

Rio State 3 (30-015-33690)
Specific Justification for Volumes

The total volume released was 87 bbls of produced oil (68.4 bbls) and water (18.6 bbls). The total volume recovered was 25.5 bbls consisting of 11.5 bbls oil and 14 bbls water.

208.8 bbl tank (1.16 bbl/in)

Date	Gauge	Bbbls	Oil	Water	Lost Oil	Lost Water
1/2/2022	1' 10"	25.5	11.5	14	56.9	4.6
1/1/2022	6'3"	87	68.4	18.6		



Site Assessment and Remediation Work Plan

Murchison Oil & Gas, LLC

Rio State #3

Eddy County, New Mexico

Unit Letter "D", Section 36, Township 18 South, Range 24 East

Latitude 32.708155 North, Longitude 104.546172 West

NMOCD Incident # nAPP2202454641

Prepared For:

Murchison Oil & Gas
5325 Sierra Vista
Carlsbad, NM 88230

Prepared By:

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June 2024

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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 D (NW/NW), Section 36, Township 18 South, Range 24 East, approximately seventeen miles Southwest of Artesia, in Eddy County, New Mexico. The property is located on private 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 at a load line on an active well pad; Latitude 32.708155 North, Longitude 104.546172 West. The NMOCD Form C-141 indicated that on January 3, 2022 approximately 4.64 bbls of produced water and 68.44 bbls condensate were released when a load line valve froze and burst. A crew was dispatched to the release site and the valve was repaired. Approximately 11.6 bbls were recovered. Previously submitted pages of the 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 Karst designated area. Depth to groundwater information is provided as Attachment II and the results are depicted on Figures 2 and 3.

Three water wells are located within a half mile of the release area with depth to groundwater ranging from 364' to 379.17' bgs. However, as the site is located in a 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 Upton-Reagan association comprised of gravelly loam soils with 0 to 9 percent slopes. As the release occurred on an active well pad, no 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, eighteen representative soil samples were selected for laboratory analysis. Soil samples SSA1 through SSA6, 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 only three of the submitted samples, BG at 0-4' and 4.2' bgs and SSA3 at 4.2 bgs. The remaining soil samples all exhibited TPH concentrations in excess of NMOCD Closure Criteria.

On February 7, 2023, RT Hicks Consultants, Ltd. conducted additional sampling activities in and around the release area. Based on these sampling activities, twelve representative soil samples were selected for laboratory analysis. Soil samples SSA1, SSA2, SSA7, and SSA8, 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 SSA7 and SSA8. SSA1 and SSA2 all exhibited TPH concentrations in excess of NMOCD Closure Criteria.

On June 4, 2024, Hungry Horse conducted delineation sampling of the release area. Sixteen representative soil samples were submitted for laboratory analysis. Soil samples SP1 through SP4 and HZ1 through HZ4 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 at Surface, SP3 and SP4, at Surface and one-foot bgs, which exhibited TPH concentrations in excess of NMOCD Closure Criteria.

January 19, 2022 & February 7, 2023 Sample Map and Delineation Sample Map are provided as Figure 4 and Figure 5, respectively. Laboratory Analytical Data is provided as Attachment III.

Proposed Remediation Activities:

In accordance with NMOCD Regulations, 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 an approximate depth of five feet bgs. The proposed excavation area, approximately 2,000 sq. ft., is depicted on Figure 5.
- Excavated contaminated soil, including berms, approximately 500 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. Berms will be rebuilt to contain 1.5 times the volume of the tank.
- 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, confirmation five-point composite soil samples will be collected from the excavation floor and sidewalls; each sample representing no more than 200 square feet. This will ensure the lateral extents of soil contamination have been removed. 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 no area off pad was affected, no 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

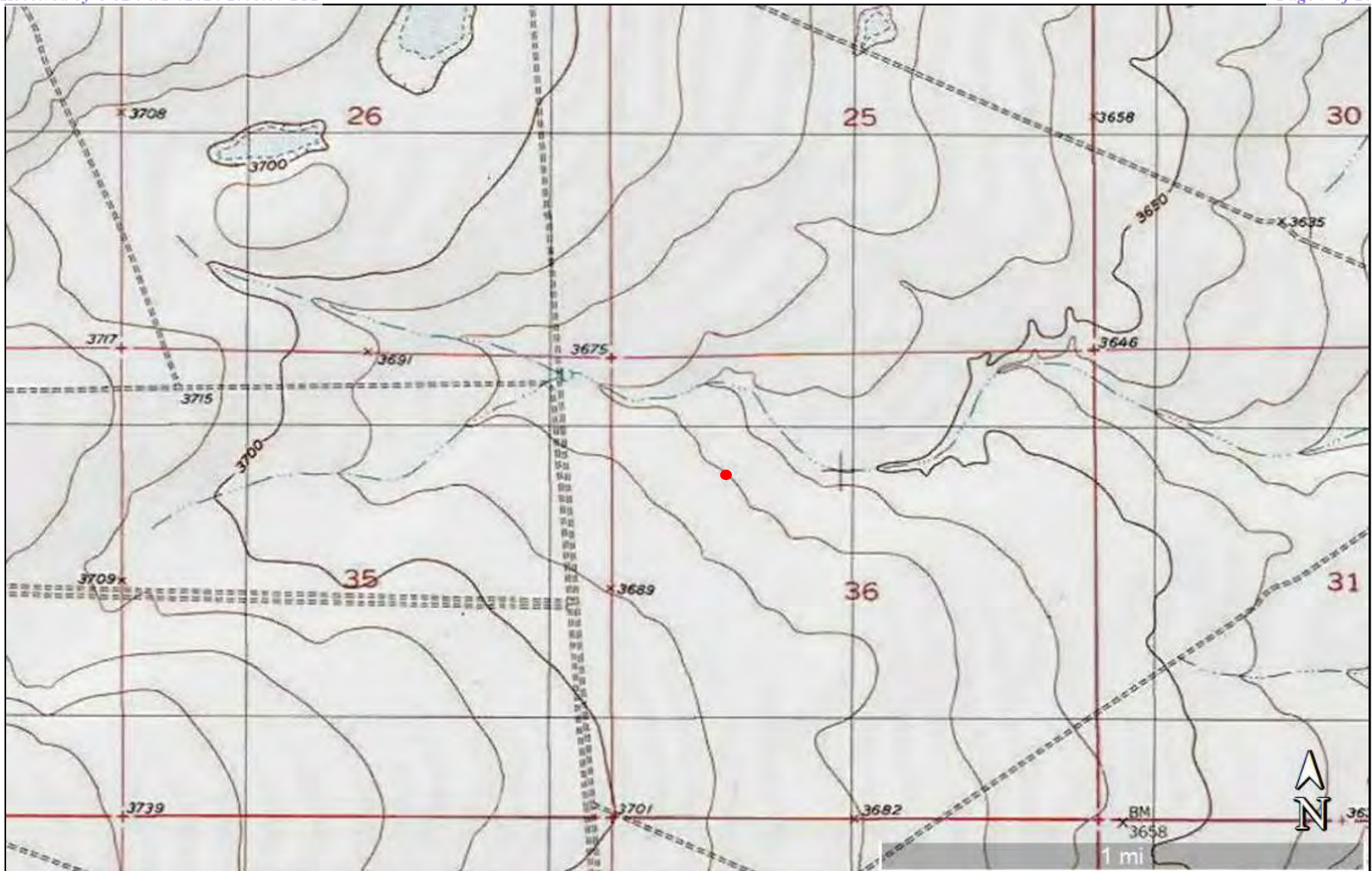
New Mexico Energy, Minerals and Natural Resources Department

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

Yates Ranch Property, LLP

PO Box 1394
Artesia, NM 88211

Figures

**Figure 1**

Topographic Map
Murchison Oil & Gas

Rio State #3

GPS: 32.708155, -104.546172

Eddy County

Legend:

- Rio State #3 Location

Drafted: dd

Checked: bw

Date: 4/15/24



**Figure 2**

OSE POD Locations Map
Murchison Oil & Gas
Rio State #3
GPS: 32.708155, -104.546172
Eddy County

Legend:

- Rio State #3 Location
- Unknown OSE Water Well

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



**Figure 3**

USGS Well Locations Map
Murchison Oil & Gas
Rio State #3
GPS: 32.708155, -104.546172
Eddy County

Legend:

- Rio State #3 Location
- USGS Well Location

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



**Figure 4**

January 19, 2022 & February 7, 2023 Sample Map
 Murchison Oil & Gas
 Rio State #3
 GPS: 32.708155, -104.546172
 Eddy County

Legend:

- Release Area
- SSA1 Sample Location

Drafted: dd
 Checked: bw
 Date: 4/16/24



**Figure 5**

Delineation Sample Map
Murchison Oil & Gas
Rio State #3
GPS: 32.708155, -104.546172
Eddy County

Legend:

- Proposed Excavation Area
- SP1 Delineation Sample Location
- HZ1 Horizontal Sample Location

Drafted: dd
Checked: bw
Date: 6/3/24



Table

TABLE 1
Summary of Soil Sample Laboratory Analytical Results
Murchison Oil & Gas
Rio State #3
NMOCD Ref. #: nAPP2202454641

