



April 1, 2026

New Mexico Oil Conservation Division

506 W. Texas Ave
Artesia, NM 88210

RE: **Spud Muffin 31 CTB 1 - Site Characterization & Remediation Plan**

Incident Number: nAPP2524525081

GPS: 32.25575506°, -104.0262478°

Eddy County, New Mexico

ESRR Project No. VP-7146

To Whom It May Concern:

Earth Systems Response & Restoration (ESRR), on behalf of Devon Energy (Devon), presents the following Site Characterization & Remediation Plan (SCRP) detailing subsequent soil sampling activities and a scope of work to address soil impacts associated with an inadvertent release of produced water at the Spud Muffin 31 CTB 1 (Site). Devon proposes this SCR, detailing remediation objectives to mitigate environmental impacts at the Site.

Site Location

The Site is located in Unit N, Section 31, Township 23 South, Range 29 East, in Eddy County, New Mexico (32.25575506°, -104.0262478°) and is associated with oil and gas exploration and production operations on Private Land (**Figure 1**).

Incident Description & Background

On August 29, 2025, a pinhole leak developed on the dump line of a separator, causing the release of approximately 5 barrels (bbl) of produced water onto the production pad surface. A vacuum truck was immediately dispatched to the Site and recovered 4 bbls of fluids. Devon gave notice to the New Mexico Oil Conservation Division (NMOCD) on September 2, 2025, by Notification of Release (NOR) and was subsequently assigned Incident Number nAPP2524525081. A Corrective Action Form C-141 (Form C-141) was later submitted on September 9, 2025 and accepted by NMOCD on September 10, 2025.

Timeline of Events

September 2, 2025 - ESRR conducted initial site assessment activities and mapped the observed release footprint, hereafter referred to as the Area of Concern (AOC) (**Figure 2**).

September 12, 2025 - ESRR performed initial delineation activities.

November 26, 2025 - Devon requested an extension of the December 1, 2025 deadline, to allow additional time for further remediation activities and/or a subsequent corrective action report. Devon was granted a 90-day extension by the NMOCD for March 5, 2026.

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January 23, 2026 - ESRR performed additional delineation activities.

March 4, 2026 - Devon requested an additional extension of the March 4, 2026 deadline, to allow additional time for ESRR to finalize this SCRP. Devon was granted a 30-day extension by the NMOCD for April 4, 2026.

Site Characterization

ESRR characterized the Site according to Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). The following proximities were estimated:

- Between 1,000 feet and ½ mile of any continuously flowing watercourse or any other significant watercourse;
- Between 1,000 feet and ½ mile of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark);
- Between 1,000 feet and ½ mile of any occupied permanent residence, school, hospital, institution or church;
- Between ½ and 1 mile of any spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes;
- Between ½ and 1 mile of any other freshwater well or spring;
- Between 1 and 5 miles of any incorporated municipal boundary or a defined municipal fresh water well field covered under a municipal ordinance;
- Between 300 and 500 feet of any wetland;
- Greater than 5 miles of any subsurface mine;
- Between 300 and 500 feet of an unstable area (non-karst); and
- Between 1,000 feet and ½ mile of a 100-year floodplain.

Receptor details used to determine the Site characterization are included in **Figure 1A** and **Figure 1B**. **Referenced Well Records** for the closest depth to water wells are attached.

Based on the desktop review and depth to groundwater (DTW) estimated to be less than 50 feet below ground surface (bgs), the following Closure Criteria was applied:

Constituents of Concern (COCs)	Closure Criteria [‡]
Chloride	600 milligram per kilogram (mg/kg)
Total Petroleum Hydrocarbon (TPH)	100 mg/kg
Benzene	10 mg/kg
Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX)	50 mg/kg

[‡]The reclamation concentration requirements of 600 mg/kg Chloride and 100 mg/kg TPH apply to the top 4 feet of areas to be immediately reclaimed following remediation pursuant to NMAC 19.15.17.13.

