



CLOSURE REQUEST

MARATHON OIL COMPANY

Created for submission to New Mexico Oil Conservation Division on 01/09/2023

ASHLEY GIOVENGO
Project Environmental Scientist

ENERGIZING AMERICA

January 09, 2023

Environmental Incident Group

State of New Mexico

Energy, Minerals, and Natural Resources

New Mexico Oil Conservation Division

811 South First Street

Artesia, New Mexico 88210

RE: CLOSURE REQUEST

COMPANY	Marathon Oil Company
LOCATION	Sun McKay Federal #003H
API	30-025-41927
PLSS	Unit C Sec 10 T19S R32E
GPS	32.6812515, -103.7562485
INCIDENT ID	nAPP2226731199

BACKGROUND

Wescom, Inc., hereafter referred to as Wescom, has prepared this Closure Request on behalf of Marathon Oil Company, hereafter referred to as Marathon, regarding the release at the Sun McKay Federal #003H (Site) located in Unit C, Section 10 Township 19 South and Range 32 East in Lea County, New Mexico. The GPS coordinates are as follows: North 32.6812515 and West -103.7562485. Surface owner of the Site is Bureau of Land Management (BLM).

On September 24, 2022, a packing failure at the wellhead resulted in the release of approximately 33.3 barrels (bbls) of production fluid onto the engineered pad. The well was shut in and an emergency one-call was placed in the event of lateral migration due to impending weather; the bulk of the impacted material along with any free-standing fluid was recovered from the pad surface. The spill area is located on the East side of the wellhead as shown in Figure 1.

Wescom personnel arrived onsite on October 03, 2022, to begin horizontal and vertical delineation of the spill area. Wescom returned to the Site on November 15, 2022, to collect vertical delineation samples at surface and one-foot below ground surface (bgs) respectively. On December 09, 2022, Wescom personnel returned to the Site to begin excavation of impacted soils and to collect final confirmation samples.



Atkins Engineering Associates Inc. was contracted to drill a temporary water well for the purpose of establishing depth to water within a half-mile radius of the Site. On December 19, 2022, the New Mexico Oil Conservation Division (NMOCD) approved an extension request that would allow Atkins time to complete the temporary water well which was rescheduled due to weather related delays (see Attachment G). The well log and plugging record for temporary water well, CP-1935 POD1 was submitted to the OSE on December 30, 2022, via electronic portal, as shown in Attachment H.

SURFACE & GROUND WATER

Well log data filled with the New Mexico Office of the State Engineer (OSE) for CP-1935 POD1, verifies DTW exceeds 101 feet below ground surface bgs and is 199 feet Southeast of the Site. No playas or lakes are located within a one-mile radius of this Site (Attachment C).

KARST POTENTIAL

According to data from the Bureau of Land Management, this Site is located within low karst potential as shown in Attachment D. There are no indicators of karst around the Site surface.

TARGET REMEDIAL LEVELS

Well log files submitted to OSE and USGS indicate that the depth to water (DTW) exceeds 101 feet bgs in the area surrounding the Site which verifies the use of the highest Remediation Action Levels (RRALs). The target cleanup levels are determined using the NMOCD Closure Criteria (19.15.29.12.B(4) and Table 1 NMAC, inserted below) including karst guidelines from the Bureau of Land Management. The applicable (RRALs) are 10 parts per million (ppm) Benzene, 50 ppm combined benzene, toluene, ethyl benzene, and xylene (BTEX) and 2500 ppm Total Petroleum Hydrocarbons (TPH) and 1000 ppm combined Gasoline Range Organics (GRO) and Diesel Range Organics (DRO). A chloride concentration at or below 20000 mg/kg (ppm) in the soil is also required.



Closure Criteria (19.15.29.12.B(4) and Table 1 NMAC)						
Sun McKay Federal #003H — 32.6812515, -103.7562485						
Depth to Groundwater		Closure Criteria (unites in mg/kg)				
		Chloride * numerical limit or background, whichever is greater	TPH	GRO+DRO	BTEX	Benzene
Based on high karst potential		600	100		50	10
No water data within 0.5 mile radius		600	100		50	10
less than 50 ft bgs		600	100		50	10
51 ft to 100 ft bgs		10000	2500	1000	50	10
greater than 100 ft bgs		20000	2500	1000	50	10
Surface Water	Yes or No	If yes, then				
< 300 feet from continuously flowing watercourse or other significant watercourse?	No					
< 200 feet from lakebed, sinkhole or playa lake	No					
Water Well or Water Source						
< 500 feet from spring or a private, domestic fresh water well used by less than 5 households for domestic or stock watering purposes?	No					
< 1000 feet from fresh water well or spring?	No					
Human and Other Areas						
< 300 feet from an occupied permanent residence, school, hospital, institution or church?	No					
Within incorporated municipal boundaries or within a defined municipal fresh water well field?	No					
< 100 feet from wetland?	No					
Within area overlying a subsurface mine?	No					
Within an unstable area?	No					
Within a 100-year floodplan?	No					

Table: Closure Criteria Statistics

SITE ASSESSMENT AND DELINEATION

On October 03, 2022, Marathon contracted Wescom to complete horizontal and vertical delineation of the spill area. A total of seven samples were jarred and sent to Hall Environmental, for laboratory analysis and all samples were below the applicable RRLs for the Site. Wescom personnel returned to the site on November 15, 2022, to collect additional vertical delineation samples from the spill area and to determine if excavation was required. A background sample, BG01, was collected 56 feet to the South of the caliche pad. Delineation sample locations are presented in Figure 2; laboratory analysis results are presented in Table 1 and laboratory analytical reports are included in Attachment E.

REMEDIATION ACTIVITIES

Beginning on December 09, 2022, Wescom personnel arrived onsite to oversee the removal of impacted soil and to conduct confirmation sampling. A backhoe was used to remove contaminated soil from the spill area to the depths of 1 to 1.5 feet bgs. Hand tools and shovels were utilized to remove contaminated soil from the area surrounding the wellhead and impacted material was hauled to an approved disposal facility.

Wescom personnel collected 33 composite confirmation samples and three side wall samples over the course of the four-day sampling and excavation period. All the confirmation samples were below the applicable



RRALs for the Site, as shown in Table 2. All soil samples were properly packaged, preserved, and transported to Hall Environmental by chain of custody, and analyzed for Total Petroleum Hydrocarbons, or TPH, — Method 8015D, BTEX—Method 8021B, and Chlorides—Method 300.0. Confirmation sample locations are presented in Figure 3 and laboratory analytical reports are included in Attachment E.

The required 48-hour confirmation sampling notification was sent on December 5, 2022, December 7, 2022, and December 12, 2022, to OCD.Enviro@emnrd.nm.gov and are included in Attachment F.

REQUEST FOR CLOSURE

On behalf of Marathon, Wescom hereby requests closure for the release associated with incident number nAPP2226731199 based on the logic below.

- The spill area has been horizontally and vertically delineated.
- All confirmation areas and samples are below applicable RRALs for the Site.
- Impacted material was removed and properly disposed of at an approved facility.

If you have any questions or comments, please do not hesitate to call Ms. Ashley Giovengo at (505) 382-1211.

Sincerely,

Wescom, Inc.

Ashley Giovengo

Project Environmental Scientist

cc: Melodie Sanjari, Marathon Oil Company
Environmental Incident Group, NMOCD



REFERENCE MATERIALS

FIGURES

FIGURE 1. Spill Area

FIGURE 2. Delineation Sampling

FIGURE 3. Confirmation Sampling

TABLES

TABLE 1. Laboratory Analysis Results: Delineation Samples

TABLE 2. Laboratory Analysis Results: Confirmation Samples

ATTACHMENTS

ATTACHMENT A. C-141

ATTACHMENT B. Site Photos

ATTACHMENT C. Closure Criteria Supporting Documents

ATTACHMENT D. Karst Map

ATTACHMENT E. Hall Environmental Laboratory Analysis Reports

ATTACHMENT F. 48-hour Confirmation Notification Emails

ATTACHMENT G. Extension Request

ATTACHMENT H. Well Record and Log



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Sun McKay Federal #003H | Incident ID: nAPP2226731199

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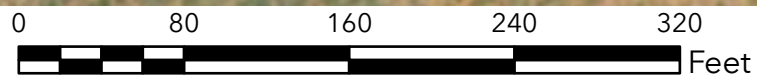
FIGURES



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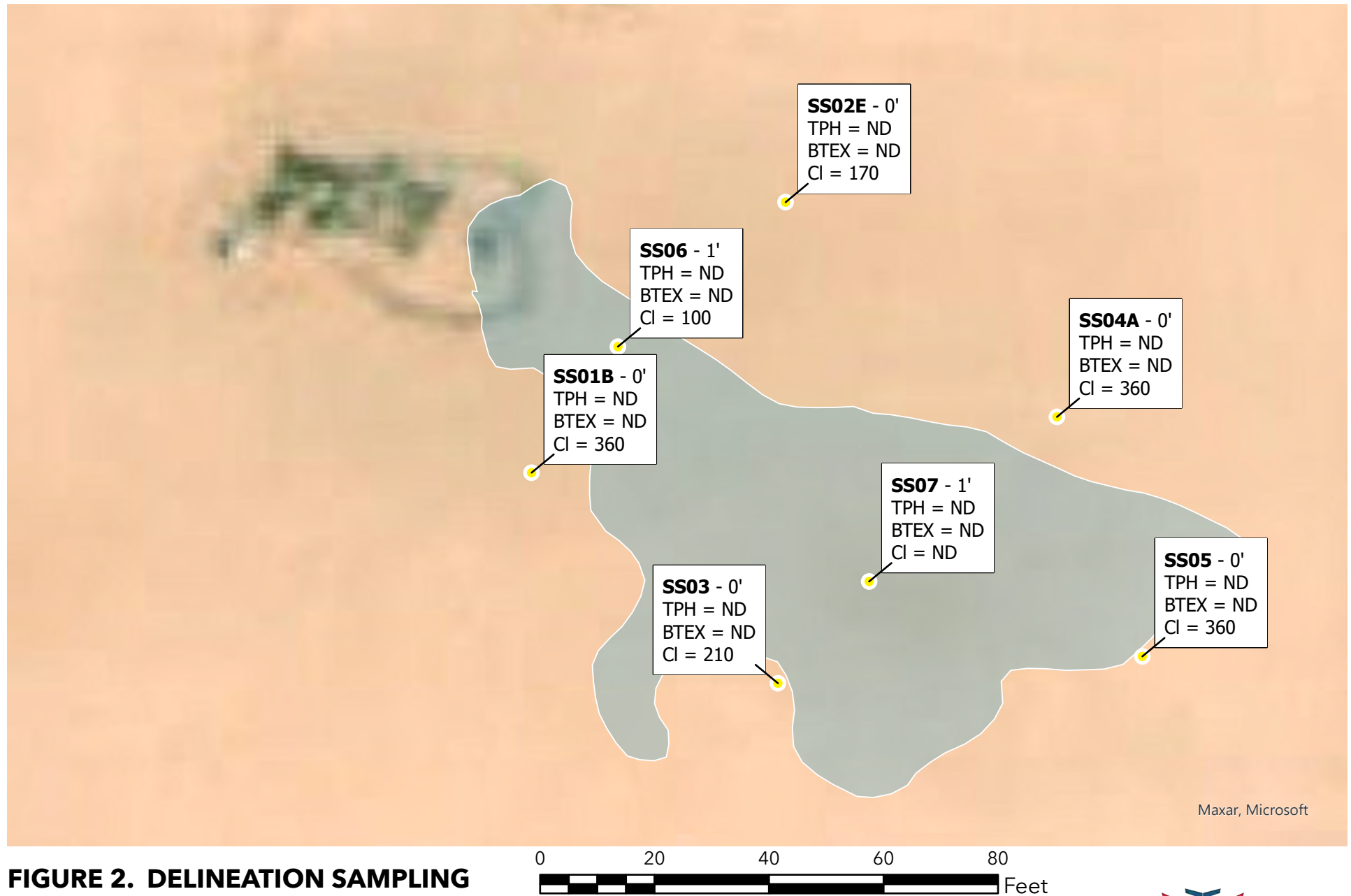
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Sun McKay Federal #003H | Incident ID: nAPP2226731199

**FIGURE 1. SPILL LOCATION****LEGEND** Spill Area

Sun Mckay Federal #003H
Incident ID: nAPP2226731199
API: 30-025-41927
GPS Coordinates: 32.6812515, -103.7562485
Lea County, New Mexico
Marathon Oil Company



**FIGURE 2. DELINEATION SAMPLING**

Sun Mckay Federal #003H
 Incident ID: nAPP2226731199
 API: 30-025-41927
 GPS Coordinates: 32.6812515, -103.7562485
 Lea County, New Mexico
 Marathon Oil Company

