/15/2022	ND	5.73	95.5	6.00	10.3	GC-NC1
Total BTEx	3.32	0.300	02/15/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 160 % 69.9-140

TPH 8015M		mg/kg	Analyzed By: CK					I-02	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	14.1	10.0	02/15/2022	ND	208	104	200	0.994	
DRO >C10-C28*	16.8	10.0	02/15/2022	ND	225	112	200	3.80	
EXT DRO >C28-C36	<10.0	10.0	02/15/2022	ND					

Surrogate: 1-Chlorooctane 106 % 66.9-136

Surrogate: 1-Chlorooctadecane 119 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager




PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- I-02 This result was analyzed outside of the EPA recommended holding time.
- GC-NC1 8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
- Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

February 01, 2022

KRISTIN POPE

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: MARALO FED #1 RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 01/27/22 9:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

R T HICKS CONSULTANTS
KRISTIN POPE
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received: 01/27/2022
Reported: 02/01/2022
Project Name: MARALO FED #1 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 1 @ 4.2' BGS (H220315-01)

BTEX 8021B	mg/kg	Analyzed By: MS/						S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<1.00	1.00	01/27/2022	ND	2.03	102	2.00	4.81	
Toluene*	8.21	1.00	01/27/2022	ND	1.97	98.3	2.00	4.83	GC-NC1
Ethylbenzene*	13.5	1.00	01/27/2022	ND	1.94	97.1	2.00	5.07	GC-NC1
Total Xylenes*	113	3.00	01/27/2022	ND	5.87	97.8	6.00	5.36	GC-NC1
Total BTEX	135	6.00	01/27/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 162 % 69.9-140

Chloride, SM4500Cl-B	mg/kg	Analyzed By: GM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	01/28/2022	ND	432	108	400	3.77	

TPH 8015M	mg/kg	Analyzed By: MS						S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	2230	10.0	01/28/2022	ND	213	106	200	6.98	
DRO >C10-C28*	776	10.0	01/28/2022	ND	210	105	200	8.92	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 351 % 66.9-136

Surrogate: 1-Chlorooctadecane 96.3 % 59.5-142

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

R T HICKS CONSULTANTS
 KRISTIN POPE
 901 RIO GRANDE BLVD SUITE F-142
 ALBUQUERQUE NM, 87104
 Fax To: NONE

Received: 01/27/2022
 Reported: 02/01/2022
 Project Name: MARALO FED #1 RELEASE
 Project Number: NONE GIVEN
 Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SSA - 2 @ 4.2' BGS (H220315-02)

BTEx 8021B		mg/kg		Analyzed By: MS/				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/27/2022	ND	2.03	102	2.00	4.81	
Toluene*	1.39	0.050	01/27/2022	ND	1.97	98.3	2.00	4.83	GC-NC1
Ethylbenzene*	1.54	0.050	01/27/2022	ND	1.94	97.1	2.00	5.07	GC-NC1
Total Xylenes*	14.1	0.150	01/27/2022	ND	5.87	97.8	6.00	5.36	GC-NC1
Total BTEX	17.0	0.300	01/27/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 285 % 69.9-140

Chloride, SM4500Cl-B			mg/kg					Analyzed By: GM	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	01/28/2022	ND	432	108	400	3.77	

TPH 8015M			mg/kg					Analyzed By: MS	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	133	10.0	01/28/2022	ND	213	106	200	6.98	
DRO >C10-C28*	125	10.0	01/28/2022	ND	210	105	200	8.92	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 125 % 66.9-136

Surrogate: 1-Chlorooctadecane 100 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

R T HICKS CONSULTANTS
KRISTIN POPE
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received: 01/27/2022
Reported: 02/01/2022
Project Name: MARALO FED #1 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 3 @ 4.2' BGS (H220315-03)

BTX 8021B		mg/kg		Analyzed By: MS/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/27/2022	ND	2.03	102	2.00	4.81	
Toluene*	<0.050	0.050	01/27/2022	ND	1.97	98.3	2.00	4.83	
Ethylbenzene*	<0.050	0.050	01/27/2022	ND	1.94	97.1	2.00	5.07	
Total Xylenes*	<0.150	0.150	01/27/2022	ND	5.87	97.8	6.00	5.36	
Total BTEX	<0.300	0.300	01/27/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	01/28/2022	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2022	ND	213	106	200	6.98	
DRO >C10-C28*	<10.0	10.0	01/28/2022	ND	210	105	200	8.92	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 93.0 % 66.9-136