TPH= Gasoline Range Organics (GRO) + Diesel Range Organics (DRO) + Oil Range Organics (ORO)

Laboratory Analytical Methods used: Environmental Protection Agency (EPA) 300.0, EPA 8015 NM, EPA 8021 B

Delineation Activities

On September 12, 2025, ESRR conducted delineation activities to assess the presence or absence of residual soil impacts associated with the AOC. Eight delineation boreholes (HA-1 through HA-8) were advanced via hand auger. Delineation activities were driven by field screening soil for chloride utilizing QuanTab® test strips. A minimum of three soil samples were collected from each delineation borehole, representing the highest observed field screening concentrations and/or the greatest depth. Delineation soil samples were placed directly into lab provided pre-cleaned jars, packed with minimal void space, labeled, and placed on ice. The delineation soil samples were transported under strict chain-of-custody procedures, to Eurofins in Carlsbad, New Mexico, for analysis of the COCs.

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On January 23, 2026, ESRR performed additional delineation of soil sample location (HA-2), to achieve full vertical delineation and to better define the vertical extent of the AOC. The additional delineation soil samples were collected, handled, transported, and analyzed as previously described.

Laboratory analytical results for delineation soil samples (HA-5 through HA-7) surrounding the AOC were compliant with Site Closure Criteria and the reclamation standard, assisting with defining the horizontal periphery of the AOC.

Laboratory analytical results for delineation soil samples collected within and around the AOC (HA-1 through HA-4 and HA-8) indicated chloride exceeded the Site Closure Criteria and/or the reclamation standard up to 6 feet bgs. Elevated chloride was characterized by concentrations ranging from 608 mg/kg to 6,450 mg/kg. Laboratory results are summarized in **Table 1**, included in the attachments. The locations of all delineation soil samples are shown in **Figure 2**.

Proposed Remediation Plan

Based on the results from the completed delineation soil sampling activities, Devon proposes the following remedial actions:

- Devon proposes to remove impacted soil to the Maximum Extent Practical (MEP) while adhering to Devon's safety precautions and encroachment guidelines, ensuring the health and safety of on-site personnel and the structural integrity of any high powered/pressurized equipment and utilities within and around the AOC.
 - Devon proposes to excavate soils associated with soil boring HA-1 to 4 ft. bgs and soil boring HA-8 to 1 ft. bgs. Areas associated with soil borings HA-2 through HA-4 will be excavated to 2 ft bgs or the MEP (**Figure 3**).
 - Following the removal of impacted soil, five-point composite soil samples will be collected at a sampling frequency of 200 square feet from the excavation floor and sidewalls. Confirmation soil samples will be handled, labeled, and transported to Eurofins in Carlsbad, New Mexico, for analysis of COCs as previously described.
- Devon anticipates 80 cubic yards of impacted soil to be excavated and removed from Site and approximately 419 cubic yards of residual impacted soil to be left in place and deferred until the Site is plugged and abandoned or undergoes major facility deconstruction, whichever comes first (**Figure 4**).
- Impacted soil will be transported to a nearby state-regulated landfill facility for disposal under Devon approved waste manifests. Once remediation activities are complete and receipt of final confirmation soil sample results are received, Devon will have the excavation backfilled with clean, locally sourced material and restored to "as close to its original state" as possible.

Proposed Schedule

Devon anticipates remediation and restoration activities to commence within 90 days of approval of this SCRP. Upon favorable laboratory analytical results of all confirmation samples, ESRR will complete a

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Closure Request Report detailing excavation activities and subsequent soil sampling activities for incident number nAPP2524525081.

If you have any questions or comments, please do not hesitate to contact Gilbert Moreno at (832) 541-7719 or gmoreno@earthsys.net. **Documentation and correspondence notifications and Executed chain-of-custody forms and laboratory analytical reports** are attached.

Sincerely,

EARTH SYSTEMS RESPONSE & RESTORATION

A handwritten signature in black ink, appearing to read "Gilbert Moreno".

Gilbert Moreno
Carlsbad Operations Manager/ Project Geologist

A handwritten signature in black ink, appearing to read "Kris Williams".