LEGEND

● Delineation Sample Locations
 ■ Spill Area



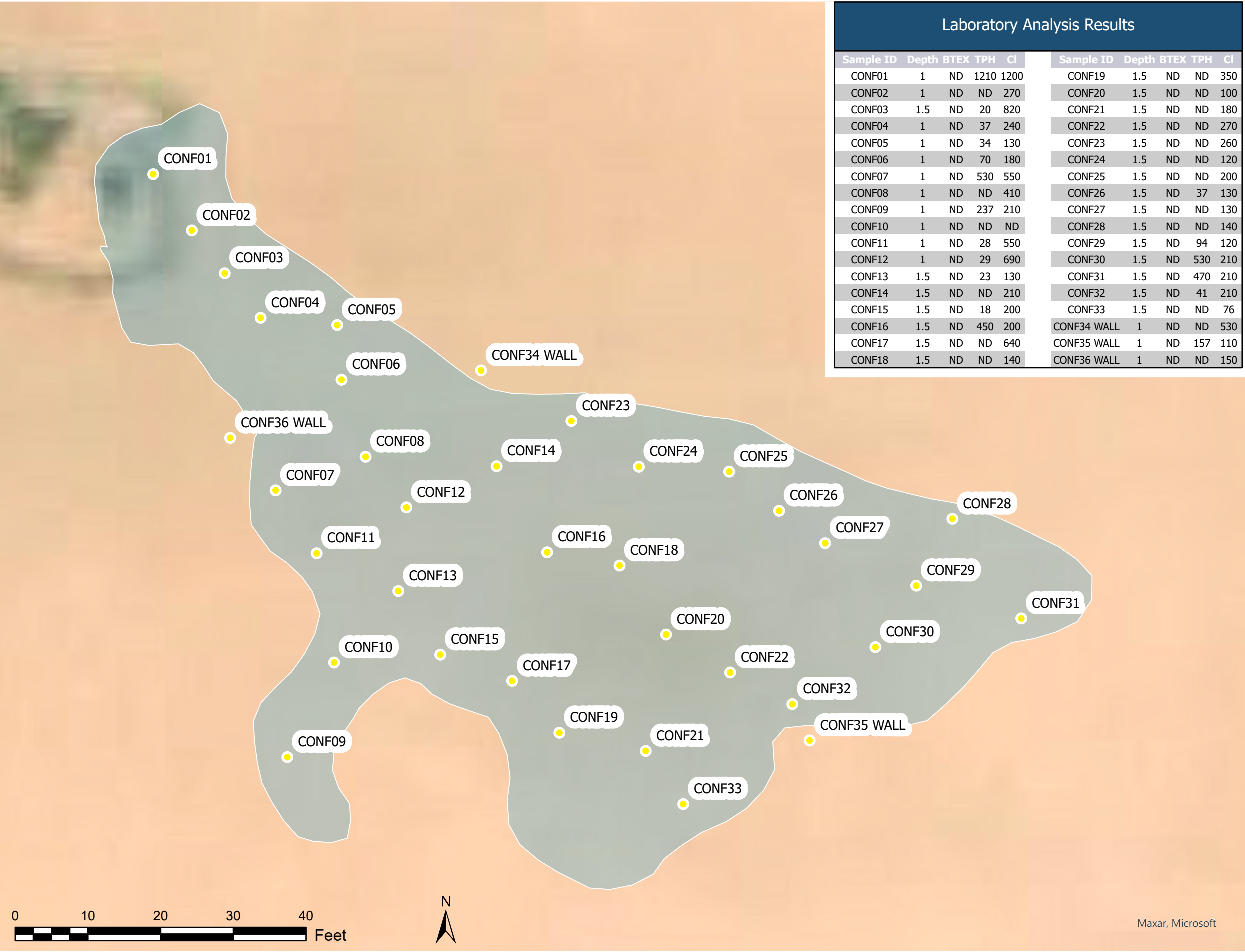


FIGURE 3.
CONFIRMATION SAMPLING

Sun McKay Federal #003H
Incident ID: nAPP2226731199
API: 30-025-41927
GPS Coordinates:
32.6812515, -103.7562485
Lea County, New Mexico
Marathon Oil Company

LEGEND

- Confirmation Sample Locations
- Spill Area



TABLES



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Sun McKay Federal #003H | Incident ID: nAPP2226731199

Sun McKay Federal #003H | nAPP2226731199

Marathon Oil Company | 01.04.2023

Table 1. Laboratory Analysis Results: Confirmation Samples

Sample Description			Petroleum Hydrocarbons				Inorganic
Sample ID	Depth (ft.)	Date	Volatile		Extractable		Chloride (mk/kg)
			Benzene (mk/kg)	Total BTEX (mk/kg)	Total TPH (mk/kg)	GRO+DRO (mk/kg)	
Closure Criteria			10	50	2500	1000	20000
BG01	1	10/3/2022	ND	ND	ND	ND	ND
SS01B	0	10/3/2022	ND	ND	ND	ND	360
SS02E	0	10/3/2022	ND	ND	ND	ND	170
SS03	0	10/3/2022	ND	ND	ND	ND	210
SS04A	0	10/3/2022	ND	ND	ND	ND	360
SS05	0	10/3/2022	ND	ND	ND	ND	360
SS06	0	11/15/2022	0.13	32	33410	22410	3300
SS06	1	11/15/2022	ND	ND	ND	ND	100
SS06	2	10/3/2022	ND	ND	ND	ND	180
SS07	0	11/15/2022	5	206	13770	7670	3100
SS07	1	10/3/2022	ND	ND	ND	ND	ND

ABBREVIATIONS

BTEX — Benzene, Toluene, Ethylene, Xylene

GRO — Gasoline Range Organics

DRO — Diesel Range Organics

ND — Non-detect

ft. — Feet

mg/kg — Milligrams per Kilogram

TPH — Total Petroleum Hydrocarbons

Notes

Bold Red - Results are above closure criteria

Gray Highlight - Background Samples



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Sun McKay Federal #003H | Incident ID: nAPP2226731199

Sun McKay Federal #003H | nAPP2226731199

Marathon Oil Company | 01.04.2023

Table 2. Laboratory Analysis Results: Confirmation Samples

Sample Description			Petroleum Hydrocarbons				Inorganic
Sample ID	Depth (ft.)	Date	Volatile		Extractable		Chloride (mk/kg)
			Benzene (mk/kg)	Total BTEX (mk/kg)	Total TPH (mk/kg)	GRO+DRO (mk/kg)	
Closure Criteria			10	50	2500	1000	20000
CONF01	1	12/13/2022	ND	ND	1210	550	1200
CONF02	1	12/13/2022	ND	ND	ND	ND	270
CONF03	1.5	12/13/2022	ND	ND	20	20	820
CONF04	1	12/13/2022	ND	ND	37	37	240
CONF05	1	12/13/2022	ND	ND	34	34	130
CONF06	1	12/13/2022	ND	ND	70	70	180
CONF07	1	12/13/2022	ND	ND	530	340	550
CONF08	1	12/13/2022	ND	ND	ND	ND	410
CONF09	1	12/13/2022	ND	ND	237	150	210
CONF10	1	12/13/2022	ND	ND	ND	ND	ND
CONF11	1	12/13/2022	ND	ND	28	28	550
CONF12	1	12/13/2022	ND	ND	29	29	690
CONF13	1.5	12/14/2022	ND	ND	23	23	130
CONF14	1.5	12/14/2022	ND	ND	ND	ND	210
CONF15	1.5	12/14/2022	ND	ND	18	18	200
CONF16	1.5	12/14/2022	ND	ND	450	310	200
CONF17	1.5	12/14/2022	ND	ND	ND	ND	640
CONF18	1.5	12/14/2022	ND	ND	ND	ND	140
CONF19	1.5	12/14/2022	ND	ND	ND	ND	350
CONF20	1.5	12/14/2022	ND	ND	ND	ND	100
CONF21	1.5	12/14/2022	ND	ND	ND	ND	180
CONF22	1.5	12/14/2022	ND	ND	ND	ND	270
CONF23	1.5	12/14/2022	ND	ND	ND	ND	260

ABBREVIATIONS

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ft. — Feet

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TPH — Total Petroleum Hydrocarbons

Notes

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Marathon Oil Company | 01.04.2023

Table 2. Laboratory Analysis Results: Confirmation Samples

Sample Description			Petroleum Hydrocarbons				Inorganic
Sample ID	Depth (ft.)	Date	Volatile		Extractable		Chloride (mk/kg)
			Benzene (mk/kg)	Total BTEX (mk/kg)	Total TPH (mk/kg)	GRO+DRO (mk/kg)	
Closure Criteria			10	50	2500	1000	20000
CONF24	1.5	12/14/2022	ND	ND	ND	ND	120
CONF25	1.5	12/14/2022	ND	ND	ND	ND	200
CONF26	1.5	12/14/2022	ND	ND	37	37	130
CONF27	1.5	12/14/2022	ND	ND	ND	ND	130
CONF28	1.5	12/14/2022	ND	ND	ND	ND	140
CONF29	1.5	12/14/2022	ND	ND	94	94	120
CONF30	1.5	12/14/2022	ND	ND	530	350	210
CONF31	1.5	12/14/2022	ND	ND	470	300	210
CONF32	1.5	12/14/2022	ND	ND	41	41	210
CONF33	1.5	12/14/2022	ND	ND	ND	ND	76
CONF34 Wall	1	12/14/2022	ND	ND	ND	ND	530
CONF35 Wall	1	12/14/2022	ND	ND	157	100	110
CONF36 Wall	1	12/14/2022	ND	ND	ND	ND	150

ABBREVIATIONS

BTEX — Benzene, Toluene, Ethylene, Xylene

GRO — Gasoline Range Organics

DRO — Diesel Range Organics

ND — Non-detect

ft. — Feet

mg/kg — Milligrams per Kilogram

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Notes

Bold Red - Results are above closure criteria

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Sun McKay Federal #003H | Incident ID: nAPP2226731199

ATTACHMENT A

C-141



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Sun McKay Federal #003H | Incident ID: nAPP2226731199

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

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

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

Incident ID	nAPP2226731199
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Marathon Oil Permian LLC	OGRID 372098
Contact Name Melodie Sanjari	Contact Telephone 575-988-8753
Contact email msanjari@marathonoil.com	Incident # (assigned by OCD)
Contact mailing address 4111 S. Tidwell Rd., Carlsbad, NM 8220	

Location of Release Source

Latitude 32.6812515

Longitude -103.7562485
(NAD 83 in decimal degrees to 5 decimal places)

Site Name SUN MCKAY FEDERAL #003H	Site Type Oil & Gas Facility
Date Release Discovered: 9/27/2022	API# (if applicable) 30-025-41927

Unit Letter	Section	Township	Range	County
C	10	19S	32E	Lea

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

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 33.3	Volume Recovered (bbls) 10
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A night operator found a packing failure at the wellhead resulted in the release of 33.3 bbl. of production fluid onto the engineered pad. The well was shut in and an emergency one call was placed in case of lateral migration due to any impending weather which removed the bulk of the impacted material along with the standing fluid that was also recovered from the surface.

Incident ID	nAPP2226731199
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? NOR submitted 9/24/22	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Melodie Sanjari</u>	Title: <u>Environmental Professional</u>
Signature: <u>Melodie Sanjari</u>	Date: <u>9/27/2022</u>
email: <u>msanjari@marathonoil.com</u>	Telephone: <u>575-988-8753</u>
<u>OCD Only</u>	
Received by: _____	Date: _____

MRO Spill Calculation Tool

Standing Liquid Inputs:

	Length (ft.)	Width (ft.)	Avg. Liquid Depth (in.)	% Oil	Total Volume (bbls)	Water Volume (bbls)	Oil Volume (bbls)
Rectangle Area #1					0.00	0.00	0.00
Rectangle Area #2					0.00	0.00	0.00
Rectangle Area #3					0.00	0.00	0.00
Rectangle Area #4					0.00	0.00	0.00
Rectangle Area #5					0.00	0.00	0.00
Rectangle Area #6					0.00	0.00	0.00
Vessel Displacement					0.00	0.00	0.00
Vessel Displacement					0.00	0.00	0.00
Liquid Volume:					0.00	0.00	0.00

Saturated Soil Inputs:

Soil Type: Gravel or Sand

	Length (ft.)	Width (ft.)	Avg. Saturated Depth (in.)	% Oil	Total Volume (bbls)	Water Volume (bbls)	Oil Volume (bbls)
Rectangle Area #1	51	37	0.5		1.12	1.12	0.00
Rectangle Area #2	90	85	2		31.79	31.79	0.00
Rectangle Area #3	12	34	0.5		0.42	0.42	0.00
Rectangle Area #4					0.00	0.00	0.00
Rectangle Area #5					0.00	0.00	0.00
Rectangle Area #6					0.00	0.00	0.00
Rectangle Area #7					0.00	0.00	0.00
Rectangle Area #8					0.00	0.00	0.00
Saturated Volume					33.34	33.34	0.00

	Total Volume (bbls)	Water Volume (bbls)	Oil Volume (bbls)
Total Spill Volume (bbls):	33.34	33.34	0.00
Total Spill Volume (gals):	1400.13	1400.13	0.00

Comments:

Color Key:

Required Input Cells

Supplemental Input Cells

No Input (Calculations)

No Input

Ground/Vegetation Overspray

Cover Type	Microns	Approximate Depth (in)
Ground		
Dull Color	10	0.00003281
Dark Color	50	0.00016404

REF: STONE / JSA TICKET #

REP / PO #

REV 10/2021

Incident ID	nAPP2201742024
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>>101</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

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

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

State of New Mexico
Oil Conservation Division

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District RP	
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Application ID	

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

Printed Name: Melodie Sanjari Title: Environmental Professional

Signature: Melodie Sanjari Date: 01/05/2023

email: msanjari@marathonoil.com Telephone: 575-988-8753

OCD Only

Received by: Jocelyn Harimon Date: 01/09/2023

Incident ID	nAPP2201742024
District RP	
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Application ID	

Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Melodie Sanjari

Title: Environmental Professional

Signature: Melodie Sanjari Date: 01/05/2023

email: msanjari@marathonoil.com

Telephone: 575-988-8753

OCD Only

Received by: Jocelyn Harimon Date: 01/09/2023

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

Closure Approved by: Jennifer Nobui Date: 01/31/2023

Printed Name: Jennifer Nobui

Title: Environmental Specialist A

ATTACHMENT B

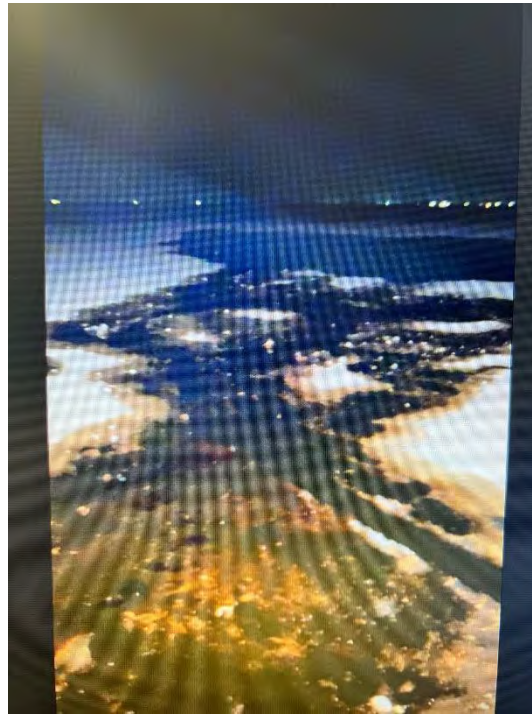
Site Photos



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Spill Area



Delineation Sampling (SS01)



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*Delineation Sampling (SS02)**Delineation Sampling (SS03)***Energizing America**

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*Delineation Sampling (SS04)**Delineation Sampling (SS05)***Energizing America**

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*Delineation Sampling (SS06)**Delineation Sampling (SS07)***Energizing America**

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Sun McKay Federal #003H | Incident ID: nAPP2226731199

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*Surface Samples**Surface Scrape in Spill Area***Energizing America**

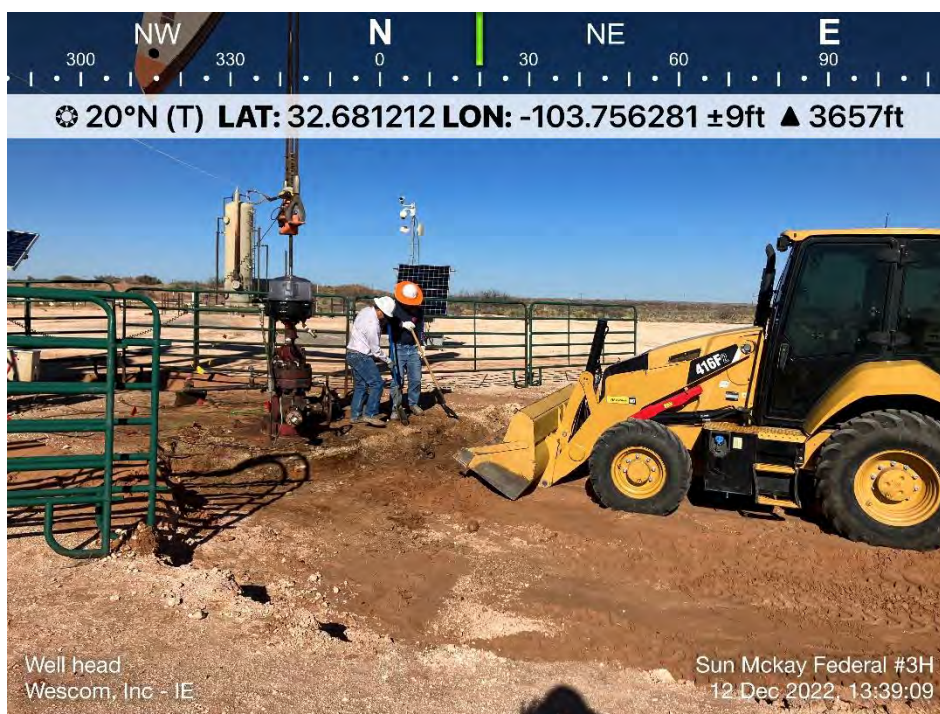
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Surface Scrape in Spill Area



Hand Digging Around Wellhead

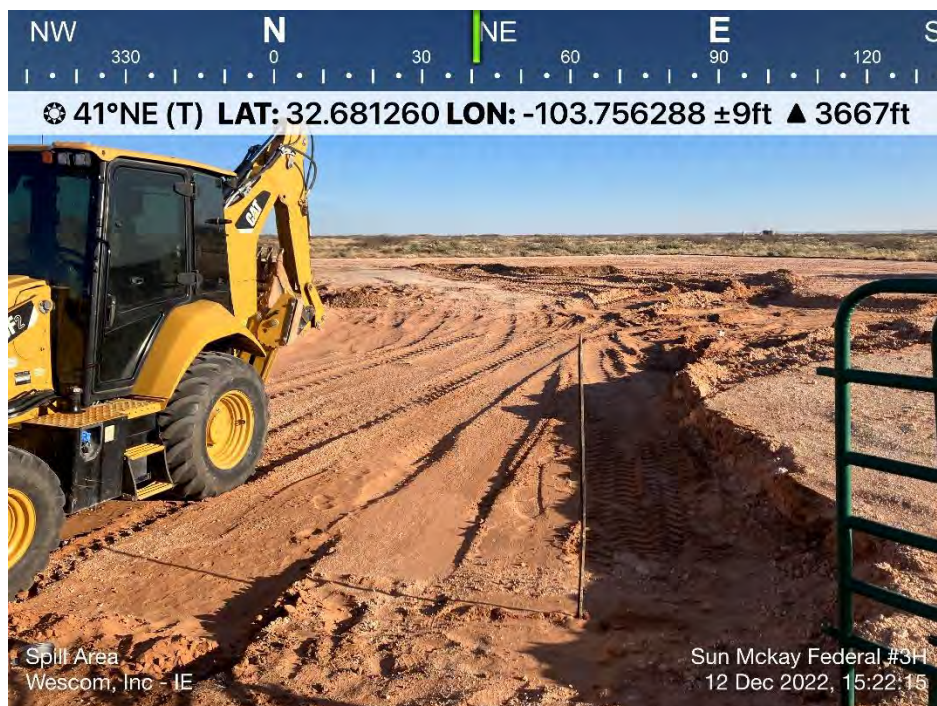


Energizing America

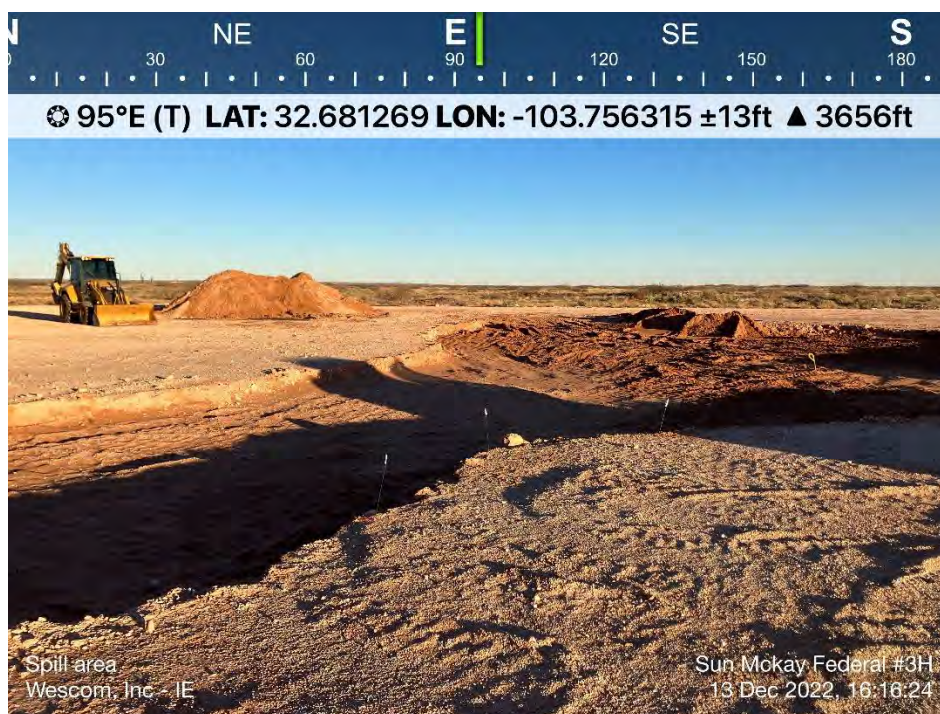
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Spill Area Excavation



Spill Area Excavation & Confirmation Sampling



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Contaminated Soil Removed



Spill Area Excavation & Confirmation Sampling



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Spill Area Excavation & Confirmation Sampling



Contaminated Soil Removal



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Sun McKay Federal #003H | Incident ID: nAPP2226731199

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ATTACHMENT C

Closure Criteria Supporting Documents



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Sun McKay Federal #003H | Incident ID: nAPP2226731199

Sun McKay Federal #003H

Distance to Nearest Depth to Water = 199 Feet

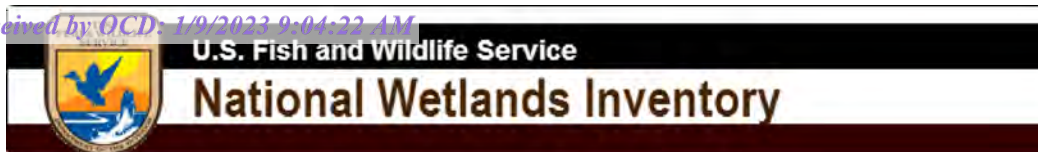
Legend

-  Distance = 199 Feet
-  DTW = >101 Ft. - CP - 1935 POD1
-  Sun McKay Federal #003H

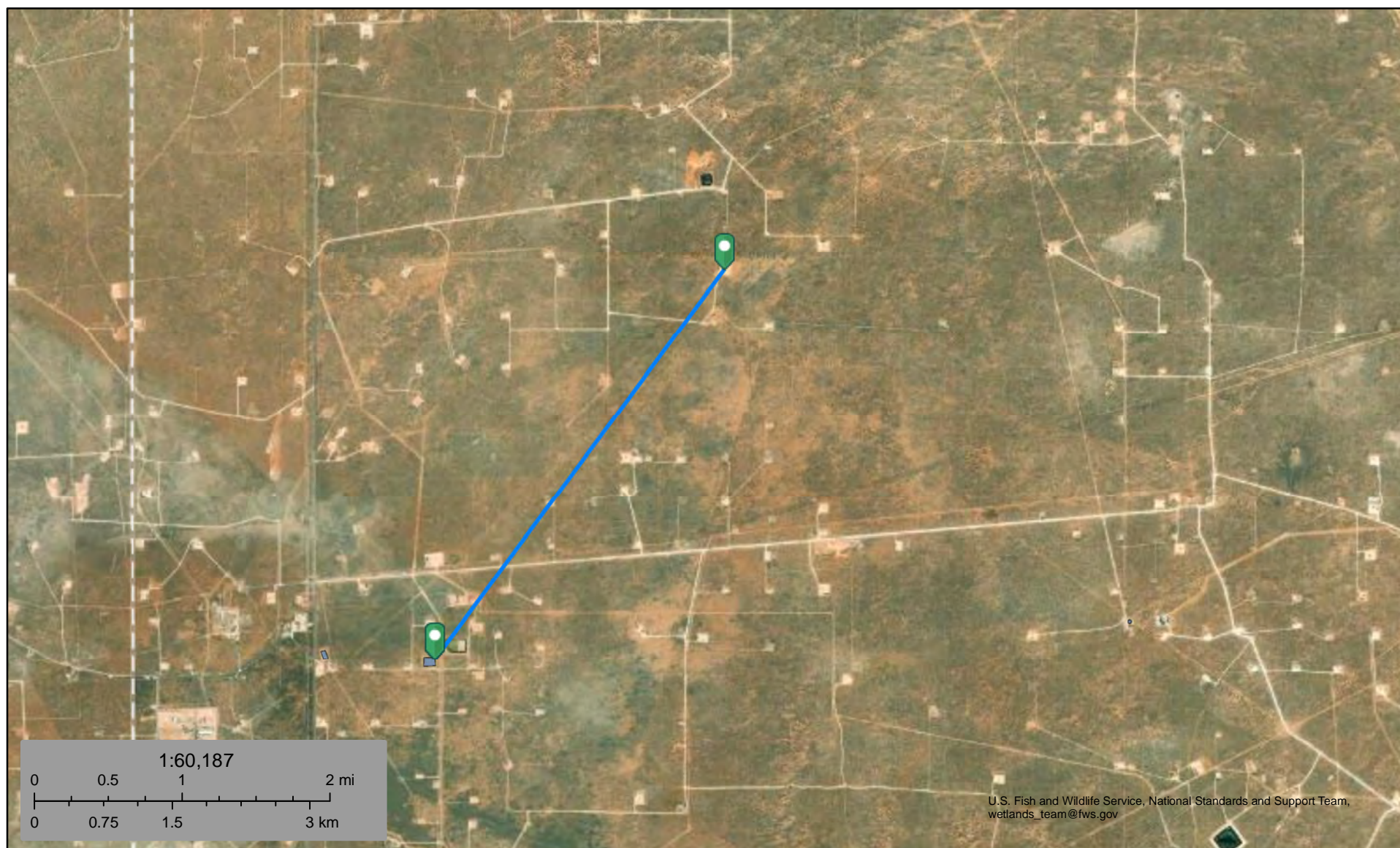


DTW = >101 Ft. - CP - 1935 POD1





Sun McKay Federal #003H - FW Pond 2.76 Miles



October 4, 2022

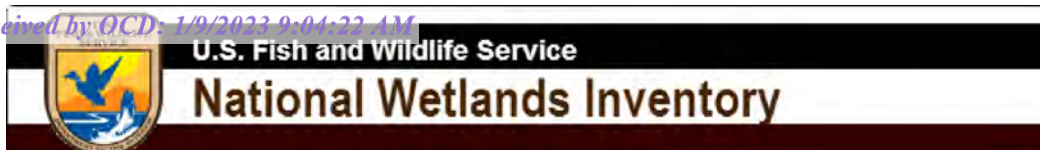
Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