Surrogate: 1-Chlorooctadecane 91.4 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

R T HICKS CONSULTANTS
 KRISTIN POPE
 901 RIO GRANDE BLVD SUITE F-142
 ALBUQUERQUE NM, 87104
 Fax To: NONE

Received: 01/27/2022
 Reported: 02/01/2022
 Project Name: MARALO FED #1 RELEASE
 Project Number: NONE GIVEN
 Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SSA - 4 @ 4.2' BGS (H220315-04)

BTX 8021B		mg/kg		Analyzed By: MS/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/27/2022	ND	2.03	102	2.00	4.81	
Toluene*	<0.050	0.050	01/27/2022	ND	1.97	98.3	2.00	4.83	
Ethylbenzene*	<0.050	0.050	01/27/2022	ND	1.94	97.1	2.00	5.07	
Total Xylenes*	<0.150	0.150	01/27/2022	ND	5.87	97.8	6.00	5.36	
Total BTX	<0.300	0.300	01/27/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	01/28/2022	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/31/2022	ND	187	93.7	200	3.96	
DRO >C10-C28*	<10.0	10.0	01/31/2022	ND	217	108	200	4.10	
EXT DRO >C28-C36	<10.0	10.0	01/31/2022	ND					

Surrogate: 1-Chlorooctane 96.4 % 66.9-136

Surrogate: 1-Chlorooctadecane 87.7 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

R T HICKS CONSULTANTS
KRISTIN POPE
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received: 01/27/2022
Reported: 02/01/2022
Project Name: MARALO FED #1 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 5 @ 4.2' BGS (H220315-05)

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/28/2022	ND	1.97	98.7	2.00	3.17		
Toluene*	<0.050	0.050	01/28/2022	ND	1.89	94.5	2.00	3.39		
Ethylbenzene*	<0.050	0.050	01/28/2022	ND	1.90	95.2	2.00	4.20		
Total Xylenes*	<0.150	0.150	01/28/2022	ND	5.77	96.1	6.00	4.19		
Total BTEX	<0.300	0.300	01/28/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	448	16.0	01/28/2022	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/31/2022	ND	187	93.7	200	3.96	
DRO >C10-C28*	<10.0	10.0	01/31/2022	ND	217	108	200	4.10	
EXT DRO >C28-C36	<10.0	10.0	01/31/2022	ND					

Surrogate: 1-Chlorooctane 102 % 66.9-136

Surrogate: 1-Chlorooctadecane 93.9 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

R T HICKS CONSULTANTS
KRISTIN POPE
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received: 01/27/2022
Reported: 02/01/2022
Project Name: MARALO FED #1 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 6 @ 4.2' BGS (H220315-06)

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/28/2022	ND	1.97	98.7	2.00	3.17		
Toluene*	<0.050	0.050	01/28/2022	ND	1.89	94.5	2.00	3.39		
Ethylbenzene*	<0.050	0.050	01/28/2022	ND	1.90	95.2	2.00	4.20		
Total Xylenes*	<0.150	0.150	01/28/2022	ND	5.77	96.1	6.00	4.19		
Total BTEx	<0.300	0.300	01/28/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	01/28/2022	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/31/2022	ND	187	93.7	200	3.96	
DRO >C10-C28*	<10.0	10.0	01/31/2022	ND	217	108	200	4.10	
EXT DRO >C28-C36	<10.0	10.0	01/31/2022	ND					

Surrogate: 1-Chlorooctane 90.5 % 66.9-136

Surrogate: 1-Chlorooctadecane 83.6 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

R T HICKS CONSULTANTS
KRISTIN POPE
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received: 01/27/2022
Reported: 02/01/2022
Project Name: MARALO FED #1 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 7 @ 4.2' BGS (H220315-07)