Kris Williams, CHMM, REM
Principal

cc: Jim Raley, Devon Energy

Attachments:

- Figure 1 - Site Map
- Figure 1A - Groundwater
- Figure 1B - Karst Potential
- Figure 2 - Delineation Soil Sample Locations
- Figure 3 - Proposed Excavation Extents
- Figure 4 - Proposed Deferral Extent
- Table 1 - Soil Sample Analytical Results
- Photographic Documentation
- Referenced Well Record
- NMOCD Email Documentation & Correspondence
- Executed Chain-of-Custody Forms and Laboratory Analytical Reports

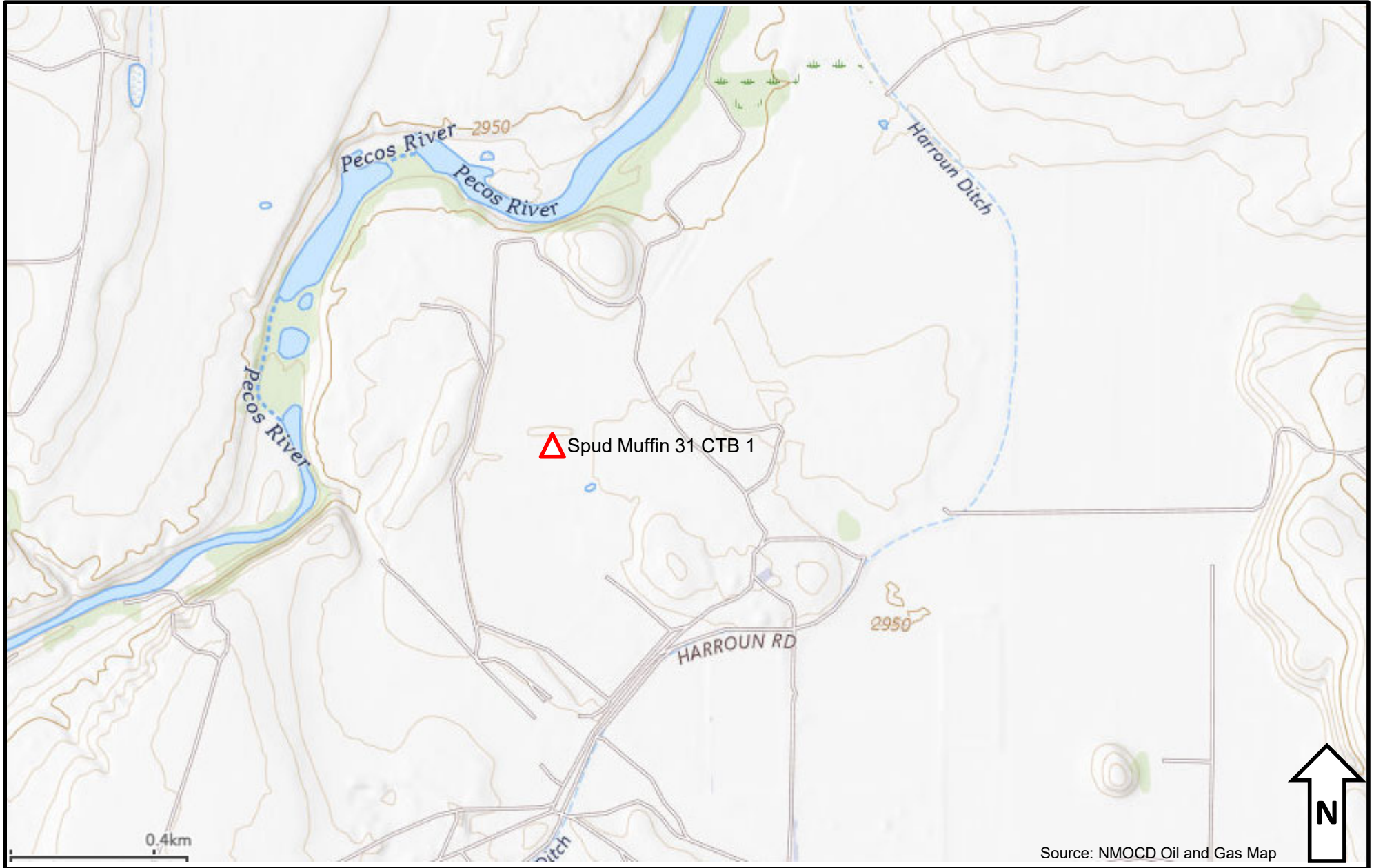


Figure 1 – Site Map

Devon Energy Permian – Spud Muffin 31 CTB 1
 GPS: 32.25575506, -104.0262478
 Eddy County, New Mexico