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)
SSA1	1/19/22	0-2	In-Situ	<0.050	<0.300	891	2,160	3,051	25.4	3,076.4	32.0
	1/19/22	2-4	In-Situ	<0.050	<0.300	415	928	1,343	11.2	1,354.2	16.0
	1/19/22	0-4	In-Situ	<0.500	112	1,540	3,750	5,290	21.6	5,311.6	<16.0
	1/19/22	4.2	In-Situ	<0.500	77.5	691	1,760	2,451	<10.0	2,451	<16.0
	2/7/23	0-2	In-Situ	<0.025	3.99	1,390	2,170	3,560	<10.0	3,560	<16.0
	2/7/23	2-4	In-Situ	<0.500	17.1	290	467	757	<10.0	757	48.0
	2/7/23	4.2	In-Situ	<0.500	21.1	504	704	1,208	<10.0	1,208	32.0
SSA2	1/19/22	0-2	In-Situ	<0.050	<0.300	2,620	4,010	6,630	38.3	6,668.3	48.0
	1/19/22	2-4	In-Situ	<0.050	<0.300	914	1,780	2,694	14.1	2,708.1	<16.0
	1/19/22	0-4	In-Situ	<0.500	136	2,860	7,150	10,010	38.2	10,048.2	<16.0
	1/19/22	4.2	In-Situ	<0.500	102	1,260	3,150	4,410	21.2	4,431.2	<16.0
	2/7/23	0-2	In-Situ	<0.500	12.3	2,560	3,570	6,130	29.2	6,159.2	64.0
	2/7/23	2-4	In-Situ	<0.500	59.6	2,600	3,050	5,650	26.6	5,676.6	32.0
	2/7/23	4.2	In-Situ	<0.500	43.5	1,710	2,050	3,760	18.3	3,778	48.0
SSA3	1/19/22	0-4	In-Situ	<0.050	4.53	28.3	123	151	<10.0	151	<16.0
	1/19/22	4.2	In-Situ	<0.050	2.04	10.5	54.0	64.5	10.8	75.3	<16.0
SSA4	1/19/22	0-4	In-Situ	<0.050	4.05	134	602	736	<10.0	736	16.0
	1/19/22	4.2	In-Situ	<0.050	9.57	58.0	219	277	15.2	292.2	48.0
SSA5	1/19/22	0-4	In-Situ	<0.050	1.67	37.5	221	259	<10.0	259	32.0
	1/19/22	4.2	In-Situ	<0.050	3.89	13.8	102	115.8	<10.0	115.8	48.0
SSA6	1/19/22	0-4	In-Situ	<0.050	6.82	51.8	366	418	10.4	428	<16.0
	1/19/22	4.2	In-Situ	<0.050	4.43	62.4	329	391.4	12.4	403.8	16.0
SSA7	2/7/23	0-2	In-Situ	<0.025	<0.150	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
	2/7/23	2-4	In-Situ	<0.025	<0.150	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
	2/7/23	4.2	In-Situ	<0.025	<0.150	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
SSA8	2/7/23	0-2	In-Situ	<0.025	<0.150	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
	2/7/23	2-4	In-Situ	<0.025	<0.150	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
	2/7/23	4.2	In-Situ	<0.025	<0.150	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
BG	1/19/22	0-4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
	1/19/22	4.2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
NMOCD Closure Criteria				10	50	-	-	NA	-	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
Rio State #3
NMOCD Ref. #: nAPP2202454641

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	6/4/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
	6/4/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	160
SP2	6/4/24	Surf	In-Situ	<0.050	<0.300	<10.0	101	101	34.9	135.9	800
	6/4/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
SP3	6/4/24	Surf	In-Situ	<0.050	<0.300	105	4,960	5,065	267	5,332	400
	6/4/24	1	In-Situ	<0.050	<0.300	243	1,090	1,333	<10.0	1,333	80.0
SP4	6/4/24	Surf	In-Situ	<0.050	0.630	65.2	3,420	3,485.2	467	3,952.2	16.0
	6/4/24	1	In-Situ	<0.050	19.4	797	1,650	2,447	24.1	2,471.1	32.0
HZ1	6/4/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
	6/4/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
HZ2	6/4/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
	6/4/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
HZ3	6/4/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
	6/4/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
HZ4	6/4/24	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
	6/4/24	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
NMOCD Closure Criteria				10	50	-	-	NA	-	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

Rio State #3



4/17/2024

Karst Type

- Carbonate
- Erosional
- Gypsum



Volcanic

World Imagery

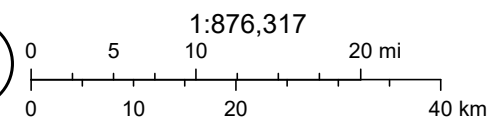
Low Resolution 15m Imagery

High Resolution 60cm Imagery

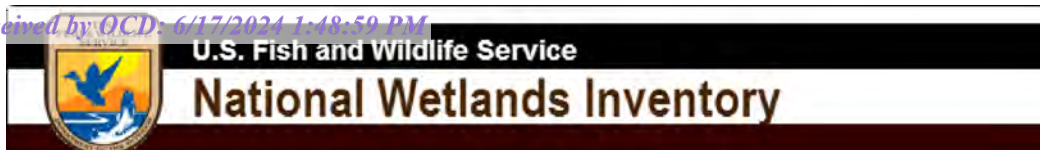
High Resolution 30cm Imagery

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 US., Earthstar Geographics








Rio State #3






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
(Rio State #3)

32° 42' 58" N

104° 33' 40" W

104° 31' 51" W

32° 42' 58" N



32° 41' 59" N

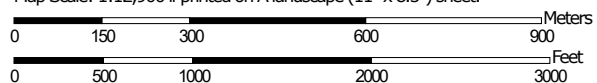
32° 41' 59" N

104° 33' 40" W

104° 31' 51" W



Map Scale: 1:12,900 if printed on A landscape (11" x 8.5") sheet.




Map projection: Web Mercator Corner coordinates: WGS84

Natural Resources
Conservation ServiceWeb Soil Survey
National Cooperative Soil Survey4/17/2024
Page 1 of 3

Soil Map—Eddy Area, New Mexico
(Rio State #3)

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
PM	Pima silt loam, 0 to 1 percent slopes	79.3	9.7%
RE	Reagan-Upton association, 0 to 9 percent slopes	7.2	0.9%
UG	Upton gravelly loam, 0 to 9 percent slopes	21.1	2.6%
UR	Upton-Reagan complex, 0 to 9 percent slopes	712.4	86.9%
Totals for Area of Interest		820.0	100.0%

Eddy Area, New Mexico

UR—Upton-Reagan complex, 0 to 9 percent slopes

Map Unit Setting

National map unit symbol: 1w65

Elevation: 1,100 to 5,400 feet

Mean annual precipitation: 6 to 15 inches

Mean annual air temperature: 60 to 70 degrees F

Frost-free period: 180 to 240 days

Farmland classification: Not prime farmland

Map Unit Composition

Upton and similar soils: 55 percent

Reagan and similar soils: 35 percent

Minor components: 10 percent

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

Description of Upton

Setting

Landform: Ridges, fans

Landform position (three-dimensional): Side slope, rise

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Residuum weathered from limestone

Typical profile

H1 - 0 to 9 inches: gravelly loam

H2 - 9 to 13 inches: gravelly loam

H3 - 13 to 21 inches: cemented

H4 - 21 to 60 inches: very gravelly loam

Properties and qualities

Slope: 0 to 9 percent

Depth to restrictive feature: 7 to 20 inches to petrocalcic

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.60 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 75 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 1.0

Available water supply, 0 to 60 inches: Very low (about 1.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Map Unit Description: Upton-Reagan complex, 0 to 9 percent slopes---Eddy Area, New Mexico

Rio State #3

Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R070BC025NM - Shallow
Hydric soil rating: No

Description of Reagan

Setting

Landform: Fan remnants, alluvial fans
Landform position (three-dimensional): Rise
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Alluvium and/or eolian deposits

Typical profile

H1 - 0 to 8 inches: loam
H2 - 8 to 60 inches: loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: R070BC007NM - Loamy
Hydric soil rating: No

Minor Components

Pima

Percent of map unit: 5 percent
Ecological site: R070BC017NM - Bottomland
Hydric soil rating: No

Reagan

Percent of map unit: 5 percent
Ecological site: R070BC007NM - Loamy

Map Unit Description: Upton-Reagan complex, 0 to 9 percent slopes---Eddy Area, New Mexico

Rio State #3

Hydric soil rating: No

Data Source Information

Soil Survey Area: Eddy Area, New Mexico

Survey Area Data: Version 19, Sep 7, 2023



Attachment II

Depth to Groundwater



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

No wells found.

UTMNAD83 Radius Search (in meters):

Easting (X): 542535 Northing (Y): 3619022 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 1:09 PM

WELLS WITH WELL LOG INFORMATION



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)						(NAD83 UTM in meters)	
		(quarters are smallest to largest)							
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	RA 08148	3	3	1	36	18S	24E	542252	3618748* 
x									
Driller License:		Driller Company:							
Driller Name:									
Drill Start Date:		Drill Finish Date:						Plug Date:	
Log File Date:		PCW Rev Date:						Source:	
Pump Type:		Pipe Discharge Size:						Estimated Yield:	
Casing Size:	8.00	Depth Well:				508 feet		Depth Water:	
x									

*UTM location was derived from PLSS - see Help

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 any particular purpose of the data.

4/17/24 1:27 PM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)						(quarters are smallest to largest)		(NAD83 UTM in meters)			
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y				
	RA 11061 POD1	4	2	35	18S	24E	541949	3618852*					
x													
Driller License:				Driller Company:									
Driller Name:				UNKNOWN DRILLER									
Drill Start Date:				Drill Finish Date:				12/31/1982				Plug Date:	
Log File Date:				PCW Rev Date:				Source:					
Pump Type:				Pipe Discharge Size:				Estimated Yield:				400 GPM	
Casing Size:		5.00		Depth Well:				450 feet		Depth Water:		364 feet	

*UTM location was derived from PLSS - see Help

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 any particular purpose of the data.



USGS Home
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National Water Information System: Web Interface


USGS Water Resources

Data Category:
Groundwater

Geographic Area:
United States

GO

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

Groundwater levels for the Nation

 Important: [Next Generation Monitoring Location Page](#)

Search Results -- 1 sites found

Agency code = usgs
site_no list =

- 324217104325401

Minimum number of levels = 1
[Save file of selected sites](#) to local disk for future upload

USGS 324217104325401 18S.24E.35.24444

Eddy County, New Mexico
Latitude 32°42'17", Longitude 104°32'54" NAD27
Land-surface elevation 3,689 feet above NGVD29
The depth of the well is 450.00 feet below land surface.
This well is completed in the Roswell Basin aquifer system (S400RSWLBS) national aquifer.
This well is completed in the Artesia Group (313ARTS) local aquifer.