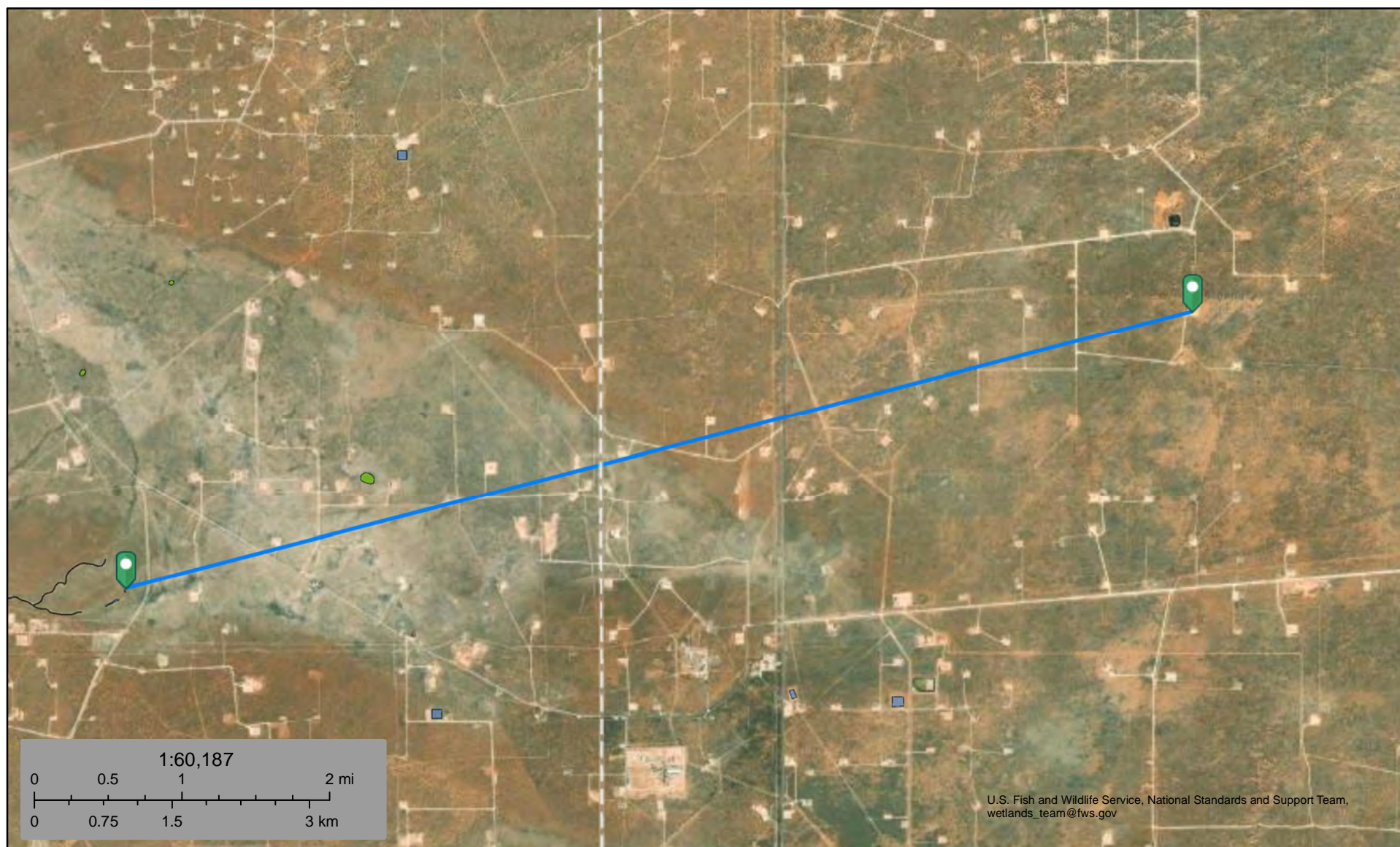
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- 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.



Sun McKay Federal #003H - Riverine 6.29 Miles



October 5, 2022

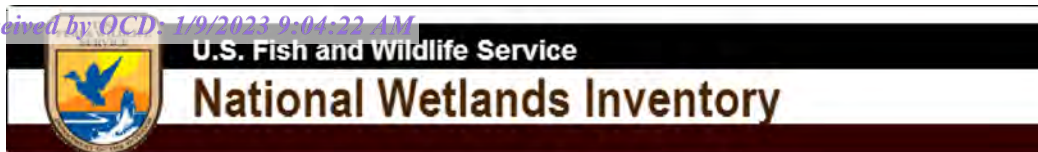
Wetlands

- 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.



Sun McKay Federal #003H - Wetland 4.78 Miles



October 5, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

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




- Lake
- Other
- Riverine

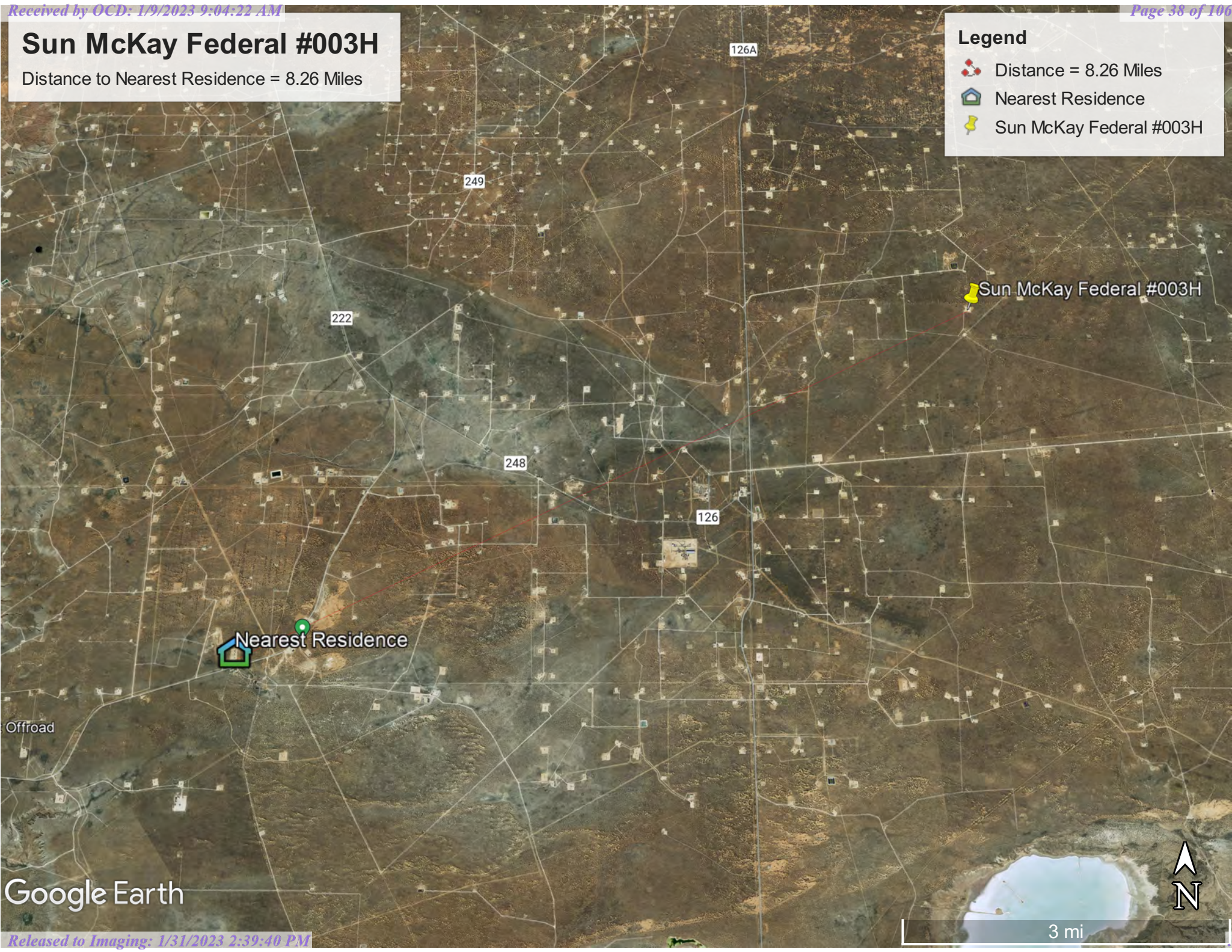
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Sun McKay Federal #003H

Distance to Nearest Residence = 8.26 Miles

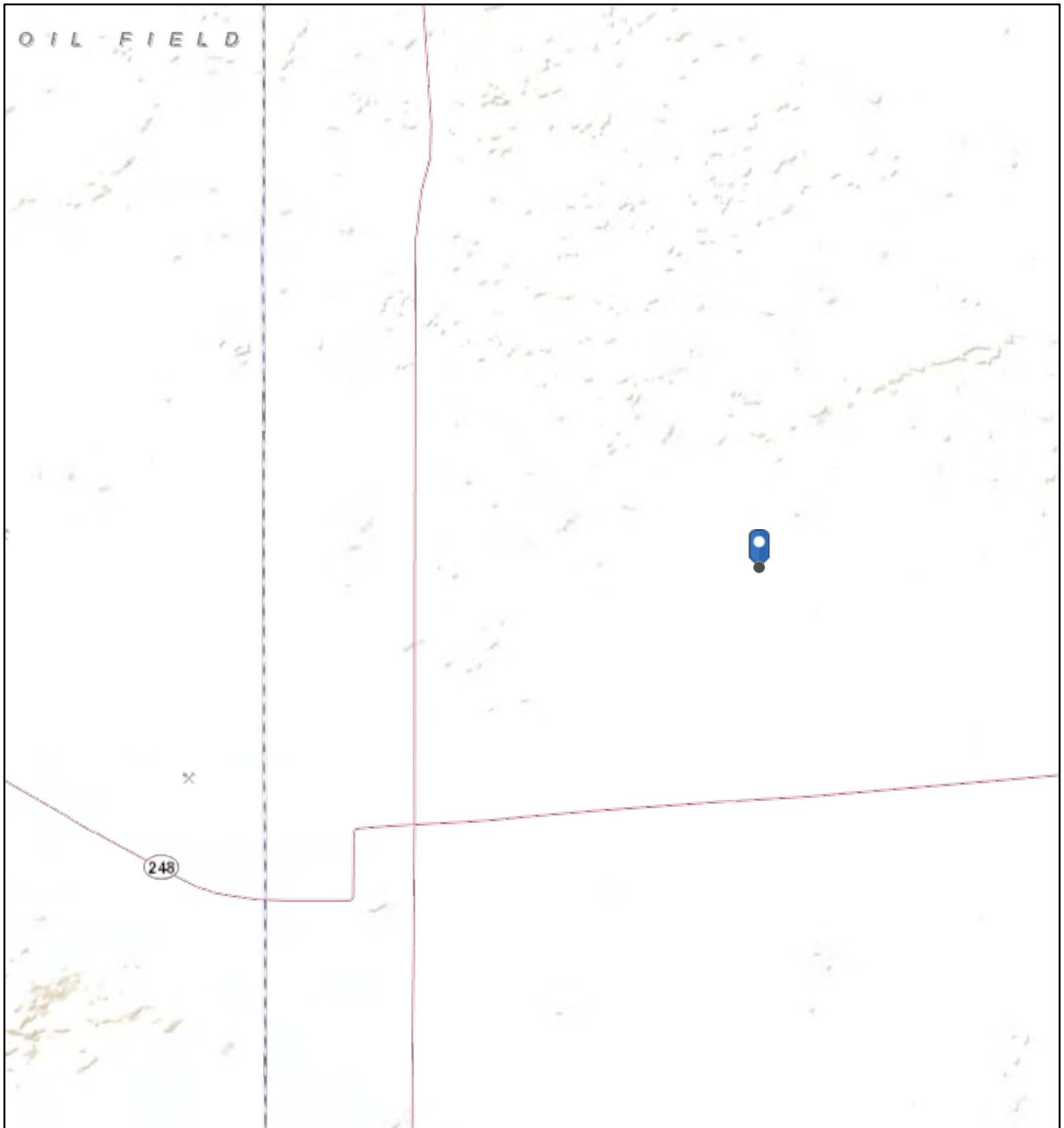
Legend

-  Distance = 8.26 Miles
-  Nearest Residence
-  Sun McKay Federal #003H



Google Earth

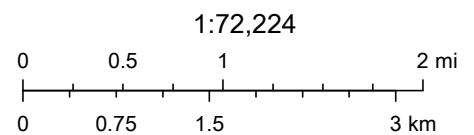
Active Mines Near Sun McKay Federal #003H



10/4/2022, 7:57:47 AM

Registered Mines

x Aggregate, Stone etc.