BTX 8021B		mg/kg		Analyzed By: MS/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/28/2022	ND	1.97	98.7	2.00	3.17	
Toluene*	<0.050	0.050	01/28/2022	ND	1.89	94.5	2.00	3.39	
Ethylbenzene*	0.072	0.050	01/28/2022	ND	1.90	95.2	2.00	4.20	GC-NC1
Total Xylenes*	0.924	0.150	01/28/2022	ND	5.77	96.1	6.00	4.19	GC-NC1
Total BTX	0.996	0.300	01/28/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 117 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	848	16.0	01/28/2022	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/31/2022	ND	187	93.7	200	3.96	
DRO >C10-C28*	<10.0	10.0	01/31/2022	ND	217	108	200	4.10	
EXT DRO >C28-C36	<10.0	10.0	01/31/2022	ND					

Surrogate: 1-Chlorooctane 98.2 % 66.9-136

Surrogate: 1-Chlorooctadecane 91.5 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

R T HICKS CONSULTANTS
KRISTIN POPE
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received: 01/27/2022
Reported: 02/01/2022
Project Name: MARALO FED #1 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 8 @ 4.2' BGS (H220315-08)

BTEx 8021B		mg/kg		Analyzed By: MS/				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/28/2022	ND	1.97	98.7	2.00	3.17	
Toluene*	0.124	0.050	01/28/2022	ND	1.89	94.5	2.00	3.39	GC-NC1
Ethylbenzene*	<0.050	0.050	01/28/2022	ND	1.90	95.2	2.00	4.20	
Total Xylenes*	3.64	0.150	01/28/2022	ND	5.77	96.1	6.00	4.19	GC-NC1
Total BTEx	3.77	0.300	01/28/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 207 % 69.9-140

Chloride, SM4500CI-B			mg/kg					Analyzed By: GM	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	01/28/2022	ND	432	108	400	3.77	

TPH 8015M			mg/kg					Analyzed By: MS	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	98.3	10.0	01/31/2022	ND	187	93.7	200	3.96	
DRO >C10-C28*	160	10.0	01/31/2022	ND	217	108	200	4.10	
EXT DRO >C28-C36	<10.0	10.0	01/31/2022	ND					

Surrogate: 1-Chlorooctane 119 % 66.9-136

Surrogate: 1-Chlorooctadecane 100 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

R T HICKS CONSULTANTS
KRISTIN POPE
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received: 01/27/2022
Reported: 02/01/2022
Project Name: MARALO FED #1 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 9 @ 4.2' BGS (H220315-09)

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/28/2022	ND	1.97	98.7	2.00	3.17		
Toluene*	<0.050	0.050	01/28/2022	ND	1.89	94.5	2.00	3.39		
Ethylbenzene*	<0.050	0.050	01/28/2022	ND	1.90	95.2	2.00	4.20		
Total Xylenes*	<0.150	0.150	01/28/2022	ND	5.77	96.1	6.00	4.19		
Total BTEX	<0.300	0.300	01/28/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	01/28/2022	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/31/2022	ND	187	93.7	200	3.96	
DRO >C10-C28*	<10.0	10.0	01/31/2022	ND	217	108	200	4.10	
EXT DRO >C28-C36	<10.0	10.0	01/31/2022	ND					

Surrogate: 1-Chlorooctane 93.6 % 66.9-136

Surrogate: 1-Chlorooctadecane 88.5 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

R T HICKS CONSULTANTS
KRISTIN POPE
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received: 01/27/2022
Reported: 02/01/2022
Project Name: MARALO FED #1 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 10 @ 4.2' BGS (H220315-10)

BTEx 8021B		mg/kg		Analyzed By: MS/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/28/2022	ND	1.97	98.7	2.00	3.17	
Toluene*	<0.050	0.050	01/28/2022	ND	1.89	94.5	2.00	3.39	
Ethylbenzene*	<0.050	0.050	01/28/2022	ND	1.90	95.2	2.00	4.20	
Total Xylenes*	<0.150	0.150	01/28/2022	ND	5.77	96.1	6.00	4.19	
Total BTEX	<0.300	0.300	01/28/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	01/28/2022	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	17.6	10.0	01/31/2022	ND	187	93.7	200	3.96	
DRO >C10-C28*	22.6	10.0	01/31/2022	ND	217	108	200	4.10	
EXT DRO >C28-C36	<10.0	10.0	01/31/2022	ND					