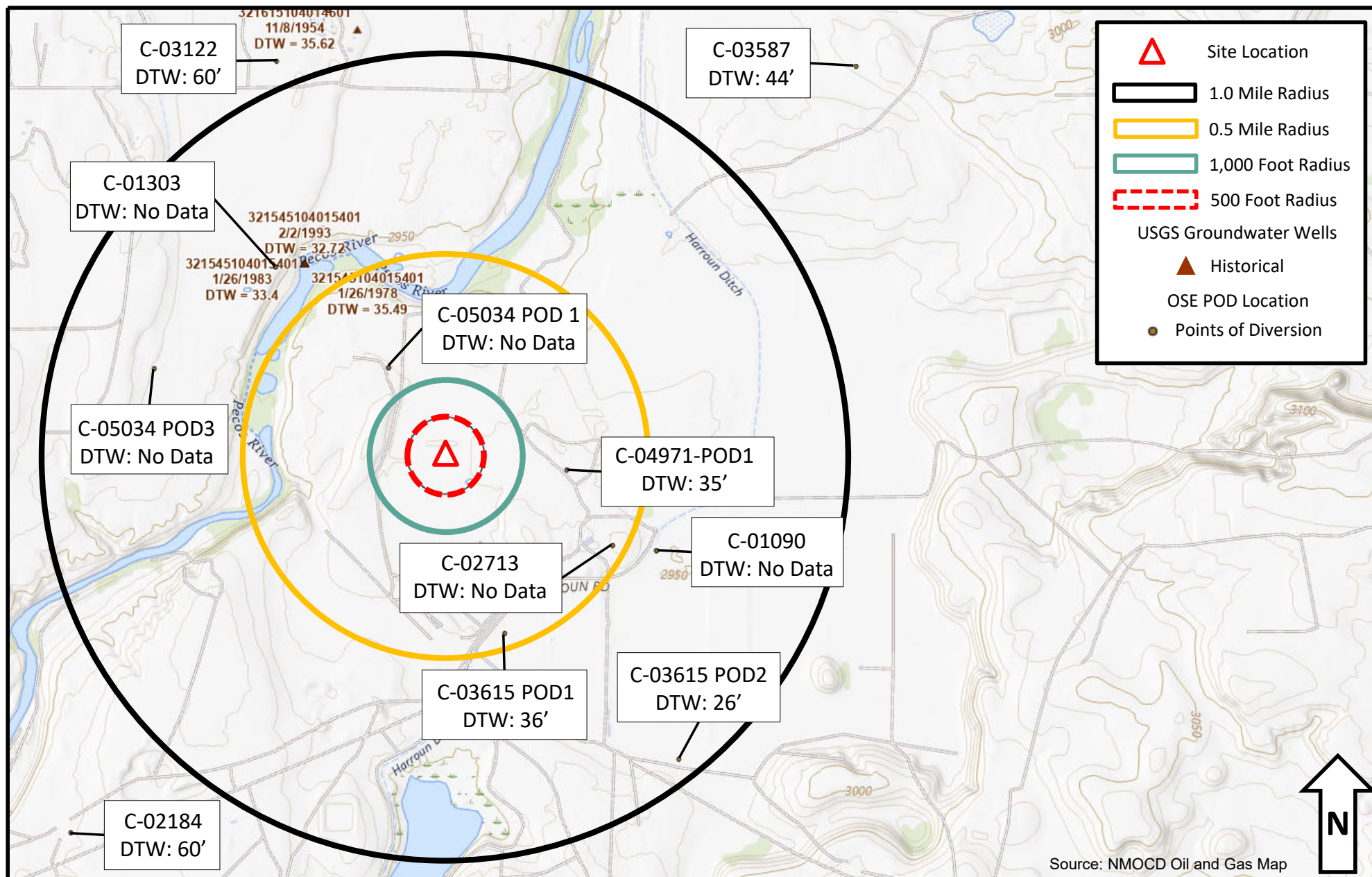


Figure 1A – Groundwater

Devon Energy – Spud Muffin 31 CTB 1
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 Eddy County, New Mexico