Sources: Esri, USGS, NOAA, Sources: Esri, Garmin, USGS, NPS

National Flood Hazard Layer FIRMette



103°45'41"W 32°41'8"N



Released to Imaging: 1/31/2023 2:39:40 PM

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/4/2022 at 9:55 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

ATTACHMENT D

Karst Map



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Sun McKay Federal #003H | Incident ID: nAPP2226731199

Sun McKay Federal #003H

Karst Potential = Low

Legend

- 01 Low
- 02 Medium
- 03 High
- Point of Release
- Sun McKay Federal #003H

Sun McKay Federal #003H



ATTACHMENT E

Hall Environmental Laboratory Analysis Reports



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Sun McKay Federal #003H | Incident ID: nAPP2226731199

Analytical Report

Lab Order 2210136

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: BG01-1'

Project: Sun McKay Federal 003H

Collection Date: 10/3/2022 9:30:00 AM

Lab ID: 2210136-001

Matrix: SOIL

Received Date: 10/5/2022 10:36:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	10/6/2022 11:12:11 AM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	10/6/2022 11:12:11 AM
Surr: DNOP	85.1	21-129		%Rec	1	10/6/2022 11:12:11 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/6/2022 2:57:25 PM
Surr: BFB	95.0	37.7-212		%Rec	1	10/6/2022 2:57:25 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	10/6/2022 2:57:25 PM
Toluene	ND	0.050		mg/Kg	1	10/6/2022 2:57:25 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/6/2022 2:57:25 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/6/2022 2:57:25 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	10/6/2022 2:57:25 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/6/2022 7:56:29 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2210136

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: SS01B-0'

Project: Sun McKay Federal 003H

Collection Date: 10/3/2022 10:50:00 AM

Lab ID: 2210136-002

Matrix: SOIL

Received Date: 10/5/2022 10:36:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/6/2022 11:45:05 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/6/2022 11:45:05 AM
Surr: DNOP	76.4	21-129		%Rec	1	10/6/2022 11:45:05 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/6/2022 4:07:48 PM
Surr: BFB	87.6	37.7-212		%Rec	1	10/6/2022 4:07:48 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	10/6/2022 4:07:48 PM
Toluene	ND	0.049		mg/Kg	1	10/6/2022 4:07:48 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/6/2022 4:07:48 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/6/2022 4:07:48 PM
Surr: 4-Bromofluorobenzene	94.9	70-130		%Rec	1	10/6/2022 4:07:48 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	360	61		mg/Kg	20	10/6/2022 8:08:54 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2210136

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: SS02E-0'

Project: Sun McKay Federal 003H

Collection Date: 10/3/2022 11:34:00 AM

Lab ID: 2210136-003

Matrix: SOIL

Received Date: 10/5/2022 10:36:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/6/2022 11:55:43 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/6/2022 11:55:43 AM
Surr: DNOP	75.6	21-129		%Rec	1	10/6/2022 11:55:43 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/6/2022 5:18:02 PM
Surr: BFB	89.7	37.7-212		%Rec	1	10/6/2022 5:18:02 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	10/6/2022 5:18:02 PM
Toluene	ND	0.048		mg/Kg	1	10/6/2022 5:18:02 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/6/2022 5:18:02 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/6/2022 5:18:02 PM
Surr: 4-Bromofluorobenzene	95.8	70-130		%Rec	1	10/6/2022 5:18:02 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	170	60		mg/Kg	20	10/6/2022 8:21:19 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2210136

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: SS03-0'

Project: Sun McKay Federal 003H

Collection Date: 10/3/2022 9:41:00 AM

Lab ID: 2210136-004

Matrix: SOIL

Received Date: 10/5/2022 10:36:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/6/2022 12:06:19 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/6/2022 12:06:19 PM
Surr: DNOP	71.1	21-129		%Rec	1	10/6/2022 12:06:19 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/6/2022 5:41:27 PM
Surr: BFB	88.6	37.7-212		%Rec	1	10/6/2022 5:41:27 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	10/6/2022 5:41:27 PM
Toluene	ND	0.049		mg/Kg	1	10/6/2022 5:41:27 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/6/2022 5:41:27 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/6/2022 5:41:27 PM
Surr: 4-Bromofluorobenzene	96.2	70-130		%Rec	1	10/6/2022 5:41:27 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	210	60		mg/Kg	20	10/6/2022 8:33:44 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2210136

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: SS04A-0'

Project: Sun McKay Federal 003H

Collection Date: 10/3/2022 10:36:00 AM

Lab ID: 2210136-005

Matrix: SOIL

Received Date: 10/5/2022 10:36:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	10/6/2022 12:21:19 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/6/2022 12:21:19 PM
Surr: DNOP	80.7	21-129		%Rec	1	10/6/2022 12:21:19 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/6/2022 6:04:55 PM
Surr: BFB	85.5	37.7-212		%Rec	1	10/6/2022 6:04:55 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	10/6/2022 6:04:55 PM
Toluene	ND	0.048		mg/Kg	1	10/6/2022 6:04:55 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/6/2022 6:04:55 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/6/2022 6:04:55 PM
Surr: 4-Bromofluorobenzene	93.4	70-130		%Rec	1	10/6/2022 6:04:55 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	360	60		mg/Kg	20	10/6/2022 8:46:09 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2210136

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: SS05-0'

Project: Sun McKay Federal 003H

Collection Date: 10/3/2022 9:50:00 AM

Lab ID: 2210136-006

Matrix: SOIL

Received Date: 10/5/2022 10:36:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/6/2022 12:31:57 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/6/2022 12:31:57 PM
Surr: DNOP	70.1	21-129		%Rec	1	10/6/2022 12:31:57 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/6/2022 6:28:24 PM
Surr: BFB	86.7	37.7-212		%Rec	1	10/6/2022 6:28:24 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	10/6/2022 6:28:24 PM
Toluene	ND	0.047		mg/Kg	1	10/6/2022 6:28:24 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/6/2022 6:28:24 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/6/2022 6:28:24 PM
Surr: 4-Bromofluorobenzene	94.2	70-130		%Rec	1	10/6/2022 6:28:24 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	360	60		mg/Kg	20	10/6/2022 9:23:23 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2210136

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: SS06-2'

Project: Sun McKay Federal 003H

Collection Date: 10/3/2022 12:28:00 PM

Lab ID: 2210136-007

Matrix: SOIL

Received Date: 10/5/2022 10:36:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/6/2022 12:42:35 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/6/2022 12:42:35 PM
Surr: DNOP	86.5	21-129		%Rec	1	10/6/2022 12:42:35 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/6/2022 6:51:49 PM
Surr: BFB	85.7	37.7-212		%Rec	1	10/6/2022 6:51:49 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	10/6/2022 6:51:49 PM
Toluene	ND	0.049		mg/Kg	1	10/6/2022 6:51:49 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/6/2022 6:51:49 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/6/2022 6:51:49 PM
Surr: 4-Bromofluorobenzene	93.8	70-130		%Rec	1	10/6/2022 6:51:49 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	180	60		mg/Kg	20	10/6/2022 9:35:48 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2210136

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: SS07-1'

Project: Sun McKay Federal 003H

Collection Date: 10/3/2022 12:39:00 PM

Lab ID: 2210136-008

Matrix: SOIL

Received Date: 10/5/2022 10:36:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/6/2022 12:53:15 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/6/2022 12:53:15 PM
Surr: DNOP	96.2	21-129		%Rec	1	10/6/2022 12:53:15 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/6/2022 7:15:10 PM
Surr: BFB	87.4	37.7-212		%Rec	1	10/6/2022 7:15:10 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	10/6/2022 7:15:10 PM
Toluene	ND	0.049		mg/Kg	1	10/6/2022 7:15:10 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/6/2022 7:15:10 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/6/2022 7:15:10 PM
Surr: 4-Bromofluorobenzene	95.8	70-130		%Rec	1	10/6/2022 7:15:10 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/6/2022 10:13:04 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2211A34

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: SS06-0'

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 11/15/2022 11:04:00 AM

Lab ID: 2211A34-001

Matrix: SOIL

Received Date: 11/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	22000	150	E	mg/Kg	10	11/23/2022 11:53:04 PM
Motor Oil Range Organics (MRO)	11000	500	E	mg/Kg	10	11/23/2022 11:53:04 PM
Surr: DNOP	0	21-129	S	%Rec	10	11/23/2022 11:53:04 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	410	24		mg/Kg	5	11/22/2022 9:12:00 PM
Surr: BFB	635	37.7-212	S	%Rec	5	11/22/2022 9:12:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	0.13	0.12		mg/Kg	5	11/22/2022 9:12:00 PM
Toluene	7.2	0.24		mg/Kg	5	11/22/2022 9:12:00 PM
Ethylbenzene	19	0.24		mg/Kg	5	11/22/2022 9:12:00 PM
Xylenes, Total	32	0.47		mg/Kg	5	11/22/2022 9:12:00 PM
Surr: 4-Bromofluorobenzene	331	70-130	S	%Rec	5	11/22/2022 9:12:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	3300	150		mg/Kg	50	11/28/2022 10:45:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2211A34

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: SS06-1'

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 11/15/2022 11:11:00 AM

Lab ID: 2211A34-002

Matrix: SOIL

Received Date: 11/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	11/24/2022 12:24:26 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/24/2022 12:24:26 AM
Surr: DNOP	119	21-129		%Rec	1	11/24/2022 12:24:26 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	11/22/2022 9:51:00 PM
Surr: BFB	108	37.7-212		%Rec	1	11/22/2022 9:51:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.023		mg/Kg	1	11/22/2022 9:51:00 PM
Toluene	ND	0.046		mg/Kg	1	11/22/2022 9:51:00 PM
Ethylbenzene	ND	0.046		mg/Kg	1	11/22/2022 9:51:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	11/22/2022 9:51:00 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	11/22/2022 9:51:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	100	60		mg/Kg	20	11/23/2022 1:40:38 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2211A34

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: SS07-0'

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 11/15/2022 11:06:00 AM

Lab ID: 2211A34-003

Matrix: SOIL

Received Date: 11/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	7200	150		mg/Kg	10	11/24/2022 12:45:20 AM
Motor Oil Range Organics (MRO)	6100	490		mg/Kg	10	11/24/2022 12:45:20 AM
Surr: DNOP	288	21-129	S	%Rec	10	11/24/2022 12:45:20 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	470	24		mg/Kg	5	11/22/2022 10:11:00 PM
Surr: BFB	464	37.7-212	S	%Rec	5	11/22/2022 10:11:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	5.0	0.12		mg/Kg	5	11/22/2022 10:11:00 PM
Toluene	56	2.4		mg/Kg	50	11/23/2022 4:48:00 PM
Ethylbenzene	22	0.24		mg/Kg	5	11/22/2022 10:11:00 PM
Xylenes, Total	28	0.48		mg/Kg	5	11/22/2022 10:11:00 PM
Surr: 4-Bromofluorobenzene	206	70-130	S	%Rec	5	11/22/2022 10:11:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	3100	150		mg/Kg	50	11/28/2022 10:57:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf01

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/13/2022 10:52:00 AM

Lab ID: 2212A13-001

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	550	15		mg/Kg	1	12/18/2022 6:57:38 PM
Motor Oil Range Organics (MRO)	660	49		mg/Kg	1	12/18/2022 6:57:38 PM
Surr: DNOP	114	21-129		%Rec	1	12/18/2022 6:57:38 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	25		mg/Kg	5	12/18/2022 7:27:00 PM
Surr: BFB	104	37.7-212		%Rec	5	12/18/2022 7:27:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.12		mg/Kg	5	12/18/2022 7:27:00 PM
Toluene	ND	0.25		mg/Kg	5	12/18/2022 7:27:00 PM
Ethylbenzene	ND	0.25		mg/Kg	5	12/18/2022 7:27:00 PM
Xylenes, Total	ND	0.50		mg/Kg	5	12/18/2022 7:27:00 PM
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	5	12/18/2022 7:27:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	1200	60		mg/Kg	20	12/19/2022 1:22:11 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf02

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/13/2022 10:56:00 AM

Lab ID: 2212A13-002

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/18/2022 7:18:46 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/18/2022 7:18:46 PM
Surr: DNOP	107	21-129		%Rec	1	12/18/2022 7:18:46 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/18/2022 8:26:00 PM
Surr: BFB	96.4	37.7-212		%Rec	1	12/18/2022 8:26:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	12/18/2022 8:26:00 PM
Toluene	ND	0.050		mg/Kg	1	12/18/2022 8:26:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	12/18/2022 8:26:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	12/18/2022 8:26:00 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	12/18/2022 8:26:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	270	60		mg/Kg	20	12/19/2022 1:59:25 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf03

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/13/2022 11:46:00 AM

Lab ID: 2212A13-003

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	20	14		mg/Kg	1	12/18/2022 7:29:24 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	12/18/2022 7:29:24 PM
Surr: DNOP	104	21-129		%Rec	1	12/18/2022 7:29:24 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/18/2022 9:24:00 PM
Surr: BFB	95.6	37.7-212		%Rec	1	12/18/2022 9:24:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	12/18/2022 9:24:00 PM
Toluene	ND	0.050		mg/Kg	1	12/18/2022 9:24:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	12/18/2022 9:24:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	12/18/2022 9:24:00 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	12/18/2022 9:24:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	820	60		mg/Kg	20	12/19/2022 2:36:40 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf04