Output formats

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

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement
1990-02-20			D 62610		3324.50	NGVD29	P	S		
1990-02-20			D 62611		3326.10	NAVD88	P	S		
1990-02-20			D 72019	364.50			P	S		
1994-02-21			D 62610		3317.37	NGVD29		S		
1994-02-21			D 62611		3318.97	NAVD88		S		
1994-02-21			D 72019	371.63				S		
1999-02-02			D 62610		3309.83	NGVD29	1	S	USGS	
1999-02-02			D 62611		3311.43	NAVD88	1	S	USGS	
1999-02-02			D 72019	379.17			1	S	USGS	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet

Section	Code	Description
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status		The reported water-level measurement represents a static level
Status	1	Static
Status	P	Pumping
Method of measurement	S	Steel-tape measurement.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement		Not determined
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Title: Groundwater for USA: Water Levels
URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>



Page Contact Information: [USGS Water Data Support Team](#)
Page Last Modified: 2024-04-17 15:31:15 EDT
0.31 0.26 nadww01

Attachment III

Field Data

Sample Log

Hungry Horse, LLC

Project: Rio State #3

Karst Yes Water <50'

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

Date: 6-4-24GPS: 32.708155, -104.546172Sampler: Jerry Heidelberg

Sample ID	Depth	PID/Odor	Chloride	GPS
HZ1	Surf	NO	1.4 @ 30x4 = 120	
	1'		1.4 @ 36x4 = 144	
HZ2	Surf		0.8 > 100	
	1'		1.2 > 100	
HZ3	Surf		1.6 @ 36x4 = 144	
	1'		1.4 @ 30x4 = 120	
HZ4	Surf		1.2 @ > 100	
	1'		1.4 @ 30x4 = 120	
SP1	Surf	NO	1.4 @ 30x4 = 120	
	1'	NO	3.4 @ 114x4 = 456	
	2'			
	3'			
	4'			
	6'			
	8'			
	10'			
	12'			
	Surf	yes	5.0 @ 227x4 = 908	
	1'	yes	1.8 @ 43x4 = 172	
	2'		2.6 @ 73x4 = 292	
SP3	Surf	yes	3.6 @ 125x4 = 500	
	1'	yes	1.8 @ 43x4 = 172	
	2'			
	3'			
	4'			
	6'			
	8'			
	10'			
	12'			
	Surf			
	1'			
	2'			

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

Attachment IV

Laboratory Analytical Results



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: RIO STATE #3 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
Reported: 02/15/2022
Project Name: RIO STATE #3 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' (H220560-01)

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' (H220560-02)

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	02/15/2022	ND	432	108	400	0.00	

Sample ID: SSA - 2 @ 0-2' (H220560-03)

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 @ 2-4' (H220560-04)

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	02/15/2022	ND	432	108	400	0.00	

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

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



CARDINAL
Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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: RIO STATE #3 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)

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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:

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:	RIO STATE #3 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' (H220561-01)

TPH 8015M	mg/kg	Analyzed By: CK						I-03, S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	891	10.0	02/15/2022	ND	208	104	200	0.994	
DRO >C10-C28*	2160	10.0	02/15/2022	ND	225	112	200	3.80	
EXT DRO >C28-C36	25.4	10.0	02/15/2022	ND					

Surrogate: 1-Chlorooctane 254 % 66.9-136

Surrogate: 1-Chlorooctadecane 136 % 59.5-142

Sample ID: SSA - 1 @ 2-4' (H220561-02)

TPH 8015M	mg/kg	Analyzed By: CK						I-03, S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	415	10.0	02/15/2022	ND	208	104	200	0.994	
DRO >C10-C28*	928	10.0	02/15/2022	ND	225	112	200	3.80	
EXT DRO >C28-C36	11.2	10.0	02/15/2022	ND					

Surrogate: 1-Chlorooctane 175 % 66.9-136

Surrogate: 1-Chlorooctadecane 135 % 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: 02/14/2022
Reported: 02/15/2022
Project Name: RIO STATE #3 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' (H220561-03)

TPH 8015M	mg/kg	Analyzed By: CK						I-03, S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	2620	10.0	02/15/2022	ND	208	104	200	0.994	
DRO >C10-C28*	4010	10.0	02/15/2022	ND	225	112	200	3.80	
EXT DRO >C28-C36	38.3	10.0	02/15/2022	ND					

Surrogate: 1-Chlorooctane 429 % 66.9-136

Surrogate: 1-Chlorooctadecane 147 % 59.5-142

Sample ID: SSA - 2 @ 2-4' (H220561-04)

TPH 8015M	mg/kg	Analyzed By: CK						I-03, S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	914	10.0	02/15/2022	ND	208	104	200	0.994	
DRO >C10-C28*	1780	10.0	02/15/2022	ND	225	112	200	3.80	
EXT DRO >C28-C36	14.1	10.0	02/15/2022	ND					

Surrogate: 1-Chlorooctane 248 % 66.9-136

Surrogate: 1-Chlorooctadecane 139 % 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.
I-03	This result was extracted outside of the EPA recommended holding time of 14 days.
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

Cardinal Laboratories

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

Celey D. Keene, Lab Director/Quality Manager



CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

(575) 393-2326 FAX (575) 393-2476

[illegible]



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

January 28, 2022

KRISTIN POPE

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: RIO STATE #3 RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 01/24/22 11:25.

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: 01/24/2022
Reported: 01/28/2022
Project Name: RIO STATE #3 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: BG @ 0-4' BGS (H220256-01)

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	01/27/2022	ND	2.14	107	2.00	1.10	
Toluene*	<0.050	0.050	01/27/2022	ND	2.03	102	2.00	0.677	
Ethylbenzene*	<0.050	0.050	01/27/2022	ND	2.04	102	2.00	0.527	
Total Xylenes*	<0.150	0.150	01/27/2022	ND	6.21	103	6.00	0.448	
Total BTEX	<0.300	0.300	01/27/2022	ND					

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

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	01/26/2022	ND	416	104	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	01/27/2022	ND	216	108	200	2.30	
DRO >C10-C28*	<10.0	10.0	01/27/2022	ND	254	127	200	12.5	
EXT DRO >C28-C36	<10.0	10.0	01/27/2022	ND					

Surrogate: 1-Chlorooctane 79.6 % 66.9-136

Surrogate: 1-Chlorooctadecane 77.9 % 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:	01/24/2022	Sampling Date:	01/19/2022
Reported:	01/28/2022	Sampling Type:	Soil
Project Name:	RIO STATE #3 RELEASE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	MURCHISON- EDDY CO.		

Sample ID: SSA - 1 @ 0-4' BGS (H220256-02)

BTEx 8021B		mg/kg		Analyzed By: MS/				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	01/28/2022	ND	2.14	107	2.00	1.10	
Toluene*	4.57	0.500	01/28/2022	ND	2.03	102	2.00	0.677	GC-NC1
Ethylbenzene*	18.0	0.500	01/28/2022	ND	2.04	102	2.00	0.527	GC-NC1
Total Xylenes*	89.5	1.50	01/28/2022	ND	6.21	103	6.00	0.448	GC-NC1
Total BTEX	112	3.00	01/28/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 395 % 69.9-140

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	01/26/2022	ND	416	104	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*	1540	10.0	01/27/2022	ND	216	108	200	2.30	
DRO >C10-C28*	3750	10.0	01/27/2022	ND	254	127	200	12.5	
EXT DRO >C28-C36	21.6	10.0	01/27/2022	ND					

Surrogate: 1-Chlorooctane 341 % 66.9-136

Surrogate: 1-Chlorooctadecane 78.5 % 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:	01/24/2022	Sampling Date:	01/19/2022
Reported:	01/28/2022	Sampling Type:	Soil
Project Name:	RIO STATE #3 RELEASE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	MURCHISON- EDDY CO.		

Sample ID: SSA - 2 @ 0-4' BGS (H220256-03)

BTEx 8021B		mg/kg		Analyzed By: MS/				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	01/28/2022	ND	2.14	107	2.00	1.10	
Toluene*	7.00	0.500	01/28/2022	ND	2.03	102	2.00	0.677	GC-NC1
Ethylbenzene*	21.2	0.500	01/28/2022	ND	2.04	102	2.00	0.527	GC-NC1
Total Xylenes*	108	1.50	01/28/2022	ND	6.21	103	6.00	0.448	GC-NC1
Total BTEX	136	3.00	01/28/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 424 % 69.9-140

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	01/26/2022	ND	416	104	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*	2860	10.0	01/27/2022	ND	216	108	200	2.30	
DRO >C10-C28*	7150	10.0	01/27/2022	ND	254	127	200	12.5	
EXT DRO >C28-C36	38.2	10.0	01/27/2022	ND					

Surrogate: 1-Chlorooctane 378 % 66.9-136

Surrogate: 1-Chlorooctadecane 87.0 % 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: 01/24/2022
Reported: 01/28/2022
Project Name: RIO STATE #3 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 (H220256-04)

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	2.14	107	2.00	1.10	
Toluene*	0.074	0.050	01/27/2022	ND	2.03	102	2.00	0.677	GC-NC1
Ethylbenzene*	0.791	0.050	01/27/2022	ND	2.04	102	2.00	0.527	GC-NC1
Total Xylenes*	3.66	0.150	01/27/2022	ND	6.21	103	6.00	0.448	GC-NC1
Total BTEX	4.53	0.300	01/27/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 313 % 69.9-140

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	01/26/2022	ND	416	104	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*	28.3	10.0	01/27/2022	ND	216	108	200	2.30	
DRO >C10-C28*	126	10.0	01/27/2022	ND	254	127	200	12.5	
EXT DRO >C28-C36	<10.0	10.0	01/27/2022	ND					

Surrogate: 1-Chlorooctane 97.0 % 66.9-136

Surrogate: 1-Chlorooctadecane 83.7 % 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: 01/24/2022
Reported: 01/28/2022
Project Name: RIO STATE #3 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 (H220256-05)