Surrogate: 1-Chlorooctane 90.2 % 66.9-136

Surrogate: 1-Chlorooctadecane 83.6 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

R T HICKS CONSULTANTS
KRISTIN POPE
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received: 01/27/2022
Reported: 02/01/2022
Project Name: MARALO FED #1 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BACKGROUND @ 0-4' BGS (H220315-11)

BTEX 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/28/2022	ND	1.97	98.7	2.00	3.17		
Toluene*	<0.050	0.050	01/28/2022	ND	1.89	94.5	2.00	3.39		
Ethylbenzene*	<0.050	0.050	01/28/2022	ND	1.90	95.2	2.00	4.20		
Total Xylenes*	<0.150	0.150	01/28/2022	ND	5.77	96.1	6.00	4.19		
Total BTEX	<0.300	0.300	01/28/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	01/28/2022	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2022	ND	201	100	200	1.03	
DRO >C10-C28*	<10.0	10.0	01/28/2022	ND	207	103	200	3.51	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 103 % 66.9-136

Surrogate: 1-Chlorooctadecane 104 % 59.5-142

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Analytical Results For:

R T HICKS CONSULTANTS
KRISTIN POPE
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received: 01/27/2022
Reported: 02/01/2022
Project Name: MARALO FED #1 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 01/19/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BACKGROUND @ 4.2' BGS (H220315-12)

BTEX 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/28/2022	ND	2.03	102	2.00	2.58		
Toluene*	<0.050	0.050	01/28/2022	ND	1.96	97.9	2.00	0.624		
Ethylbenzene*	<0.050	0.050	01/28/2022	ND	1.96	98.0	2.00	1.09		
Total Xylenes*	<0.150	0.150	01/28/2022	ND	5.97	99.5	6.00	0.350		
Total BTEX	<0.300	0.300	01/28/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	01/28/2022	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2022	ND	201	100	200	1.03	
DRO >C10-C28*	<10.0	10.0	01/28/2022	ND	207	103	200	3.51	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 91.1 % 66.9-136

Surrogate: 1-Chlorooctadecane 90.5 % 59.5-142

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Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- GC-NC1 8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene", written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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Page 15 of 16

[illegible]

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
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Relinquished By: <i>Kristin Pope</i>		Date: <i>1-27-22</i>	Received By: <i>Tamara Aldaye</i>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #:
		Time: <i>0955</i>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Fax #:
Relinquished By:		Date:	Received By:	REMARKS:
		Time:		
Delivered By: (Circle One) <i>2.5° C-0.5°</i>		Sample Condition	CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other: <i>2.0° #113</i>		Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<i>TA</i>	

Email to kristin@rthicksconsult.com

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

Attachment V

Field Data

Sample Log

Hungry Horse, LLC

Project: Maraia Federal Com #1

Karst Yes Water <50'

Standard TPH 100mg/kg, Chloride 600mg/kg

Date: 6-6-24

GPS: 32.8178253, -104.2728271

Sampler: Jerry Heidelberg

Sample ID	Depth	PID/Odor	Chloride	GPS
HZ1	Surf		2.0@ 49X4=196	
	1'		1.8@ 43X4=172	
HZ2	Surf		2.2@ 57X4=228	
	1'		2.0@ 49X4=196	
HZ3	Surf		2.4@ 65X4=260	
	1'		1.6@ 36X4=144	
HZ4	Surf		2.6@ 73X4=292	
	1'		2.0@ 49X4=196	
HZ5	Surf		2.0@ 49X4=196	
	1'		1.8@ 43X4=172	
HZ6	Surf		1.8@ 43X4=172	
	1'		2.0@ 49X4=196	
HZ7	Surf		2.4@ 65X4=260	
	1'		1.8@ 43X4=172	
HZ8	Surf		2.6@ 73X4=292	
	1'		2.2@ 57X4=228	
HZ9	Surf		2.8@ 83X4=332	
	1'		2.4@ 65X4=260	
HZ10	Surf		2.6@ 73X4=292	
HZ10	1'		1.8@ 43X4=172	
SP1	Surf	Yes	2.8@ 83X4=332	
	1'	Yes	1.8@ 43X4=172	
	2'	Yes	2.6@ 73X4=292	
	3'	Yes	2.0@ 49X4=196	
	4'	NO	2.6@ 49X4=196	
SP2	Surf	Yes	2.6@ 73X4=292	
	1'	Yes	2.4@ 65X4=260	
	2'	Yes	2.0@ 49X4=196	
	3'	NO	1.8@ 43X4=172	
	4'	NO	1.6@ 36X4=144	
SP3	Surf	NO	6.0@ 142X4=5704	
	1'	NO	5.2@ 125X4=980	
	2'	NO	6.0@ 322X4=1312	
	3'	NO	4.8@ 115X4=848	
	4'	NO	3.1@ 125X4=500	