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/13/2022 11:05:00 AM

Lab ID: 2212A13-004

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	37	15		mg/Kg	1	12/18/2022 8:01:25 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/18/2022 8:01:25 PM
Surr: DNOP	123	21-129		%Rec	1	12/18/2022 8:01:25 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	25		mg/Kg	5	12/18/2022 9:44:00 PM
Surr: BFB	92.9	37.7-212		%Rec	5	12/18/2022 9:44:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.12		mg/Kg	5	12/18/2022 9:44:00 PM
Toluene	ND	0.25		mg/Kg	5	12/18/2022 9:44:00 PM
Ethylbenzene	ND	0.25		mg/Kg	5	12/18/2022 9:44:00 PM
Xylenes, Total	ND	0.49		mg/Kg	5	12/18/2022 9:44:00 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	5	12/18/2022 9:44:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	240	61		mg/Kg	20	12/19/2022 3:13:52 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf05

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/13/2022 1:36:00 PM

Lab ID: 2212A13-005

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	34	14		mg/Kg	1	12/18/2022 8:12:04 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/18/2022 8:12:04 PM
Surr: DNOP	129	21-129		%Rec	1	12/18/2022 8:12:04 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/18/2022 10:04:00 PM
Surr: BFB	98.2	37.7-212		%Rec	1	12/18/2022 10:04:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	12/18/2022 10:04:00 PM
Toluene	ND	0.048		mg/Kg	1	12/18/2022 10:04:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	12/18/2022 10:04:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	12/18/2022 10:04:00 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	12/18/2022 10:04:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	130	60		mg/Kg	20	12/19/2022 3:26:17 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf06

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/13/2022 1:38:00 PM

Lab ID: 2212A13-006

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	70	15		mg/Kg	1	12/18/2022 8:22:41 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/18/2022 8:22:41 PM
Surr: DNOP	117	21-129		%Rec	1	12/18/2022 8:22:41 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	24		mg/Kg	5	12/18/2022 10:23:00 PM
Surr: BFB	99.1	37.7-212		%Rec	5	12/18/2022 10:23:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.12		mg/Kg	5	12/18/2022 10:23:00 PM
Toluene	ND	0.24		mg/Kg	5	12/18/2022 10:23:00 PM
Ethylbenzene	ND	0.24		mg/Kg	5	12/18/2022 10:23:00 PM
Xylenes, Total	ND	0.48		mg/Kg	5	12/18/2022 10:23:00 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	5	12/18/2022 10:23:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	180	59		mg/Kg	20	12/19/2022 3:38:42 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf07

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/13/2022 1:43:00 PM

Lab ID: 2212A13-007

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	340	15		mg/Kg	1	12/18/2022 8:33:18 PM
Motor Oil Range Organics (MRO)	190	49		mg/Kg	1	12/18/2022 8:33:18 PM
Surr: DNOP	111	21-129		%Rec	1	12/18/2022 8:33:18 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	25		mg/Kg	5	12/18/2022 10:43:00 PM
Surr: BFB	101	37.7-212		%Rec	5	12/18/2022 10:43:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.12		mg/Kg	5	12/18/2022 10:43:00 PM
Toluene	ND	0.25		mg/Kg	5	12/18/2022 10:43:00 PM
Ethylbenzene	ND	0.25		mg/Kg	5	12/18/2022 10:43:00 PM
Xylenes, Total	ND	0.50		mg/Kg	5	12/18/2022 10:43:00 PM
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	5	12/18/2022 10:43:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	550	60		mg/Kg	20	12/19/2022 3:51:06 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf08

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/13/2022 1:45:00 PM

Lab ID: 2212A13-008

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/18/2022 8:54:24 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/18/2022 8:54:24 PM
Surr: DNOP	107	21-129		%Rec	1	12/18/2022 8:54:24 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/18/2022 11:02:00 PM
Surr: BFB	101	37.7-212		%Rec	1	12/18/2022 11:02:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	12/18/2022 11:02:00 PM
Toluene	ND	0.049		mg/Kg	1	12/18/2022 11:02:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	12/18/2022 11:02:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	12/18/2022 11:02:00 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	12/18/2022 11:02:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	410	60		mg/Kg	20	12/19/2022 4:03:31 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf09

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/13/2022 3:14:00 PM

Lab ID: 2212A13-009

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	150	15		mg/Kg	1	12/18/2022 9:04:59 PM
Motor Oil Range Organics (MRO)	87	49		mg/Kg	1	12/18/2022 9:04:59 PM
Surr: DNOP	109	21-129		%Rec	1	12/18/2022 9:04:59 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	25		mg/Kg	5	12/18/2022 11:22:00 PM
Surr: BFB	99.9	37.7-212		%Rec	5	12/18/2022 11:22:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.12		mg/Kg	5	12/18/2022 11:22:00 PM
Toluene	ND	0.25		mg/Kg	5	12/18/2022 11:22:00 PM
Ethylbenzene	ND	0.25		mg/Kg	5	12/18/2022 11:22:00 PM
Xylenes, Total	ND	0.49		mg/Kg	5	12/18/2022 11:22:00 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	5	12/18/2022 11:22:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	210	60		mg/Kg	20	12/19/2022 4:15:55 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf10

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/13/2022 3:16:00 PM

Lab ID: 2212A13-010

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/18/2022 9:15:34 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/18/2022 9:15:34 PM
Surr: DNOP	114	21-129		%Rec	1	12/18/2022 9:15:34 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/18/2022 11:41:00 PM
Surr: BFB	93.5	37.7-212		%Rec	1	12/18/2022 11:41:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	12/18/2022 11:41:00 PM
Toluene	ND	0.050		mg/Kg	1	12/18/2022 11:41:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	12/18/2022 11:41:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	12/18/2022 11:41:00 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/18/2022 11:41:00 PM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	ND	60		mg/Kg	20	12/19/2022 12:05:29 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf11

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/13/2022 3:20:00 PM

Lab ID: 2212A13-011

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	28	14		mg/Kg	1	12/18/2022 9:26:07 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/18/2022 9:26:07 PM
Surr: DNOP	112	21-129		%Rec	1	12/18/2022 9:26:07 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/19/2022 12:20:00 AM
Surr: BFB	90.4	37.7-212		%Rec	1	12/19/2022 12:20:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	12/19/2022 12:20:00 AM
Toluene	ND	0.048		mg/Kg	1	12/19/2022 12:20:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	12/19/2022 12:20:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	12/19/2022 12:20:00 AM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/19/2022 12:20:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	550	60		mg/Kg	20	12/19/2022 1:07:13 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf12

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/13/2022 3:23:00 PM

Lab ID: 2212A13-012

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	29	13		mg/Kg	1	12/18/2022 9:36:43 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	12/18/2022 9:36:43 PM
Surr: DNOP	106	21-129		%Rec	1	12/18/2022 9:36:43 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	25		mg/Kg	5	12/19/2022 12:39:00 AM
Surr: BFB	98.7	37.7-212		%Rec	5	12/19/2022 12:39:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.12		mg/Kg	5	12/19/2022 12:39:00 AM
Toluene	ND	0.25		mg/Kg	5	12/19/2022 12:39:00 AM
Ethylbenzene	ND	0.25		mg/Kg	5	12/19/2022 12:39:00 AM
Xylenes, Total	ND	0.50		mg/Kg	5	12/19/2022 12:39:00 AM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	5	12/19/2022 12:39:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	690	59		mg/Kg	20	12/19/2022 1:44:16 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf13

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 9:34:00 AM

Lab ID: 2212A13-013

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	23	13		mg/Kg	1	12/18/2022 9:47:17 PM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	12/18/2022 9:47:17 PM
Surr: DNOP	132	21-129	S	%Rec	1	12/18/2022 9:47:17 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/19/2022 12:59:00 AM
Surr: BFB	96.1	37.7-212		%Rec	1	12/19/2022 12:59:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	12/19/2022 12:59:00 AM
Toluene	ND	0.050		mg/Kg	1	12/19/2022 12:59:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/19/2022 12:59:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	12/19/2022 12:59:00 AM
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	12/19/2022 12:59:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	130	60		mg/Kg	20	12/19/2022 1:56:37 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf14

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 9:36:00 AM

Lab ID: 2212A13-014

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/18/2022 9:57:48 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/18/2022 9:57:48 PM
Surr: DNOP	114	21-129		%Rec	1	12/18/2022 9:57:48 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/19/2022 1:18:00 AM
Surr: BFB	90.3	37.7-212		%Rec	1	12/19/2022 1:18:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	12/19/2022 1:18:00 AM
Toluene	ND	0.050		mg/Kg	1	12/19/2022 1:18:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/19/2022 1:18:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	12/19/2022 1:18:00 AM
Surr: 4-Bromofluorobenzene	99.2	70-130		%Rec	1	12/19/2022 1:18:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	210	60		mg/Kg	20	12/19/2022 2:08:58 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf15

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 9:39:00 AM

Lab ID: 2212A13-015

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	18	14		mg/Kg	1	12/18/2022 10:08:21 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/18/2022 10:08:21 PM
Surr: DNOP	108	21-129		%Rec	1	12/18/2022 10:08:21 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/19/2022 1:38:00 AM
Surr: BFB	98.8	37.7-212		%Rec	1	12/19/2022 1:38:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	12/19/2022 1:38:00 AM
Toluene	ND	0.048		mg/Kg	1	12/19/2022 1:38:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	12/19/2022 1:38:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	12/19/2022 1:38:00 AM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	12/19/2022 1:38:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	200	60		mg/Kg	20	12/19/2022 2:21:18 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf16

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 9:40:00 AM

Lab ID: 2212A13-016

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	310	15		mg/Kg	1	12/18/2022 10:18:53 PM
Motor Oil Range Organics (MRO)	140	50		mg/Kg	1	12/18/2022 10:18:53 PM
Surr: DNOP	103	21-129		%Rec	1	12/18/2022 10:18:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	24		mg/Kg	5	12/19/2022 1:57:00 AM
Surr: BFB	94.7	37.7-212		%Rec	5	12/19/2022 1:57:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.12		mg/Kg	5	12/19/2022 1:57:00 AM
Toluene	ND	0.24		mg/Kg	5	12/19/2022 1:57:00 AM
Ethylbenzene	ND	0.24		mg/Kg	5	12/19/2022 1:57:00 AM
Xylenes, Total	ND	0.49		mg/Kg	5	12/19/2022 1:57:00 AM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	5	12/19/2022 1:57:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	200	60		mg/Kg	20	12/19/2022 2:33:38 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf17

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 9:59:00 AM

Lab ID: 2212A13-017

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/18/2022 10:29:26 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/18/2022 10:29:26 PM
Surr: DNOP	107	21-129		%Rec	1	12/18/2022 10:29:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/19/2022 2:17:00 AM
Surr: BFB	91.8	37.7-212		%Rec	1	12/19/2022 2:17:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	12/19/2022 2:17:00 AM
Toluene	ND	0.049		mg/Kg	1	12/19/2022 2:17:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/19/2022 2:17:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	12/19/2022 2:17:00 AM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/19/2022 2:17:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	640	60		mg/Kg	20	12/19/2022 3:10:41 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf18

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 10:01:00 AM

Lab ID: 2212A13-018

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/18/2022 10:40:00 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/18/2022 10:40:00 PM
Surr: DNOP	108	21-129		%Rec	1	12/18/2022 10:40:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/19/2022 2:36:00 AM
Surr: BFB	95.0	37.7-212		%Rec	1	12/19/2022 2:36:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	12/19/2022 2:36:00 AM
Toluene	ND	0.049		mg/Kg	1	12/19/2022 2:36:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/19/2022 2:36:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	12/19/2022 2:36:00 AM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	12/19/2022 2:36:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	140	60		mg/Kg	20	12/19/2022 3:23:02 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf19

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 10:07:00 AM

Lab ID: 2212A13-019

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/18/2022 10:50:31 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/18/2022 10:50:31 PM
Surr: DNOP	105	21-129		%Rec	1	12/18/2022 10:50:31 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/19/2022 2:55:00 AM
Surr: BFB	91.1	37.7-212		%Rec	1	12/19/2022 2:55:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	12/19/2022 2:55:00 AM
Toluene	ND	0.049		mg/Kg	1	12/19/2022 2:55:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/19/2022 2:55:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	12/19/2022 2:55:00 AM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/19/2022 2:55:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	350	60		mg/Kg	20	12/19/2022 3:35:22 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf20

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 10:07:00 AM

Lab ID: 2212A13-020

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/18/2022 11:01:00 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/18/2022 11:01:00 PM
Surr: DNOP	108	21-129		%Rec	1	12/18/2022 11:01:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/19/2022 3:15:00 AM
Surr: BFB	92.5	37.7-212		%Rec	1	12/19/2022 3:15:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	12/19/2022 3:15:00 AM
Toluene	ND	0.048		mg/Kg	1	12/19/2022 3:15:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	12/19/2022 3:15:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	12/19/2022 3:15:00 AM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	12/19/2022 3:15:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	100	60		mg/Kg	20	12/19/2022 3:47:43 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf21

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 10:10:00 AM

Lab ID: 2212A13-021

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/18/2022 1:38:07 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/18/2022 1:38:07 PM
Surr: DNOP	105	21-129		%Rec	1	12/18/2022 1:38:07 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/19/2022 5:11:00 AM
Surr: BFB	93.1	37.7-212		%Rec	1	12/19/2022 5:11:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	12/19/2022 5:11:00 AM
Toluene	ND	0.049		mg/Kg	1	12/19/2022 5:11:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/19/2022 5:11:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	12/19/2022 5:11:00 AM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	12/19/2022 5:11:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	180	59		mg/Kg	20	12/19/2022 4:00:03 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf22