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	2.14	107	2.00	1.10	
Toluene*	0.050	0.050	01/27/2022	ND	2.03	102	2.00	0.677	GC-NC1
Ethylbenzene*	0.823	0.050	01/27/2022	ND	2.04	102	2.00	0.527	GC-NC1
Total Xylenes*	3.18	0.150	01/27/2022	ND	6.21	103	6.00	0.448	GC-NC1
Total BTEX	4.05	0.300	01/27/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 294 % 69.9-140

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	01/26/2022	ND	432	108	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*	134	10.0	01/27/2022	ND	216	108	200	2.30	
DRO >C10-C28*	602	10.0	01/27/2022	ND	254	127	200	12.5	
EXT DRO >C28-C36	<10.0	10.0	01/27/2022	ND					

Surrogate: 1-Chlorooctane 145 % 66.9-136

Surrogate: 1-Chlorooctadecane 86.8 % 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: 01/24/2022
Reported: 01/28/2022
Project Name: RIO STATE #3 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 (H220256-06)

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	2.14	107	2.00	1.10	
Toluene*	<0.050	0.050	01/27/2022	ND	2.03	102	2.00	0.677	GC-NC1
Ethylbenzene*	0.314	0.050	01/27/2022	ND	2.04	102	2.00	0.527	GC-NC1
Total Xylenes*	1.35	0.150	01/27/2022	ND	6.21	103	6.00	0.448	GC-NC1
Total BTEx	1.67	0.300	01/27/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 201 % 69.9-140

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	01/26/2022	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*	37.5	10.0	01/27/2022	ND	216	108	200	2.30	
DRO >C10-C28*	221	10.0	01/27/2022	ND	254	127	200	12.5	
EXT DRO >C28-C36	<10.0	10.0	01/27/2022	ND					

Surrogate: 1-Chlorooctane 104 % 66.9-136

Surrogate: 1-Chlorooctadecane 82.7 % 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: 01/24/2022
Reported: 01/28/2022
Project Name: RIO STATE #3 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 (H220256-07)

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	2.14	107	2.00	1.10	
Toluene*	0.117	0.050	01/27/2022	ND	2.03	102	2.00	0.677	GC-NC1
Ethylbenzene*	1.14	0.050	01/27/2022	ND	2.04	102	2.00	0.527	GC-NC1
Total Xylenes*	5.56	0.150	01/27/2022	ND	6.21	103	6.00	0.448	GC-NC1
Total BTEX	6.82	0.300	01/27/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 409 % 69.9-140

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	01/26/2022	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*	51.8	10.0	01/27/2022	ND	216	108	200	2.30	
DRO >C10-C28*	366	10.0	01/27/2022	ND	254	127	200	12.5	
EXT DRO >C28-C36	10.4	10.0	01/27/2022	ND					

Surrogate: 1-Chlorooctane 121 % 66.9-136

Surrogate: 1-Chlorooctadecane 95.9 % 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: 01/24/2022
Reported: 01/28/2022
Project Name: RIO STATE #3 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 (H220256-08)

BTX 8021B		mg/kg		Analyzed By: MS/				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	01/28/2022	ND	2.14	107	2.00	1.10	
Toluene*	2.77	0.500	01/28/2022	ND	2.03	102	2.00	0.677	GC-NC1
Ethylbenzene*	12.4	0.500	01/28/2022	ND	2.04	102	2.00	0.527	GC-NC1
Total Xylenes*	62.3	1.50	01/28/2022	ND	6.21	103	6.00	0.448	GC-NC1
Total BTX	77.5	3.00	01/28/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 338 % 69.9-140

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	01/26/2022	ND	432	108	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*	691	10.0	01/27/2022	ND	216	108	200	2.30	
DRO >C10-C28*	1760	10.0	01/27/2022	ND	254	127	200	12.5	
EXT DRO >C28-C36	<10.0	10.0	01/27/2022	ND					

Surrogate: 1-Chlorooctane 285 % 66.9-136

Surrogate: 1-Chlorooctadecane 102 % 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:	01/24/2022	Sampling Date:	01/19/2022
Reported:	01/28/2022	Sampling Type:	Soil
Project Name:	RIO STATE #3 RELEASE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	MURCHISON- EDDY CO.		

Sample ID: SSA - 2 @ 4.2' BGS (H220256-09)

BTEx 8021B		mg/kg	Analyzed By: MS/					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	01/28/2022	ND	2.14	107	2.00	1.10	
Toluene*	4.05	0.500	01/28/2022	ND	2.03	102	2.00	0.677	GC-NC1
Ethylbenzene*	15.3	0.500	01/28/2022	ND	2.04	102	2.00	0.527	GC-NC1
Total Xylenes*	83.0	1.50	01/28/2022	ND	6.21	103	6.00	0.448	GC-NC1
Total BTEX	102	3.00	01/28/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 381 % 69.9-140

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	01/26/2022	ND	432	108	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*	1260	10.0	01/27/2022	ND	216	108	200	2.30	
DRO >C10-C28*	3150	10.0	01/27/2022	ND	254	127	200	12.5	
EXT DRO >C28-C36	21.2	10.0	01/27/2022	ND					

Surrogate: 1-Chlorooctane 245 % 66.9-136

Surrogate: 1-Chlorooctadecane 98.9 % 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: 01/24/2022
Reported: 01/28/2022
Project Name: RIO STATE #3 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 (H220256-10)

BTX 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	2.14	107	2.00	1.10	
Toluene*	<0.050	0.050	01/27/2022	ND	2.03	102	2.00	0.677	GC-NC1
Ethylbenzene*	0.383	0.050	01/27/2022	ND	2.04	102	2.00	0.527	GC-NC1
Total Xylenes*	1.66	0.150	01/27/2022	ND	6.21	103	6.00	0.448	GC-NC1
Total BTX	2.04	0.300	01/27/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 219 % 69.9-140

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	01/26/2022	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*	10.5	10.0	01/27/2022	ND	216	108	200	2.30	
DRO >C10-C28*	54.0	10.0	01/27/2022	ND	254	127	200	12.5	
EXT DRO >C28-C36	10.8	10.0	01/27/2022	ND					

Surrogate: 1-Chlorooctane 92.7 % 66.9-136

Surrogate: 1-Chlorooctadecane 90.0 % 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: 01/24/2022
Reported: 01/28/2022
Project Name: RIO STATE #3 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 (H220256-11)

BTX 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	2.14	107	2.00	1.10	
Toluene*	0.170	0.050	01/28/2022	ND	2.03	102	2.00	0.677	GC-NC1
Ethylbenzene*	1.57	0.050	01/28/2022	ND	2.04	102	2.00	0.527	GC-NC1
Total Xylenes*	7.82	0.150	01/28/2022	ND	6.21	103	6.00	0.448	GC-NC1
Total BTX	9.57	0.300	01/28/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 487 % 69.9-140

Chloride, SM4500Cl-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	01/26/2022	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*	58.0	10.0	01/27/2022	ND	216	108	200	2.30	
DRO >C10-C28*	219	10.0	01/27/2022	ND	254	127	200	12.5	
EXT DRO >C28-C36	15.2	10.0	01/27/2022	ND					

Surrogate: 1-Chlorooctane 116 % 66.9-136

Surrogate: 1-Chlorooctadecane 97.0 % 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: 01/24/2022
Reported: 01/28/2022
Project Name: RIO STATE #3 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 (H220256-12)

BTX 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	01/26/2022	ND	2.10	105	2.00	3.67	
Toluene*	<0.050	0.050	01/26/2022	ND	2.01	100	2.00	3.55	GC-NC
Ethylbenzene*	0.845	0.050	01/26/2022	ND	2.02	101	2.00	3.98	GC-NC1
Total Xylenes*	3.04	0.150	01/26/2022	ND	6.11	102	6.00	4.08	GC-NC1
Total BTX	3.89	0.300	01/26/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 291 % 69.9-140

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	01/26/2022	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*	13.8	10.0	01/27/2022	ND	216	108	200	2.30	
DRO >C10-C28*	102	10.0	01/27/2022	ND	254	127	200	12.5	
EXT DRO >C28-C36	<10.0	10.0	01/27/2022	ND					

Surrogate: 1-Chlorooctane 103 % 66.9-136

Surrogate: 1-Chlorooctadecane 97.0 % 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: 01/24/2022
Reported: 01/28/2022
Project Name: RIO STATE #3 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 (H220256-13)

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	01/26/2022	ND	2.10	105	2.00	3.67	
Toluene*	<0.050	0.050	01/26/2022	ND	2.01	100	2.00	3.55	GC-NC
Ethylbenzene*	0.956	0.050	01/26/2022	ND	2.02	101	2.00	3.98	GC-NC1
Total Xylenes*	3.47	0.150	01/26/2022	ND	6.11	102	6.00	4.08	GC-NC1
Total BTEX	4.43	0.300	01/26/2022	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 359 % 69.9-140

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	01/26/2022	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*	62.4	10.0	01/27/2022	ND	216	108	200	2.30	
DRO >C10-C28*	329	10.0	01/27/2022	ND	254	127	200	12.5	
EXT DRO >C28-C36	12.4	10.0	01/27/2022	ND					

Surrogate: 1-Chlorooctane 124 % 66.9-136

Surrogate: 1-Chlorooctadecane 94.9 % 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: 01/24/2022
 Reported: 01/28/2022
 Project Name: RIO STATE #3 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: BG @ 4.2' BGS (H220256-14)

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	01/26/2022	ND	2.10	105	2.00	3.67		
Toluene*	0.134	0.050	01/26/2022	ND	2.01	100	2.00	3.55	GC-NC1	
Ethylbenzene*	<0.050	0.050	01/26/2022	ND	2.02	101	2.00	3.98		
Total Xylenes*	<0.150	0.150	01/26/2022	ND	6.11	102	6.00	4.08		
Total BTEX	<0.300	0.300	01/26/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 69.9-140