Sample Point = SP1 @ ## etc

Floor = FL1 etc

Sidewall = SW1 etc

Horizontal = HZ1 etc

Refusal = SP1 @ 4'-R

GPS Sample Points, Center of Comp Areas

Test Trench = TT1 @ ##

Resamples = SP1b @ 5' or SW #1b

Stockpile = Stockpile #1

Sample Log

Hungry Horse, LLC

Project: Maralo Federal Com #1

Karst Yes Water <50'

Standard TPH 100mg/kg, Chloride 600mg/kg

Date:

GPS: 32.8178253, -104.2728271

Sampler: Jerry Heidelberg

Sample ID	Depth	PID/Odor	Chloride	GPS
SP4	Surf	Little	5.8H@1322X4= 5.288	
	1'	NO	4.2@165X4= 660	
	2'	NO	3.0@92X4= 368	
	3'			
	4'			
SP5	Surf	NO	6.4@371X4= 1.508	
	1'	NO	2.6@73X4= 292	
	2'			
	3'			
	4'			
SP6	Surf	NO	6.8@433X4= 1.732	
	1'	NO	2.8@83X4= 332	
	2'			
	3'			
	4'			
SP7	Surf	NO	1.0>100	
	1'	NO	2.8@83X4= 332	
	2'	NO	2.8@83X4= 332	
	3'			
	4'			
SP8	Surf	NO	1.6@36X4= 144	
	1'		2.6@73X4= 292	
	2'			
	3'			
	4'			
SP9	Surf	NO	1.2>100	
	1'	NO	1.8@43X4= 172	
	2'			
	3'			
	4'			
SP10	Surf	NO	2.0@49X4=	
	1'	NO	1.8@43X4= 172	
	2'			
	3'			
	4'			

Sample Point = SP1 @ ## etc

Floor = FL1 etc

Sidewall = SW1 etc

Horizontal = HZ1 etc

Refusal = SP1 @ 4'-R

GPS Sample Points, Center of Comp Areas

Test Trench = TT1 @ ##

Resamples= SP1b @ 5' or SW #1b

Stockpile = Stockpile #1

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1625 N. French Dr., Hobbs, NM 88240
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811 S. First St., Artesia, NM 88210
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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 361461

QUESTIONS

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID:	15363
	Action Number:	361461
	Action Type:	[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2202451213
Incident Name	NAPP2202451213 MARALO FEDERAL COM #1 @ 30-015-22958
Incident Type	Oil Release
Incident Status	Remediation Plan Received
Incident Well	[30-015-22958] MARALO FEDERAL COM #001

Location of Release Source	
Please answer all the questions in this group.	
Site Name	MARALO FEDERAL COM #1
Date Release Discovered	01/03/2022
Surface Owner	Federal

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

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Freeze Other (Specify) Produced Water Released: 43 BBL Recovered: 0 BBL Lost: 43 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Cause: Freeze Other (Specify) Condensate Released: 53 BBL Recovered: 0 BBL Lost: 53 BBL.
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)	Load line valve froze and burst

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1220 S. St Francis Dr., Santa Fe, NM 87505
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QUESTIONS, Page 2

Action 361461

QUESTIONS (continued)

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID:
	15363
	Action Number:
	361461
Action Type:	
[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)	

QUESTIONS

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

Initial Response

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

The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	Not answered.