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 10:11:00 AM

Lab ID: 2212A13-022

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/18/2022 2:02:01 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/18/2022 2:02:01 PM
Surr: DNOP	107	21-129		%Rec	1	12/18/2022 2:02:01 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/19/2022 6:09:00 AM
Surr: BFB	88.9	37.7-212		%Rec	1	12/19/2022 6:09:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	12/19/2022 6:09:00 AM
Toluene	ND	0.048		mg/Kg	1	12/19/2022 6:09:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	12/19/2022 6:09:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	12/19/2022 6:09:00 AM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	12/19/2022 6:09:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	270	60		mg/Kg	20	12/19/2022 4:12:25 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf23

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 10:55:00 AM

Lab ID: 2212A13-023

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/18/2022 3:14:42 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/18/2022 3:14:42 PM
Surr: DNOP	105	21-129		%Rec	1	12/18/2022 3:14:42 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/19/2022 7:09:00 AM
Surr: BFB	104	37.7-212		%Rec	1	12/19/2022 7:09:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	12/19/2022 7:09:00 AM
Toluene	ND	0.050		mg/Kg	1	12/19/2022 7:09:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/19/2022 7:09:00 AM
Xylenes, Total	ND	0.10		mg/Kg	1	12/19/2022 7:09:00 AM
Surr: 4-Bromofluorobenzene	112	70-130		%Rec	1	12/19/2022 7:09:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	260	60		mg/Kg	20	12/19/2022 4:24:46 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf24

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 10:58:00 AM

Lab ID: 2212A13-024

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/18/2022 3:38:46 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/18/2022 3:38:46 PM
Surr: DNOP	107	21-129		%Rec	1	12/18/2022 3:38:46 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/19/2022 7:28:00 AM
Surr: BFB	102	37.7-212		%Rec	1	12/19/2022 7:28:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	12/19/2022 7:28:00 AM
Toluene	ND	0.049		mg/Kg	1	12/19/2022 7:28:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/19/2022 7:28:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	12/19/2022 7:28:00 AM
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	1	12/19/2022 7:28:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	120	60		mg/Kg	20	12/19/2022 4:37:07 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf25

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 11:02:00 AM

Lab ID: 2212A13-025

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/18/2022 4:02:54 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/18/2022 4:02:54 PM
Surr: DNOP	111	21-129		%Rec	1	12/18/2022 4:02:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/19/2022 7:48:00 AM
Surr: BFB	103	37.7-212		%Rec	1	12/19/2022 7:48:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	12/19/2022 7:48:00 AM
Toluene	ND	0.050		mg/Kg	1	12/19/2022 7:48:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/19/2022 7:48:00 AM
Xylenes, Total	ND	0.10		mg/Kg	1	12/19/2022 7:48:00 AM
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	1	12/19/2022 7:48:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	200	61		mg/Kg	20	12/19/2022 4:49:28 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf26

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 11:08:00 AM

Lab ID: 2212A13-026

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	37	15		mg/Kg	1	12/18/2022 4:26:50 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/18/2022 4:26:50 PM
Surr: DNOP	114	21-129		%Rec	1	12/18/2022 4:26:50 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	24		mg/Kg	5	12/19/2022 8:08:00 AM
Surr: BFB	102	37.7-212		%Rec	5	12/19/2022 8:08:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.12		mg/Kg	5	12/19/2022 8:08:00 AM
Toluene	ND	0.24		mg/Kg	5	12/19/2022 8:08:00 AM
Ethylbenzene	ND	0.24		mg/Kg	5	12/19/2022 8:08:00 AM
Xylenes, Total	ND	0.49		mg/Kg	5	12/19/2022 8:08:00 AM
Surr: 4-Bromofluorobenzene	112	70-130		%Rec	5	12/19/2022 8:08:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	130	60		mg/Kg	20	12/19/2022 5:01:48 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf27

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 11:09:00 AM

Lab ID: 2212A13-027

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/18/2022 4:50:58 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/18/2022 4:50:58 PM
Surr: DNOP	110	21-129		%Rec	1	12/18/2022 4:50:58 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/19/2022 8:27:00 AM
Surr: BFB	99.6	37.7-212		%Rec	1	12/19/2022 8:27:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	12/19/2022 8:27:00 AM
Toluene	ND	0.050		mg/Kg	1	12/19/2022 8:27:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/19/2022 8:27:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	12/19/2022 8:27:00 AM
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	1	12/19/2022 8:27:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	130	60		mg/Kg	20	12/19/2022 5:38:51 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf28

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 11:12:00 AM

Lab ID: 2212A13-028

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/18/2022 5:14:53 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/18/2022 5:14:53 PM
Surr: DNOP	102	21-129		%Rec	1	12/18/2022 5:14:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/19/2022 8:47:00 AM
Surr: BFB	101	37.7-212		%Rec	1	12/19/2022 8:47:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	12/19/2022 8:47:00 AM
Toluene	ND	0.049		mg/Kg	1	12/19/2022 8:47:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/19/2022 8:47:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	12/19/2022 8:47:00 AM
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	1	12/19/2022 8:47:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	140	60		mg/Kg	20	12/19/2022 5:51:12 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf29

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 11:14:00 AM

Lab ID: 2212A13-029

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	94	15		mg/Kg	1	12/18/2022 5:38:55 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/18/2022 5:38:55 PM
Surr: DNOP	104	21-129		%Rec	1	12/18/2022 5:38:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	24		mg/Kg	5	12/19/2022 9:07:00 AM
Surr: BFB	102	37.7-212		%Rec	5	12/19/2022 9:07:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.12		mg/Kg	5	12/19/2022 9:07:00 AM
Toluene	ND	0.24		mg/Kg	5	12/19/2022 9:07:00 AM
Ethylbenzene	ND	0.24		mg/Kg	5	12/19/2022 9:07:00 AM
Xylenes, Total	ND	0.49		mg/Kg	5	12/19/2022 9:07:00 AM
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	5	12/19/2022 9:07:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	120	60		mg/Kg	20	12/19/2022 6:03:34 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf30

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 11:18:00 AM

Lab ID: 2212A13-030

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	350	14		mg/Kg	1	12/18/2022 6:02:55 PM
Motor Oil Range Organics (MRO)	180	48		mg/Kg	1	12/18/2022 6:02:55 PM
Surr: DNOP	106	21-129		%Rec	1	12/18/2022 6:02:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	25		mg/Kg	5	12/19/2022 9:27:00 AM
Surr: BFB	118	37.7-212		%Rec	5	12/19/2022 9:27:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.12		mg/Kg	5	12/19/2022 9:27:00 AM
Toluene	ND	0.25		mg/Kg	5	12/19/2022 9:27:00 AM
Ethylbenzene	ND	0.25		mg/Kg	5	12/19/2022 9:27:00 AM
Xylenes, Total	ND	0.50		mg/Kg	5	12/19/2022 9:27:00 AM
Surr: 4-Bromofluorobenzene	114	70-130		%Rec	5	12/19/2022 9:27:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	210	60		mg/Kg	20	12/19/2022 6:40:36 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf31

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 11:19:00 AM

Lab ID: 2212A13-031

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	300	15		mg/Kg	1	12/18/2022 6:51:01 PM
Motor Oil Range Organics (MRO)	170	49		mg/Kg	1	12/18/2022 6:51:01 PM
Surr: DNOP	108	21-129		%Rec	1	12/18/2022 6:51:01 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	24		mg/Kg	5	12/19/2022 10:06:00 AM
Surr: BFB	106	37.7-212		%Rec	5	12/19/2022 10:06:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.12		mg/Kg	5	12/19/2022 10:06:00 AM
Toluene	ND	0.24		mg/Kg	5	12/19/2022 10:06:00 AM
Ethylbenzene	ND	0.24		mg/Kg	5	12/19/2022 10:06:00 AM
Xylenes, Total	ND	0.48		mg/Kg	5	12/19/2022 10:06:00 AM
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	5	12/19/2022 10:06:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	210	60		mg/Kg	20	12/19/2022 7:17:39 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf32

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 11:25:00 AM

Lab ID: 2212A13-032

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	41	15		mg/Kg	1	12/18/2022 7:38:54 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/18/2022 7:38:54 PM
Surr: DNOP	104	21-129		%Rec	1	12/18/2022 7:38:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	25		mg/Kg	5	12/19/2022 10:26:00 AM
Surr: BFB	101	37.7-212		%Rec	5	12/19/2022 10:26:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.12		mg/Kg	5	12/19/2022 10:26:00 AM
Toluene	ND	0.25		mg/Kg	5	12/19/2022 10:26:00 AM
Ethylbenzene	ND	0.25		mg/Kg	5	12/19/2022 10:26:00 AM
Xylenes, Total	ND	0.50		mg/Kg	5	12/19/2022 10:26:00 AM
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	5	12/19/2022 10:26:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	210	60		mg/Kg	20	12/19/2022 7:29:59 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf33

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 11:31:00 AM

Lab ID: 2212A13-033

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/18/2022 8:03:00 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/18/2022 8:03:00 PM
Surr: DNOP	96.3	21-129		%Rec	1	12/18/2022 8:03:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/19/2022 10:45:00 AM
Surr: BFB	98.0	37.7-212		%Rec	1	12/19/2022 10:45:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	12/19/2022 10:45:00 AM
Toluene	ND	0.048		mg/Kg	1	12/19/2022 10:45:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	12/19/2022 10:45:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	12/19/2022 10:45:00 AM
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	1	12/19/2022 10:45:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	76	60		mg/Kg	20	12/19/2022 8:07:01 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf34

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 11:37:00 AM

Lab ID: 2212A13-034

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/18/2022 8:26:58 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/18/2022 8:26:58 PM
Surr: DNOP	114	21-129		%Rec	1	12/18/2022 8:26:58 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/19/2022 11:05:00 AM
Surr: BFB	107	37.7-212		%Rec	1	12/19/2022 11:05:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	12/19/2022 11:05:00 AM
Toluene	ND	0.048		mg/Kg	1	12/19/2022 11:05:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	12/19/2022 11:05:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	12/19/2022 11:05:00 AM
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	1	12/19/2022 11:05:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	530	60		mg/Kg	20	12/19/2022 8:19:22 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf35

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 11:37:00 AM

Lab ID: 2212A13-035

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	100	15		mg/Kg	1	12/18/2022 8:51:02 PM
Motor Oil Range Organics (MRO)	57	50		mg/Kg	1	12/18/2022 8:51:02 PM
Surr: DNOP	110	21-129		%Rec	1	12/18/2022 8:51:02 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	25		mg/Kg	5	12/19/2022 11:25:00 AM
Surr: BFB	98.6	37.7-212		%Rec	5	12/19/2022 11:25:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.12		mg/Kg	5	12/19/2022 11:25:00 AM
Toluene	ND	0.25		mg/Kg	5	12/19/2022 11:25:00 AM
Ethylbenzene	ND	0.25		mg/Kg	5	12/19/2022 11:25:00 AM
Xylenes, Total	ND	0.49		mg/Kg	5	12/19/2022 11:25:00 AM
Surr: 4-Bromofluorobenzene	109	70-130		%Rec	5	12/19/2022 11:25:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	110	60		mg/Kg	20	12/19/2022 8:31:43 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2212A13

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Oil Company

Client Sample ID: Conf36

Project: Sun Mckay Federal 003H 9 27 22 Spill

Collection Date: 12/14/2022 11:39:00 AM

Lab ID: 2212A13-036

Matrix: SOIL

Received Date: 12/16/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/18/2022 9:14:56 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/18/2022 9:14:56 PM
Surr: DNOP	110	21-129		%Rec	1	12/18/2022 9:14:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/19/2022 11:45:00 AM
Surr: BFB	99.9	37.7-212		%Rec	1	12/19/2022 11:45:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	12/19/2022 11:45:00 AM
Toluene	ND	0.048		mg/Kg	1	12/19/2022 11:45:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	12/19/2022 11:45:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	12/19/2022 11:45:00 AM
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	1	12/19/2022 11:45:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	150	60		mg/Kg	20	12/19/2022 8:44:05 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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ATTACHMENT F

48-Hour Confirmation Sampling Notification Emails



Energizing America

wescominc.com | info@wescominc.com | 218-724-1322

Sun McKay Federal #003H | Incident ID: nAPP2226731199

From: [Ashley Giovengo](#)
To: [Cole Burton](#)
Subject: FW: [EXTERNAL] 48-hour Confirmation Sampling Notification - SunMckay Federal #003H - nAPP2226731199
Date: Monday, December 19, 2022 7:50:44 AM

Ashley Giovengo, Environmental Manager - Permian

O (218) 724-1322 | C (505) 382-1211

[WescomInc.com](#) | ashley.giovengo@WescomInc.com

"I am in charge of my own safety."

From: Ashley Giovengo
Sent: Monday, December 12, 2022 10:56 PM
To: 'Enviro, OCD, EMNRD' <OCD.Enviro@emnrd.nm.gov>
Cc: 'Bratcher, Michael, EMNRD' <mike.bratcher@emnrd.nm.gov>; 'Nobui, Jennifer, EMNRD' <Jennifer.Nobui@emnrd.nm.gov>; 'Sanjari, Melodie (MRO)' <msanjari@marathonoil.com>
Subject: RE: [EXTERNAL] 48-hour Confirmation Sampling Notification - SunMckay Federal #003H - nAPP2226731199

Hello,

Please extend this sampling notification to include samples collected on (12/12/2022) through (12/14/2022).

Thanks,

Ashley Giovengo, Environmental Manager - Permian

O (218) 724-1322 | C (505) 382-1211

[WescomInc.com](#) | ashley.giovengo@WescomInc.com

"I am in charge of my own safety."