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	01/26/2022	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	01/26/2022	ND	197	98.6	200	2.47	
DRO >C10-C28*	<10.0	10.0	01/26/2022	ND	227	113	200	3.90	
EXT DRO >C28-C36	<10.0	10.0	01/26/2022	ND					

Surrogate: 1-Chlorooctane 90.2 % 66.9-136

Surrogate: 1-Chlorooctadecane 88.2 % 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.
GC-NC	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
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", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



CARDINAL
Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: R. T. Hicks Consultants Project Manager:		BILL TO		ANALYSIS REQUEST	
Address: 901 Rio Grande Blvd NW, Suite F-142 City: Albuquerque State: NM Zip: 87104 Phone #: 505-266-5004 Fax #: Project #:		P.O. #: Company: R. T. Hicks Consultants Attn: Randy Hicks Address: City: State: Zip: Phone #: Fax #:			
Project Name: Rio State #3 release Project Location: Eddy County Sampler Name: Kristin Pope					

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							PRESERV	SAMPLING	DATE	TIME	TPH	BTEX	Chloride
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:							
HA30356	BA @ 0-4 ft BGS	C	1										1/19/22	0908			
	SSA-1 0-4 ft BGS	C												0920			
	SSA-2 0-4 ft BGS	C												0937			
	SSA-3 0-4 ft BGS	C												0944			
	SSA-4 0-4 ft BGS	C												1000			
	SSA-5 0-4 ft BGS	C												1010			
	SSA-6 0-4 ft BGS	C												1018			
	PI @ 0-4 ft BGS	C															
	PI @ 0-4 ft BGS	C															

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Relinquished By: Kristin Pope Date: 1-24-22 Time: 1125	Received By: [Signature] Date: Time:
---	---

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

Email to kristin@rthicksconsult.com

Phone Result: ☐ Yes ☐ No Add'l Phone #: _____
 Fax Result: ☐ Yes ☐ No Add'l Fax #: _____
 REMARKS:



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

[illegible]



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

February 13, 2023

KRISTIN POPE

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: RIO STATE #003 RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 02/08/23 11:12.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. 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 style with a large, stylized 'C' and 'K'.

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: 02/08/2023
Reported: 02/13/2023
Project Name: RIO STATE #003 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 02/07/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 1 @ 0-2' (H230547-01)

BTEX 8260B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	02/10/2023	ND	1.89	94.4	2.00	5.21	
Toluene*	0.067	0.025	02/10/2023	ND	2.07	103	2.00	3.93	
Ethylbenzene*	0.379	0.025	02/10/2023	ND	2.13	106	2.00	4.69	
Total Xylenes*	3.54	0.075	02/10/2023	ND	6.29	105	6.00	4.19	
Total BTEX	3.99	0.150	02/10/2023	ND					

Surrogate: Dibromofluoromethane 99.8 % 86.7-111

Surrogate: Toluene-d8 111 % 89.3-110

Surrogate: 4-Bromofluorobenzene 234 % 88.2-108

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	02/09/2023	ND	416	104	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*	1390	10.0	02/10/2023	ND	189	94.7	200	1.45	
DRO >C10-C28*	2170	10.0	02/10/2023	ND	177	88.7	200	8.70	
EXT DRO >C28-C36	<10.0	10.0	02/10/2023	ND					

Surrogate: 1-Chlorooctane 229 % 48.2-134

Surrogate: 1-Chlorooctadecane 115 % 49.1-148

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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: 02/08/2023
Reported: 02/13/2023
Project Name: RIO STATE #003 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 02/07/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 1 @ 2-4' (H230547-02)

BTEx 8260B		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	02/10/2023	ND	1.89	94.4	2.00	5.21	
Toluene*	0.966	0.500	02/10/2023	ND	2.07	103	2.00	3.93	
Ethylbenzene*	3.11	0.500	02/10/2023	ND	2.13	106	2.00	4.69	
Total Xylenes*	13.0	1.50	02/10/2023	ND	6.29	105	6.00	4.19	
Total BTEX	17.1	3.00	02/10/2023	ND					

Surrogate: Dibromofluoromethane 101 % 86.7-111
Surrogate: Toluene-d8 102 % 89.3-110
Surrogate: 4-Bromofluorobenzene 113 % 88.2-108

Chloride, SM4500Cl-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	02/09/2023	ND	416	104	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*	290	10.0	02/10/2023	ND	189	94.7	200	1.45	
DRO >C10-C28*	467	10.0	02/10/2023	ND	177	88.7	200	8.70	
EXT DRO >C28-C36	<10.0	10.0	02/10/2023	ND					

Surrogate: 1-Chlorooctane 131 % 48.2-134
Surrogate: 1-Chlorooctadecane 120 % 49.1-148

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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: 02/08/2023
Reported: 02/13/2023
Project Name: RIO STATE #003 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 02/07/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 1 @ 4.2' (H230547-03)

BTX 8260B		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	02/10/2023	ND	1.89	94.4	2.00	5.21	
Toluene*	1.71	0.500	02/10/2023	ND	2.07	103	2.00	3.93	
Ethylbenzene*	4.13	0.500	02/10/2023	ND	2.13	106	2.00	4.69	
Total Xylenes*	15.2	1.50	02/10/2023	ND	6.29	105	6.00	4.19	
Total BTX	21.1	3.00	02/10/2023	ND					

Surrogate: Dibromofluoromethane 97.9 % 86.7-111
Surrogate: Toluene-d8 99.0 % 89.3-110
Surrogate: 4-Bromofluorobenzene 114 % 88.2-108

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	02/09/2023	ND	416	104	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*	504	10.0	02/09/2023	ND	196	98.0	200	0.636	QM-07
DRO >C10-C28*	704	10.0	02/09/2023	ND	183	91.6	200	0.694	QM-07
EXT DRO >C28-C36	<10.0	10.0	02/09/2023	ND					

Surrogate: 1-Chlorooctane 140 % 48.2-134
Surrogate: 1-Chlorooctadecane 100 % 49.1-148

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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: 02/08/2023
 Reported: 02/13/2023
 Project Name: RIO STATE #003 RELEASE
 Project Number: NONE GIVEN
 Project Location: MURCHISON- EDDY CO.

Sampling Date: 02/07/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SSA - 2 @ 0-2' (H230547-04)

BTX 8260B		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	02/10/2023	ND	1.89	94.4	2.00	5.21	
Toluene*	0.843	0.500	02/10/2023	ND	2.07	103	2.00	3.93	
Ethylbenzene*	1.57	0.500	02/10/2023	ND	2.13	106	2.00	4.69	
Total Xylenes*	9.88	1.50	02/10/2023	ND	6.29	105	6.00	4.19	
Total BTX	12.3	3.00	02/10/2023	ND					

Surrogate: Dibromofluoromethane 99.9 % 86.7-111
 Surrogate: Toluene-d8 102 % 89.3-110
 Surrogate: 4-Bromofluorobenzene 120 % 88.2-108

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	02/09/2023	ND	416	104	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*	2560	10.0	02/09/2023	ND	196	98.0	200	0.636	
DRO >C10-C28*	3570	10.0	02/09/2023	ND	183	91.6	200	0.694	
EXT DRO >C28-C36	29.2	10.0	02/09/2023	ND					

Surrogate: 1-Chlorooctane 338 % 48.2-134
 Surrogate: 1-Chlorooctadecane 107 % 49.1-148

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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: 02/08/2023
Reported: 02/13/2023
Project Name: RIO STATE #003 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 02/07/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 2 @ 2-4' (H230547-05)

BTEx 8260B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	02/10/2023	ND	1.90	94.9	2.00	4.02	
Toluene*	4.99	0.500	02/10/2023	ND	2.07	104	2.00	3.63	
Ethylbenzene*	7.67	0.500	02/10/2023	ND	2.13	106	2.00	3.88	
Total Xylenes*	47.0	1.50	02/10/2023	ND	6.25	104	6.00	4.30	
Total BTEX	59.6	3.00	02/10/2023	ND					

Surrogate: Dibromofluoromethane 98.5 % 86.7-111
Surrogate: Toluene-d8 101 % 89.3-110
Surrogate: 4-Bromofluorobenzene 117 % 88.2-108

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	02/09/2023	ND	416	104	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*	2600	10.0	02/09/2023	ND	196	98.0	200	0.636	
DRO >C10-C28*	3050	10.0	02/09/2023	ND	183	91.6	200	0.694	
EXT DRO >C28-C36	26.6	10.0	02/09/2023	ND					

Surrogate: 1-Chlorooctane 313 % 48.2-134
Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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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: 02/08/2023
Reported: 02/13/2023
Project Name: RIO STATE #003 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 02/07/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 2 @ 4.2' (H230547-06)

BTEx 8260B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	02/10/2023	ND	1.90	94.9	2.00	4.02	
Toluene*	3.15	0.500	02/10/2023	ND	2.07	104	2.00	3.63	
Ethylbenzene*	5.67	0.500	02/10/2023	ND	2.13	106	2.00	3.88	
Total Xylenes*	34.7	1.50	02/10/2023	ND	6.25	104	6.00	4.30	
Total BTEx	43.5	3.00	02/10/2023	ND					

Surrogate: Dibromofluoromethane 96.8 % 86.7-111
Surrogate: Toluene-d8 98.5 % 89.3-110
Surrogate: 4-Bromofluorobenzene 117 % 88.2-108

Chloride, SM4500Cl-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	02/09/2023	ND	416	104	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*	1710	10.0	02/09/2023	ND	196	98.0	200	0.636	
DRO >C10-C28*	2050	10.0	02/09/2023	ND	183	91.6	200	0.694	
EXT DRO >C28-C36	18.6	10.0	02/09/2023	ND					

Surrogate: 1-Chlorooctane 242 % 48.2-134
Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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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: 02/08/2023
Reported: 02/13/2023
Project Name: RIO STATE #003 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 02/07/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 7 @ 0-2' (H230547-07)