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

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

I hereby agree and sign off to the above statement	Name: Cindy Cottrell Title: Regulatory Coordinator Email: ccottrell@jdmii.com Date: 07/08/2024
--	---

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1625 N. French Dr., Hobbs, NM 88240
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811 S. First St., Artesia, NM 88210
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1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

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1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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QUESTIONS, Page 3

Action 361461

QUESTIONS (continued)

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID:
	15363
	Action Number:
	361461
Action Type:	
[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)	

QUESTIONS

Site Characterization	
<i>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.</i>	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 26 and 50 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between 1 and 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between 1 and 5 (mi.)
Categorize the risk of this well / site being in a karst geology	High
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

Remediation Plan	
<i>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.</i>	
Requesting a remediation plan approval with this submission	Yes
<i>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.</i>	
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)	5300
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	8910
GRO+DRO (EPA SW-846 Method 8015M)	8910
BTEX (EPA SW-846 Method 8021B or 8260B)	310
Benzene (EPA SW-846 Method 8021B or 8260B)	2.2
<i>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>	
On what estimated date will the remediation commence	07/22/2024
On what date will (or did) the final sampling or liner inspection occur	08/12/2024
On what date will (or was) the remediation complete(d)	08/19/2024
What is the estimated surface area (in square feet) that will be reclaimed	5500
What is the estimated volume (in cubic yards) that will be reclaimed	650
What is the estimated surface area (in square feet) that will be remediated	5500
What is the estimated volume (in cubic yards) that will be remediated	650
<i>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.</i>	
<i>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.</i>	

District I

1625 N. French Dr., Hobbs, NM 88240
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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

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QUESTIONS, Page 4

Action 361461

QUESTIONS (continued)

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID:	15363
	Action Number:	361461
	Action Type:	[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Remediation Plan (continued)	
<i>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.</i>	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
<i>(Select all answers below that apply.)</i>	
(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	HALFWAY DISPOSAL AND LANDFILL [fEEM0112334510]
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
OR is the off-site disposal site, to be used, out-of-state	Not answered.
OR is the off-site disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Not answered.
<i>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>	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Cindy Cottrell Title: Regulatory Coordinator Email: ccottrell@jdmii.com Date: 07/08/2024
<i>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.</i>	

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

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

QUESTIONS, Page 5

Action 361461

QUESTIONS (continued)

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID: 15363
	Action Number: 361461
	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, Page 6

Action 361461

QUESTIONS (continued)

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID: 15363
	Action Number: 361461
	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 361461

CONDITIONS

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID:
	15363
	Action Number:
	361461
Action Type:	
[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)	

CONDITIONS

Created By	Condition	Condition Date
bhall	Vertical delineation will be completed through excavation and confirmation sampling pursuant to 19.15.29.12 NMAC. Remediation and delineation will need to meet the most stringent remediation closure criteria found on Table I of 19.15.29 NMAC.	7/9/2024
bhall	Due to incomplete delineation information the excavation may need to be extended past the proposed excavation extents contingent upon the results of the remediation confirmation samples. Remediation confirmation samples must meet the most stringent remediation closure criteria found on Table I of 19.15.29 NMAC.	7/9/2024
bhall	Photos of the stockpile with the BMPs will need to be included in the closure report. The Bills of Lading and photos of the removal of the stockpile and native surface underneath the stockpile will also need to be included in the remediation closure report.	7/9/2024
bhall	Pursuant to 19.15.29.12 D.(1)(a) NMAC, ensure the C-141N (Notification of Sampling) application is completed on the OCD Permitting website at least 2 business days prior to collecting remediation confirmation samples.	7/9/2024
bhall	Pursuant to 19.15.29.13 D. NMAC, areas not reasonably needed for production or subsequent drilling activities must be reclaimed as early and as nearly as practical to their original condition or their final land use. The area of the release that extends south of the well pad must meet the requirements of 19.15.29.13 D. (1-2) NMAC at time of remediation.	7/9/2024
bhall	At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. OCD reserves the right to request additional sampling if needed.	7/9/2024
bhall	OCD approves the timeframe included in the attached remediation plan, a complete remediation closure report must be submitted by 8/23/2024.	7/9/2024