From: Ashley Giovengo
Sent: Wednesday, December 7, 2022 8:28 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>; Sanjari, Melodie (MRO) <msanjari@marathonoil.com>
Subject: RE: [EXTERNAL] 48-hour Confirmation Sampling Notification - SunMckay Federal #003H - nAPP2226731199

Hello,

Please extend this sampling notification to include samples collected on (12/9/2022).

Thanks,

Ashley Giovengo, Environmental Manager - Permian

O (218) 724-1322 | C (505) 382-1211
WescomInc.com | ashley.gioveno@WescomInc.com
"I am in charge of my own safety."

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Tuesday, December 6, 2022 10:44 AM
To: Ashley Gioveno <ashley.gioveno@wescominc.com>
Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>
Subject: RE: [EXTERNAL] 48-hour Confirmation Sampling Notification - SunMckay Federal #003H - nAPP2226731199

Please be aware that notification requirements are **two business days**, per rule. Please proceed on your schedule. Also, please include this, and all correspondence, in the closure report to insure inclusion in the project file.

Jocelyn Harimon • Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
[http:// www.emnrd.nm.gov](http://www.emnrd.nm.gov)



From: Ashley Gioveno <ashley.gioveno@wescominc.com>
Sent: Monday, December 5, 2022 6:51 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Sanjari, Melodie (MRO) <msanjari@marathonoil.com>; Shar Harvester <Shar.Harvester@WescomInc.com>; Joey Croce <Joey.Croce@WescomInc.com>; Cody York <cody.york@wescominc.com>; Luis Obeso <luis.obeso@wescominc.com>; Cole Burton <cole.burton@wescominc.com>; Israel Estrella <Israel.Estrella@wescominc.com>
Subject: [EXTERNAL] 48-hour Confirmation Sampling Notification - SunMckay Federal #003H - nAPP2226731199

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Hello All,

We intend to take confirmation samples at the Sun Mckay Federal #003H – nAPP2226731199 starting on (12/7/22) thru (12/8/22). Please let us know if you plan to be onsite to oversee this sampling event.

Thanks,

Ashley Giovengo, Environmental Manager - Permian
O (218) 724-1322 | C (505) 382-1211
WescomInc.com | ashley.giovengo@WescomInc.com
"I am in charge of my own safety."

ATTACHMENT G

Extension Request



Energizing America

wescominc.com | info@wescominc.com | 218-724-1322

Sun McKay Federal #003H | Incident ID: nAPP2226731199

Ashley Giovengo

From: Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>
Sent: Monday, December 19, 2022 11:55 AM
To: Sanjari, Melodie (MRO); Ashley Giovengo
Cc: Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD; Harimon, Jocelyn, EMNRD
Subject: RE: [EXTERNAL] 48-hour Confirmation Sampling Notification - SunMckay Federal #003H - nAPP2226731199

Hello Melodie

OCD approves your extension request and a submittal is now due to the OCD portal by January 31, 2023. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thanks,
 Jennifer Nobui

From: Sanjari, Melodie (MRO) <msanjari@marathonoil.com>
Sent: Monday, December 19, 2022 11:49 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Ashley Giovengo <ashley.giovengo@wescominc.com>
Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>
Subject: RE: [EXTERNAL] 48-hour Confirmation Sampling Notification - SunMckay Federal #003H - nAPP2226731199

Good Afternoon All,

Please let this email serve as a request for an extension on incident number nAPP2226731199 from the 90 day closure deadline of 12/23/2022 to 1/13/2023. The excavation of the impacted area has been completed but the drilling of a temporary monitoring well for a depth to groundwater determination was postponed from it's previously scheduled date due to weather and the OSE logs will not be in hand until the first week or so of the year.

Thank you so much for your time and consideration.

Melodie Sanjari
 Environmental Professional
 Permian & Oklahoma
 575-988-8753



From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Tuesday, December 13, 2022 9:17 AM
To: Ashley Giovengo <ashley.giovengo@wescominc.com>; Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Nobui, Jennifer, EMNRD

<Jennifer.Nobui@emnrd.nm.gov>; Sanjari, Melodie (MRO) <msanjari@marathonoil.com>

Subject: RE: [EXTERNAL] 48-hour Confirmation Sampling Notification - SunMckay Federal #003H - nAPP2226731199

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Jocelyn Harimon • Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
[http:// www.emnrd.nm.gov](http://www.emnrd.nm.gov)



From: Ashley Giovengo <ashley.giovengo@wescominc.com>
Sent: Monday, December 12, 2022 10:56 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>; Sanjari, Melodie (MRO) <msanjari@marathonoil.com>
Subject: RE: [EXTERNAL] 48-hour Confirmation Sampling Notification - SunMckay Federal #003H - nAPP2226731199

Hello,

Please extend this sampling notification to include samples collected on (12/12/2022) through (12/14/2022).

Thanks,

Ashley Giovengo, Environmental Manager - Permian
O (218) 724-1322 | C (505) 382-1211
WescomInc.com | ashley.giovengo@WescomInc.com
"I am in charge of my own safety."

From: Ashley Giovengo
Sent: Wednesday, December 7, 2022 8:28 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>; Sanjari, Melodie (MRO) <msanjari@marathonoil.com>
Subject: RE: [EXTERNAL] 48-hour Confirmation Sampling Notification - SunMckay Federal #003H - nAPP2226731199

Hello,

Please extend this sampling notification to include samples collected on (12/9/2022).

Thanks,

Ashley Giovengo, Environmental Manager - Permian
O (218) 724-1322 | C (505) 382-1211

WescomInc.com | ashley.giovengo@WescomInc.com

"I am in charge of my own safety."

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>

Sent: Tuesday, December 6, 2022 10:44 AM

To: Ashley Giovanco <ashley.giovengo@wescominc.com>

Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>

Subject: RE: [EXTERNAL] 48-hour Confirmation Sampling Notification - SunMckay Federal #003H - nAPP2226731199

Please be aware that notification requirements are **two business days**, per rule. Please proceed on your schedule. Also, please include this, and all correspondence, in the closure report to insure inclusion in the project file.

Jocelyn Harimon • Environmental Specialist

Environmental Bureau

EMNRD - Oil Conservation Division

1220 South St. Francis Drive | Santa Fe, NM 87505

(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov

<http://www.emnrd.nm.gov>



From: Ashley Giovanco <ashley.giovengo@wescominc.com>

Sent: Monday, December 5, 2022 6:51 PM

To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>

Cc: Sanjari, Melodie (MRO) <msanjari@marathonoil.com>; Shar Harvester <Shar.Harvester@WescomInc.com>; Joey Croce <Joey.Croce@WescomInc.com>; Cody York <cody.york@wescominc.com>; Luis Obeso <luis.obeso@wescominc.com>; Cole Burton <cole.burton@wescominc.com>; Israel Estrella <Israel.Estrella@wescominc.com>

Subject: [EXTERNAL] 48-hour Confirmation Sampling Notification - SunMckay Federal #003H - nAPP2226731199

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Hello All,

We intend to take confirmation samples at the Sun Mckay Federal #003H – nAPP2226731199 starting on (12/7/22) thru (12/8/22). Please let us know if you plan to be onsite to oversee this sampling event.

Thanks,

Ashley Giovanco, Environmental Manager - Permian

O (218) 724-1322 | **C** (505) 382-1211

WescomInc.com | ashley.giovengo@WescomInc.com

"I am in charge of my own safety."

ATTACHMENT H

Well Record and Log



Energizing America

wescominc.com | info@wescominc.com | 218-724-1322

Sun McKay Federal #003H | Incident ID: nAPP2226731199



2904 W 2nd St.
Roswell, NM 88201
voice: 575.624.2420
fax: 575.624.2421
www.atkinseng.com

December 30, 2022

DII-NMOSE
1900 W 2nd Street
Roswell, NM 88201

Hand Delivered to the DII Office of the State Engineer

Re: Well Record CP-1935 POD1

To whom it may concern:

Attached please find a well log & record and a plugging record, in duplicate, for a one (1) soil borings, CP-1935 POD1.

If you have any questions, please contact me at 575.499.9244 or lucas@atkinseng.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Lucas Middleton".

Lucas Middleton

Enclosures: as noted above

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WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER


www.ose.state.nm.us

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD1		WELL TAG ID NO. n/a		OSE FILE NO(S). CP-1935			
	WELL OWNER NAME(S) Marathon Oil Permian LLC				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 4111S Tidwell Rd.				CITY Carlsbad	STATE NM	ZIP 88220	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 40	SECONDS 51.08	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND		
	LONGITUDE 103	45	20.88	W	* DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE NE NE NW Sec. 10, Sec. 10, T19S R32E, NMPM								
2. DRILLING & CASING INFORMATION	LICENSE NO. 1249		NAME OF LICENSED DRILLER Jackie D. Atkins			NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.		
	DRILLING STARTED 12/21/2022	DRILLING ENDED 12/21/2022	DEPTH OF COMPLETED WELL (FT) 101		BORE HOLE DEPTH (FT) ±101	DEPTH WATER FIRST ENCOUNTERED (FT) n/a		
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) n/a	DATE STATIC MEASURED 12/21/2022-12/27/22		
	DRILLING FLUID: <input type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input checked="" type="checkbox"/> OTHER - SPECIFY: Hollow Stem Auger					CHECK HERE IF PITLESS ADAPTER IS INSTALLED <input type="checkbox"/>		
	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	0 101		6.5"	Soil Boring	--	--	--	--
3. ANNULAR MATERIAL	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		

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WR-20 WELL RECORD & LOG (Version 01/28/2022)

FILE NO.	POD NO.	TRN NO.
LOCATION	WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL	DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	FROM	TO				
	0	12	12	Sand, medium/fine, poorly graded, Tan	Y ✓ N	
	12	14	2	Sand, medium/fine, poorly graded, with Caliche, Tan	Y ✓ N	
	14	32	18	Sand, medium/fine, poorly graded, with caliche, Reddish Tan	Y ✓ N	
	32	60	28	Sand, fine grained, poorly graded, semi-consolidated, Reddish Brown	Y ✓ N	
	60	75	15	Sand, fine grained, poorly graded, semi-consolidated, with gravel Reddish Brown	Y ✓ N	
	75	101	26	Clay, Stiff, Reddish/Brown	Y ✓ N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:					TOTAL ESTIMATED WELL YIELD (gpm): 0.00	
<input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> OTHER - SPECIFY:						
5. TEST; RIG SUPERVISION	WELL TEST	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.				
	MISCELLANEOUS INFORMATION: Removed temporary well material from soil boring, backfilled with drill cutting from total depth to 10 feet below ground surface, then placed hydrated bentonite from 10 feet to ground surface. See attached plugging record.					
	PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE: Shane Eldridge, Cameron Pruitt					
6. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING: <div style="display: flex; justify-content: space-between;"> <div>  SIGNATURE OF DRILLER / PRINT SIGNEE NAME </div> <div> Jackie D. Atkins DATE </div> </div>					

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 12/30/2022

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WR-20 WELL RECORD & LOG (Version 01/28/2022)

FILE NO.

POD NO.

TRN NO.

LOCATION

WELL TAG ID NO.

PAGE 2 OF 2



PLUGGING RECORD



NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: CP-1935
 Well owner: Marathon Oil Permian LLC Phone No.: _____
 Mailing address: 4111S Tidwell Rd.
 City: Carlsbad State: NM Zip code: 88220

II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Jackie D. Atkins (Atkins Engineering Associates Inc.)
- 2) New Mexico Well Driller License No.: 1249 Expiration Date: 04/30/23
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s):
Shane Eldridge
- 4) Date well plugging began: 12/27/2022 Date well plugging concluded: 12/27/2022
- 5) GPS Well Location: Latitude: 32 deg, 40 min, 51.08 sec
 Longitude: 103 deg, 45 min, 20.88 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 101 ft below ground level (bgl),
 by the following manner: weighted tape
- 7) Static water level measured at initiation of plugging: n/a ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: 12/20/22
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

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- 10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

<u>Depth</u> (ft bgl)	<u>Plugging Material Used</u> (include any additives used)	<u>Volume of Material Placed</u> (gallons)	<u>Theoretical Volume of Borehole/ Casing</u> (gallons)	<u>Placement Method</u> (tremie pipe, other)	<u>Comments</u> ("casing perforated first", "open annular space also plugged", etc.)
0-10'	Hydrated Bentonite	Approx. 15 gallons	15 gallons	Augers	
10'-101'	Drill Cuttings	Approx. 145 gallons	145 gallons	Boring	

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MULTIPLY	BY	AND OBTAIN
cubic feet x	7.4805	= gallons
cubic yards x	201.97	= gallons

III. SIGNATURE:

I, Jackie D. Atkins, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Jackie Atkins

Signature of Well Driller

12/30/2022

Date






WR-20 Well Record and Log-packet-forsign

Final Audit Report

2022-12-30

Created:	2022-12-30
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAiOu1jP0c3HqHXvQf_XZgbxsMS_FUHYzU

"WR-20 Well Record and Log-packet-forsign" History

-  Document created by Lucas Middleton (lucas@atkinseng.com)
2022-12-30 - 4:02:02 PM GMT- IP address: 64.17.82.146
-  Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2022-12-30 - 4:02:24 PM GMT
-  Email viewed by Jack Atkins (jack@atkinseng.com)
2022-12-30 - 4:04:27 PM GMT- IP address: 64.90.153.232
-  Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2022-12-30 - 4:05:38 PM GMT - Time Source: server- IP address: 64.90.153.232
-  Agreement completed.
2022-12-30 - 4:05:38 PM GMT

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Adobe Acrobat Sign

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

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

CONDITIONS

Action 173877

CONDITIONS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 173877
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved. Please implement 19.15.29.13 NMAC when completing P&A.	1/31/2023