BTX 8260B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	02/10/2023	ND	1.90	94.9	2.00	4.02	
Toluene*	<0.025	0.025	02/10/2023	ND	2.07	104	2.00	3.63	
Ethylbenzene*	<0.025	0.025	02/10/2023	ND	2.13	106	2.00	3.88	
Total Xylenes*	<0.075	0.075	02/10/2023	ND	6.25	104	6.00	4.30	
Total BTX	<0.150	0.150	02/10/2023	ND					

Surrogate: Dibromofluoromethane 93.4 % 86.7-111
Surrogate: Toluene-d8 103 % 89.3-110
Surrogate: 4-Bromofluorobenzene 99.8 % 88.2-108

Chloride, SM4500Cl-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	02/09/2023	ND	416	104	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	02/09/2023	ND	196	98.0	200	0.636	
DRO >C10-C28*	<10.0	10.0	02/09/2023	ND	183	91.6	200	0.694	
EXT DRO >C28-C36	<10.0	10.0	02/09/2023	ND					

Surrogate: 1-Chlorooctane 87.6 % 48.2-134
Surrogate: 1-Chlorooctadecane 95.0 % 49.1-148

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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: 02/08/2023
Reported: 02/13/2023
Project Name: RIO STATE #003 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 02/07/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 7 @ 2-4' (H230547-08)

BTEx 8260B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	02/10/2023	ND	1.90	94.9	2.00	4.02	
Toluene*	<0.025	0.025	02/10/2023	ND	2.07	104	2.00	3.63	
Ethylbenzene*	<0.025	0.025	02/10/2023	ND	2.13	106	2.00	3.88	
Total Xylenes*	<0.075	0.075	02/10/2023	ND	6.25	104	6.00	4.30	
Total BTEX	<0.150	0.150	02/10/2023	ND					

Surrogate: Dibromofluoromethane 94.9 % 86.7-111
Surrogate: Toluene-d8 102 % 89.3-110
Surrogate: 4-Bromofluorobenzene 99.8 % 88.2-108

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	02/09/2023	ND	416	104	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	02/09/2023	ND	196	98.0	200	0.636	
DRO >C10-C28*	<10.0	10.0	02/09/2023	ND	183	91.6	200	0.694	
EXT DRO >C28-C36	<10.0	10.0	02/09/2023	ND					

Surrogate: 1-Chlorooctane 90.5 % 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:

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

Received: 02/08/2023
Reported: 02/13/2023
Project Name: RIO STATE #003 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 02/07/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 7 @ 4.2' (H230547-09)

BTEx 8260B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	02/10/2023	ND	1.90	94.9	2.00	4.02	
Toluene*	<0.025	0.025	02/10/2023	ND	2.07	104	2.00	3.63	
Ethylbenzene*	<0.025	0.025	02/10/2023	ND	2.13	106	2.00	3.88	
Total Xylenes*	<0.075	0.075	02/10/2023	ND	6.25	104	6.00	4.30	
Total BTEX	<0.150	0.150	02/10/2023	ND					

Surrogate: Dibromofluoromethane 94.6 % 86.7-111
Surrogate: Toluene-d8 100 % 89.3-110
Surrogate: 4-Bromofluorobenzene 99.2 % 88.2-108

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	02/09/2023	ND	416	104	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	02/09/2023	ND	196	98.0	200	0.636	
DRO >C10-C28*	<10.0	10.0	02/09/2023	ND	183	91.6	200	0.694	
EXT DRO >C28-C36	<10.0	10.0	02/09/2023	ND					

Surrogate: 1-Chlorooctane 90.0 % 48.2-134
Surrogate: 1-Chlorooctadecane 95.7 % 49.1-148

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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: 02/08/2023
Reported: 02/13/2023
Project Name: RIO STATE #003 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 02/07/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 8 @ 0-2' (H230547-10)**BTEX 8260B****mg/kg****Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	02/10/2023	ND	1.90	94.9	2.00	4.02	
Toluene*	<0.025	0.025	02/10/2023	ND	2.07	104	2.00	3.63	
Ethylbenzene*	<0.025	0.025	02/10/2023	ND	2.13	106	2.00	3.88	
Total Xylenes*	<0.075	0.075	02/10/2023	ND	6.25	104	6.00	4.30	
Total BTEX	<0.150	0.150	02/10/2023	ND					

Surrogate: Dibromofluoromethane 96.3 % 86.7-111

Surrogate: Toluene-d8 102 % 89.3-110

Surrogate: 4-Bromofluorobenzene 101 % 88.2-108

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	02/09/2023	ND	416	104	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	02/09/2023	ND	196	98.0	200	0.636	
DRO >C10-C28*	<10.0	10.0	02/09/2023	ND	183	91.6	200	0.694	
EXT DRO >C28-C36	<10.0	10.0	02/09/2023	ND					

Surrogate: 1-Chlorooctane 88.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.0 % 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:

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

Received: 02/08/2023
Reported: 02/13/2023
Project Name: RIO STATE #003 RELEASE
Project Number: NONE GIVEN
Project Location: MURCHISON- EDDY CO.

Sampling Date: 02/07/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSA - 8 @ 2-4' (H230547-11)

BTEX 8260B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.025	0.025	02/10/2023	ND	1.90	94.9	2.00	4.02		
Toluene*	<0.025	0.025	02/10/2023	ND	2.07	104	2.00	3.63		
Ethylbenzene*	<0.025	0.025	02/10/2023	ND	2.13	106	2.00	3.88		
Total Xylenes*	<0.075	0.075	02/10/2023	ND	6.25	104	6.00	4.30		
Total BTEX	<0.150	0.150	02/10/2023	ND						

Surrogate: Dibromofluoromethane 94.7 % 86.7-111
Surrogate: Toluene-d8 103 % 89.3-110
Surrogate: 4-Bromofluorobenzene 100 % 88.2-108

Chloride, SM4500Cl-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	02/09/2023	ND	416	104	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	02/09/2023	ND	196	98.0	200	0.636	
DRO >C10-C28*	<10.0	10.0	02/09/2023	ND	183	91.6	200	0.694	
EXT DRO >C28-C36	<10.0	10.0	02/09/2023	ND					

Surrogate: 1-Chlorooctane 88.4 % 48.2-134
Surrogate: 1-Chlorooctadecane 94.4 % 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:

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

Received: 02/08/2023
 Reported: 02/13/2023
 Project Name: RIO STATE #003 RELEASE
 Project Number: NONE GIVEN
 Project Location: MURCHISON- EDDY CO.

Sampling Date: 02/07/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SSA - 8 @ 4.2' (H230547-12)

BTEx 8260B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.025	0.025	02/10/2023	ND	1.90	94.9	2.00	4.02		
Toluene*	<0.025	0.025	02/10/2023	ND	2.07	104	2.00	3.63		
Ethylbenzene*	<0.025	0.025	02/10/2023	ND	2.13	106	2.00	3.88		
Total Xylenes*	<0.075	0.075	02/10/2023	ND	6.25	104	6.00	4.30		
Total BTEX	<0.150	0.150	02/10/2023	ND						

Surrogate: Dibromofluoromethane 92.1 % 86.7-111
 Surrogate: Toluene-d8 100 % 89.3-110
 Surrogate: 4-Bromofluorobenzene 99.3 % 88.2-108

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	02/09/2023	ND	416	104	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	02/10/2023	ND	196	98.0	200	0.636	
DRO >C10-C28*	<10.0	10.0	02/10/2023	ND	183	91.6	200	0.694	
EXT DRO >C28-C36	<10.0	10.0	02/10/2023	ND					

Surrogate: 1-Chlorooctane 95.4 % 48.2-134
 Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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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.
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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: R. T. Hicks Consultants										BILL TO										ANALYSIS REQUEST									
Project Manager: Kristin Pope										P.O. #:																			
Address: 901 Rio Grande Blvd NW, Suite F-142										Company: RT Hicks																			
City: Albuquerque										Attn: Randy																			
Phone #: 505-266-5004										Address:																			
Fax #:										City:																			
Project #:										State:																			
Project Name: <u>Rio St. #003 Release</u>										Zip:																			
Project Location: Eddy County										Phone #:																			
Sample Name: Kristin Pope										Fax #:																			
FOR LAB USE ONLY																													
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									
H230547										SAHA-1 @ 0-2 ft										2/7/03 0941									
1										SAHA-1 @ 2-4 ft										0943									
2										SAHA-1 @ 4.2 ft										0945									
3										SAHA-2 @ 0-2 ft										1000									
4										SAHA-2 @ 2.4 ft										1008									
5										SAHA-2 @ 4.2 ft										1012									
6										SAHA-7 @ 0-2 ft										1024									
7										SAHA-7 @ 2.4 ft										1028									
8										SAHA-7 @ 4.2 ft										1033									
9										SAHA-8 @ 0-2 ft										1036									
10																													

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Relinquished By: <u>Kristin Pope</u>										Date: <u>2/8/03</u>										Received By: <u>Randy Hicks</u>									
Relinquished By: <u>Kristin Pope</u>										Date: <u>2/8/03</u>										Received By: <u>Jamara Delaney</u>									
Delivered By: (Circle One)										Observed Temp.: °C <u>4.8</u>										Sample Condition									
Sampler - UPS - Bus - Other:										Corrected Temp.: °C <u>4.2</u>										<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Intact <input checked="" type="checkbox"/> Not Intact									
Turnaround Time:										Standard										Bacteria (only)									
										Rush										Cool Intact									
																				Yes									
																				No									
																				Corrected Temp. °C									

REMARKS: kristin@rthicksconsult.com, R@rthicksconsult.com



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

June 12, 2024

DANIEL DOMINGUEZ

Hungry Horse Environmental

P.O. Box 1058

Hobbs, NM 88240

RE: RIO STATE #3

Enclosed are the results of analyses for samples received by the laboratory on 06/05/24 16:28.

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". 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:

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

Received: 06/05/2024
 Reported: 06/12/2024
 Project Name: RIO STATE #3
 Project Number: MURCHISON
 Project Location: UL/ D SEC 36 T18S - R24E

Sampling Date: 06/04/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SP 1 - SURF (H243207-01)

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	06/07/2024	ND	1.70	85.0	2.00	4.80	
Toluene*	<0.050	0.050	06/07/2024	ND	1.91	95.4	2.00	4.35	
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.08	104	2.00	9.39	
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.32	105	6.00	10.1	
Total BTEX	<0.300	0.300	06/07/2024	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	48.0	16.0	06/07/2024	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	06/06/2024	ND	193	96.3	200	1.94	
DRO >C10-C28*	<10.0	10.0	06/06/2024	ND	214	107	200	0.944	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 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: 06/05/2024
 Reported: 06/12/2024
 Project Name: RIO STATE #3
 Project Number: MURCHISON
 Project Location: UL/ D SEC 36 T18S - R24E

Sampling Date: 06/04/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SP 1 - 1' (H243207-02)

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	06/07/2024	ND	1.70	85.0	2.00	4.80		
Toluene*	<0.050	0.050	06/07/2024	ND	1.91	95.4	2.00	4.35		
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.08	104	2.00	9.39		
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.32	105	6.00	10.1		
Total BTEX	<0.300	0.300	06/07/2024	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	160	16.0	06/07/2024	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	06/07/2024	ND	193	96.3	200	1.94	
DRO >C10-C28*	<10.0	10.0	06/07/2024	ND	214	107	200	0.944	
EXT DRO >C28-C36	<10.0	10.0	06/07/2024	ND					

Surrogate: 1-Chlorooctane 74.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.0 % 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: 06/05/2024
 Reported: 06/12/2024
 Project Name: RIO STATE #3
 Project Number: MURCHISON
 Project Location: UL/ D SEC 36 T18S - R24E

Sampling Date: 06/04/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SP 2 - SURF (H243207-03)

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	06/07/2024	ND	1.70	85.0	2.00	4.80		
Toluene*	<0.050	0.050	06/07/2024	ND	1.91	95.4	2.00	4.35		
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.08	104	2.00	9.39		
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.32	105	6.00	10.1		
Total BTEX	<0.300	0.300	06/07/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 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	800	16.0	06/07/2024	ND	416	104	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	06/07/2024	ND	193	96.3	200	1.94	
DRO >C10-C28*	101	10.0	06/07/2024	ND	214	107	200	0.944	
EXT DRO >C28-C36	34.9	10.0	06/07/2024	ND					

Surrogate: 1-Chlorooctane 87.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.8 % 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: 06/05/2024
 Reported: 06/12/2024
 Project Name: RIO STATE #3
 Project Number: MURCHISON
 Project Location: UL/ D SEC 36 T18S - R24E

Sampling Date: 06/04/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SP 2 - 2' (H243207-04)

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	06/07/2024	ND	1.70	85.0	2.00	4.80		
Toluene*	<0.050	0.050	06/07/2024	ND	1.91	95.4	2.00	4.35		
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.08	104	2.00	9.39		
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.32	105	6.00	10.1		
Total BTEX	<0.300	0.300	06/07/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 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	80.0	16.0	06/07/2024	ND	416	104	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	06/07/2024	ND	193	96.3	200	1.94	
DRO >C10-C28*	<10.0	10.0	06/07/2024	ND	214	107	200	0.944	
EXT DRO >C28-C36	<10.0	10.0	06/07/2024	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 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: 06/05/2024
 Reported: 06/12/2024
 Project Name: RIO STATE #3
 Project Number: MURCHISON
 Project Location: UL/ D SEC 36 T18S - R24E

Sampling Date: 06/04/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SP 3 - SURF (H243207-05)

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	06/07/2024	ND	1.70	85.0	2.00	4.80	
Toluene*	<0.050	0.050	06/07/2024	ND	1.91	95.4	2.00	4.35	
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.08	104	2.00	9.39	GC-NC
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.32	105	6.00	10.1	
Total BTEX	<0.300	0.300	06/07/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 131 % 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	400	16.0	06/07/2024	ND	416	104	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*	105	10.0	06/07/2024	ND	193	96.3	200	1.94	
DRO >C10-C28*	4960	10.0	06/07/2024	ND	214	107	200	0.944	
EXT DRO >C28-C36	267	10.0	06/07/2024	ND					

Surrogate: 1-Chlorooctane 159 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 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: 06/05/2024
 Reported: 06/12/2024
 Project Name: RIO STATE #3
 Project Number: MURCHISON
 Project Location: UL/ D SEC 36 T18S - R24E

Sampling Date: 06/04/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SP 3 - 1' (H243207-06)

BTEx 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/07/2024	ND	1.70	85.0	2.00	4.80	
Toluene*	<0.050	0.050	06/07/2024	ND	1.91	95.4	2.00	4.35	GC-NC
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.08	104	2.00	9.39	GC-NC
Total Xylenes*	0.535	0.150	06/07/2024	ND	6.32	105	6.00	10.1	GC-NC1
Total BTEX	0.535	0.300	06/07/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 285 % 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	80.0	16.0	06/07/2024	ND	416	104	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*	243	10.0	06/06/2024	ND	176	87.8	200	5.10	
DRO >C10-C28*	1090	10.0	06/06/2024	ND	168	83.8	200	2.73	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane 116 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.1 % 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
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 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/05/2024
 Reported: 06/12/2024
 Project Name: RIO STATE #3
 Project Number: MURCHISON
 Project Location: UL/ D SEC 36 T18S - R24E

Sampling Date: 06/04/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SP 4 - SURF (H243207-07)

BTEx 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/10/2024	ND	1.70	85.0	2.00	4.80	
Toluene*	<0.050	0.050	06/10/2024	ND	1.91	95.4	2.00	4.35	
Ethylbenzene*	0.107	0.050	06/10/2024	ND	2.08	104	2.00	9.39	GC-NC1
Total Xylenes*	0.524	0.150	06/10/2024	ND	6.32	105	6.00	10.1	GC-NC1
Total BTEX	0.630	0.300	06/10/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 146 % 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	06/07/2024	ND	416	104	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*	65.2	10.0	06/06/2024	ND	176	87.8	200	5.10	
DRO >C10-C28*	3420	10.0	06/06/2024	ND	168	83.8	200	2.73	QM-07
EXT DRO >C28-C36	467	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane 85.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.2 % 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
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 Hobbs NM, 88240
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Received: 06/05/2024
 Reported: 06/12/2024
 Project Name: RIO STATE #3
 Project Number: MURCHISON
 Project Location: UL/ D SEC 36 T18S - R24E

Sampling Date: 06/04/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SP 4 - 1' (H243207-08)

BTEx 8021B		mg/kg	Analyzed By: JH					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	06/10/2024	ND	1.70	85.0	2.00	4.80	
Toluene*	<0.200	0.200	06/10/2024	ND	1.91	95.4	2.00	4.35	GC-NC
Ethylbenzene*	2.60	0.200	06/10/2024	ND	2.08	104	2.00	9.39	GC-NC1
Total Xylenes*	16.8	0.600	06/10/2024	ND	6.32	105	6.00	10.1	GC-NC1
Total BTEX	19.4	1.20	06/10/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 266 % 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	06/07/2024	ND	416	104	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*	797	10.0	06/06/2024	ND	176	87.8	200	5.10	
DRO >C10-C28*	1650	10.0	06/06/2024	ND	168	83.8	200	2.73	
EXT DRO >C28-C36	24.2	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane 180 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.6 % 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
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 Hobbs NM, 88240
 Fax To: (505) 391-4585

Received: 06/05/2024
 Reported: 06/12/2024
 Project Name: RIO STATE #3
 Project Number: MURCHISON
 Project Location: UL/ D SEC 36 T18S - R24E

Sampling Date: 06/04/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: HZ 1 - SURF (H243207-09)

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	06/07/2024	ND	1.70	85.0	2.00	4.80		
Toluene*	<0.050	0.050	06/07/2024	ND	1.91	95.4	2.00	4.35		
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.08	104	2.00	9.39		
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.32	105	6.00	10.1		
Total BTEx	<0.300	0.300	06/07/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 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	<16.0	16.0	06/07/2024	ND	416	104	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	06/06/2024	ND	176	87.8	200	5.10	
DRO >C10-C28*	<10.0	10.0	06/06/2024	ND	168	83.8	200	2.73	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane 84.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.9 % 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
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 Fax To: (505) 391-4585

Received: 06/05/2024
 Reported: 06/12/2024
 Project Name: RIO STATE #3
 Project Number: MURCHISON
 Project Location: UL/ D SEC 36 T18S - R24E

Sampling Date: 06/04/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: HZ 1 - 1' (H243207-10)

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	06/07/2024	ND	1.70	85.0	2.00	4.80		
Toluene*	<0.050	0.050	06/07/2024	ND	1.91	95.4	2.00	4.35		
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.08	104	2.00	9.39		
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.32	105	6.00	10.1		
Total BTEX	<0.300	0.300	06/07/2024	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	06/07/2024	ND	416	104	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	06/06/2024	ND	176	87.8	200	5.10	
DRO >C10-C28*	<10.0	10.0	06/06/2024	ND	168	83.8	200	2.73	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane 79.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.5 % 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: 06/05/2024
 Reported: 06/12/2024
 Project Name: RIO STATE #3
 Project Number: MURCHISON
 Project Location: UL/ D SEC 36 T18S - R24E

Sampling Date: 06/04/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: HZ 2 - SURF (H243207-11)

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	06/07/2024	ND	1.70	85.0	2.00	4.80		
Toluene*	<0.050	0.050	06/07/2024	ND	1.91	95.4	2.00	4.35		
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.08	104	2.00	9.39		
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.32	105	6.00	10.1		
Total BTEX	<0.300	0.300	06/07/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 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	06/07/2024	ND	416	104	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	06/06/2024	ND	176	87.8	200	5.10	
DRO >C10-C28*	<10.0	10.0	06/06/2024	ND	168	83.8	200	2.73	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane 84.4 % 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
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 Fax To: (505) 391-4585

Received: 06/05/2024
 Reported: 06/12/2024
 Project Name: RIO STATE #3
 Project Number: MURCHISON
 Project Location: UL/ D SEC 36 T18S - R24E

Sampling Date: 06/04/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: HZ 2 - 1' (H243207-12)

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	06/07/2024	ND	1.70	85.0	2.00	4.80		
Toluene*	<0.050	0.050	06/07/2024	ND	1.91	95.4	2.00	4.35		
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.08	104	2.00	9.39		
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.32	105	6.00	10.1		
Total BTEX	<0.300	0.300	06/07/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	06/07/2024	ND	416	104	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	06/06/2024	ND	176	87.8	200	5.10	
DRO >C10-C28*	<10.0	10.0	06/06/2024	ND	168	83.8	200	2.73	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane 63.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 62.5 % 49.1-148

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Analytical Results For:

Hungry Horse Environmental
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 P.O. Box 1058
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 Fax To: (505) 391-4585

Received: 06/05/2024
 Reported: 06/12/2024
 Project Name: RIO STATE #3
 Project Number: MURCHISON
 Project Location: UL/ D SEC 36 T18S - R24E

Sampling Date: 06/04/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: HZ 3 - SURF (H243207-13)

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	06/07/2024	ND	1.70	85.0	2.00	4.80		
Toluene*	<0.050	0.050	06/07/2024	ND	1.91	95.4	2.00	4.35		
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.08	104	2.00	9.39		
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.32	105	6.00	10.1		
Total BTEx	<0.300	0.300	06/07/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	<16.0	16.0	06/07/2024	ND	416	104	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	06/06/2024	ND	176	87.8	200	5.10	
DRO >C10-C28*	<10.0	10.0	06/06/2024	ND	168	83.8	200	2.73	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane 58.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 59.6 % 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: 06/05/2024
 Reported: 06/12/2024
 Project Name: RIO STATE #3
 Project Number: MURCHISON
 Project Location: UL/ D SEC 36 T18S - R24E

Sampling Date: 06/04/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: HZ 3 - 1' (H243207-14)

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	06/07/2024	ND	1.70	85.0	2.00	4.80		
Toluene*	<0.050	0.050	06/07/2024	ND	1.91	95.4	2.00	4.35		
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.08	104	2.00	9.39		
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.32	105	6.00	10.1		
Total BTEX	<0.300	0.300	06/07/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 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	06/07/2024	ND	416	104	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	06/06/2024	ND	176	87.8	200	5.10	
DRO >C10-C28*	<10.0	10.0	06/06/2024	ND	168	83.8	200	2.73	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane 66.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 64.6 % 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: 06/05/2024
 Reported: 06/12/2024
 Project Name: RIO STATE #3
 Project Number: MURCHISON
 Project Location: UL/ D SEC 36 T18S - R24E

Sampling Date: 06/04/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: HZ 4 - SURF (H243207-15)

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	06/07/2024	ND	1.70	85.0	2.00	4.80		
Toluene*	<0.050	0.050	06/07/2024	ND	1.91	95.4	2.00	4.35		
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.08	104	2.00	9.39		
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.32	105	6.00	10.1		
Total BTEx	<0.300	0.300	06/07/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 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	<16.0	16.0	06/07/2024	ND	416	104	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	06/06/2024	ND	176	87.8	200	5.10	
DRO >C10-C28*	<10.0	10.0	06/06/2024	ND	168	83.8	200	2.73	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane 73.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 71.7 % 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: 06/05/2024
 Reported: 06/12/2024
 Project Name: RIO STATE #3
 Project Number: MURCHISON
 Project Location: UL/ D SEC 36 T18S - R24E

Sampling Date: 06/04/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: HZ 4 - 1' (H243207-16)

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	06/07/2024	ND	1.70	85.0	2.00	4.80		
Toluene*	<0.050	0.050	06/07/2024	ND	1.91	95.4	2.00	4.35		
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.08	104	2.00	9.39		
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.32	105	6.00	10.1		
Total BTEX	<0.300	0.300	06/07/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 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	06/07/2024	ND	416	104	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	06/06/2024	ND	176	87.8	200	5.10	
DRO >C10-C28*	<10.0	10.0	06/06/2024	ND	168	83.8	200	2.73	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane 65.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 63.4 % 49.1-148

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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.
GC-NC	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
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

[illegible]



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																																									
Phone #: 575 393-3386	Fax #:	Address: 5325 Sierra Vista																																									
Project #:	Project Owner: Murchison Oil & Gas	City: Carlsbad																																									
Project Name: Rio State #3	State: NM	Zip: 88230																																									
Project Location: U/L D Sec 36 T18S - R24E	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		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME		Chloride		TPH		BTEX 8021											
9		HZ1-Surf		G 1		X		X		X		X		X		X		X		X		X		6/4/24				X		X		X											
10		HZ1-1'		G 1		X		X		X		X		X		X		X		X		X		6/4/24				X		X		X											
11		HZ2-Surf		G 1		X		X		X		X		X		X		X		X		X		6/4/24				X		X		X											
12		HZ2-1'		G 1		X		X		X		X		X		X		X		X		X		6/4/24				X		X		X											
13		HZ3-Surf		G 1		X		X		X		X		X		X		X		X		X		6/4/24				X		X		X											
14		HZ3-1'		G 1		X		X		X		X		X		X		X		X		X		6/4/24				X		X		X											
15		HZ4-Surf		G 1		X		X		X		X		X		X		X		X		X		6/4/24				X		X		X											
16		HZ4-1'		G 1		X		X		X		X		X		X		X		X		X		6/4/24				X		X		X											
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Relinquished By: [Signature]		Date: 6/6/24		Received By: [Signature]		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:		Add'l Fax #:		REMARKS:																													
Relinquished By: [Signature]		Date: 6/6/24		Received By: [Signature]		Email results to: pm@hungry-horse.com		gboans@jdmil.com																																			
Delivered By: (Circle One) -8-1c #140		Sample Condition: Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>		CHECKED BY: [Signature]																																							
Sampler - UPS - Bus - Other:		Cool <input type="checkbox"/> Intact <input checked="" type="checkbox"/>																																									
Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476																																											

Rio State #003 (30-015-33690) – Photographs 1/11/2022



View west from eastern margin of release footprint.



1/11/2022

Stain showing E extent of release on pad; view W



1/11/2022

Site of breach of release from containment; view S from N extent
32.708180, -104.546116

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

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

QUESTIONS

Action 354694

QUESTIONS

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID:
	15363
	Action Number:
	354694
Action Type:	
[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)	

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2202454641
Incident Name	NAPP2202454641 RIO STATE 3 @ 30-015-33690
Incident Type	Oil Release
Incident Status	Remediation Plan Received
Incident Well	[30-015-33690] RIO STATE #003

Location of Release Source	
Please answer all the questions in this group.	
Site Name	RIO STATE 3
Date Release Discovered	01/03/2022
Surface Owner	Private

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: 5 BBL Recovered: 0 BBL Lost: 5 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: 69 BBL Recovered: 12 BBL Lost: 57 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.

District I

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District III

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Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

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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 2

Action 354694

QUESTIONS (continued)

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID:
	15363
	Action Number:
	354694
	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: 06/17/2024
--	---

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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, Page 3

Action 354694

QUESTIONS (continued)

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID:
	15363
	Action Number:
	354694
Action Type:	
[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)	

QUESTIONS**Site Characterization**

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	U.S. Geological Survey
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 500 and 1000 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between ½ and 1 (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 ½ and 1 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between ½ and 1 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	High
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride (EPA 300.0 or SM4500 Cl B)	800
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	10048
GRO+DRO (EPA SW-846 Method 8015M)	10010
BTEX (EPA SW-846 Method 8021B or 8260B)	136
Benzene (EPA SW-846 Method 8021B or 8260B)	0.5

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

On what estimated date will the remediation commence	07/17/2024
On what date will (or did) the final sampling or liner inspection occur	08/17/2024
On what date will (or was) the remediation complete(d)	08/31/2024
What is the estimated surface area (in square feet) that will be reclaimed	2000
What is the estimated volume (in cubic yards) that will be reclaimed	500
What is the estimated surface area (in square feet) that will be remediated	2000
What is the estimated volume (in cubic yards) that will be remediated	500

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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District III

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Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

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QUESTIONS, Page 4

Action 354694

QUESTIONS (continued)

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID:	15363
	Action Number:	354694
	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: 06/17/2024
<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>	

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QUESTIONS, Page 5

Action 354694

QUESTIONS (continued)

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID: 15363
	Action Number: 354694
	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 354694

QUESTIONS (continued)

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID:
	15363
	Action Number:
	354694
Action Type:	
[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)	

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	334983
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	04/24/2024
What was the (estimated) number of samples that were to be gathered	12
What was the sampling surface area in square feet	379

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 354694

CONDITIONS

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID:
	15363
	Action Number:
	354694
Action Type:	
[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)	

CONDITIONS

Created By	Condition	Condition Date
bhall	Remediation plan conditionally approved. OCD approves 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.	6/17/2024
bhall	Due to incomplete delineation information the excavation may need to be extended past the proposed 5 feet below ground surface. Remediation confirmation samples of the base and walls must meet the most stringent remediation closure criteria found on Table I of 19.15.29 NMAC.	6/17/2024
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.	6/17/2024
bhall	Analytical results included in laboratory report H220561 will not be accepted as the samples were delivered to the lab 26 days after collection and were analyzed/extracted after the hold times.	6/17/2024
bhall	Approval of this C-141 remediation plan is only applicable for incident nAPP2202454641 and is not applicable to any other incident number.	6/17/2024
bhall	The approval of this 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	6/17/2024
bhall	A complete remediation closure report and/or reclamation report pursuant to 19.15.29 NMAC will need to be submitted by 9/17/2024. Failure to submit a complete remediation plan and/or remediation closure report by 9/17/2024 is subject to compliance and enforcement penalties pursuant to 19.15.5 NMAC.	6/17/2024