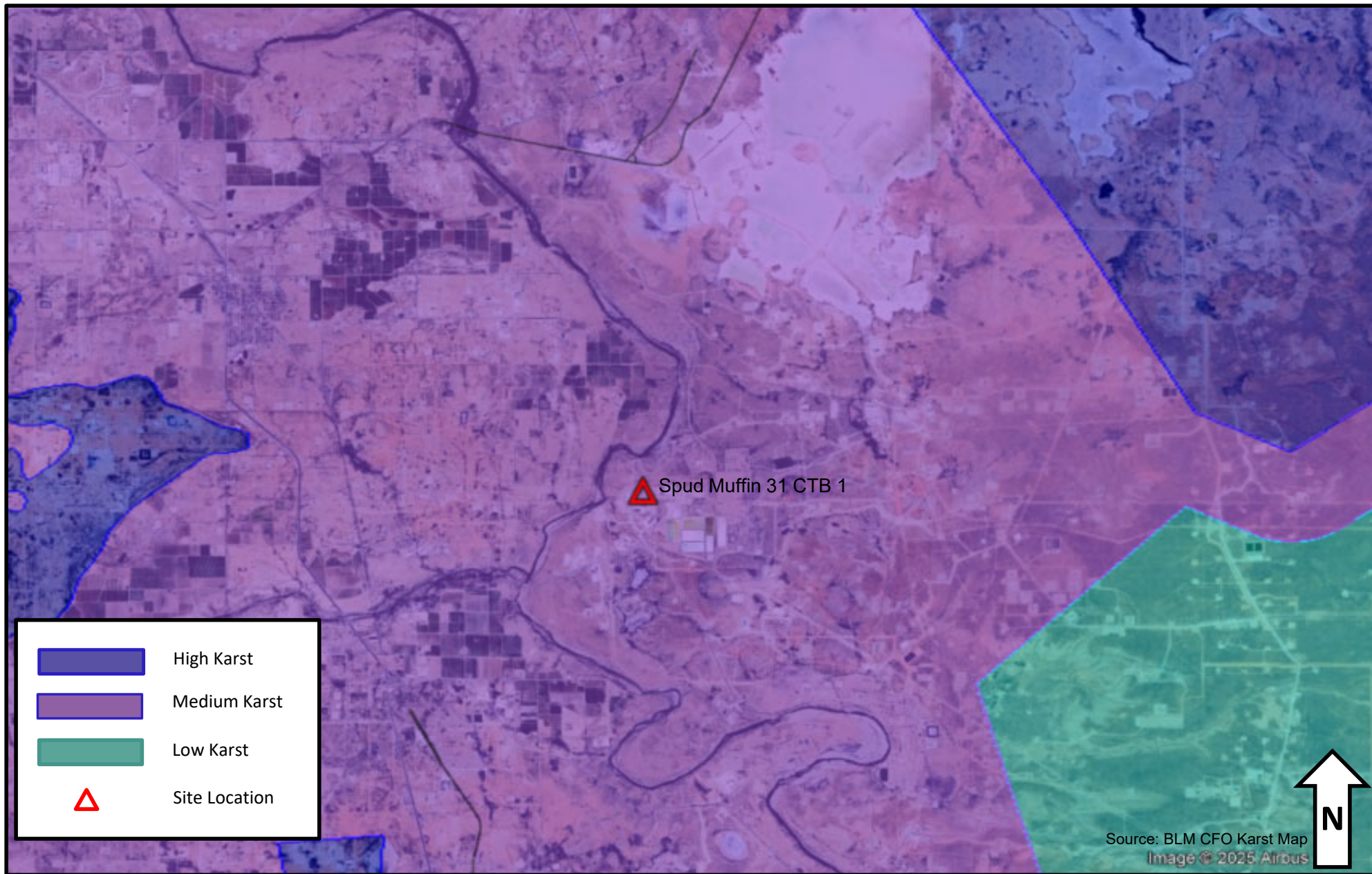


Figure 1B – Karst Potential

Devon Energy Permian – Spud Muffin 31 CTB 1
GPS: 32.25575506, -104.0262478
Eddy County, New Mexico

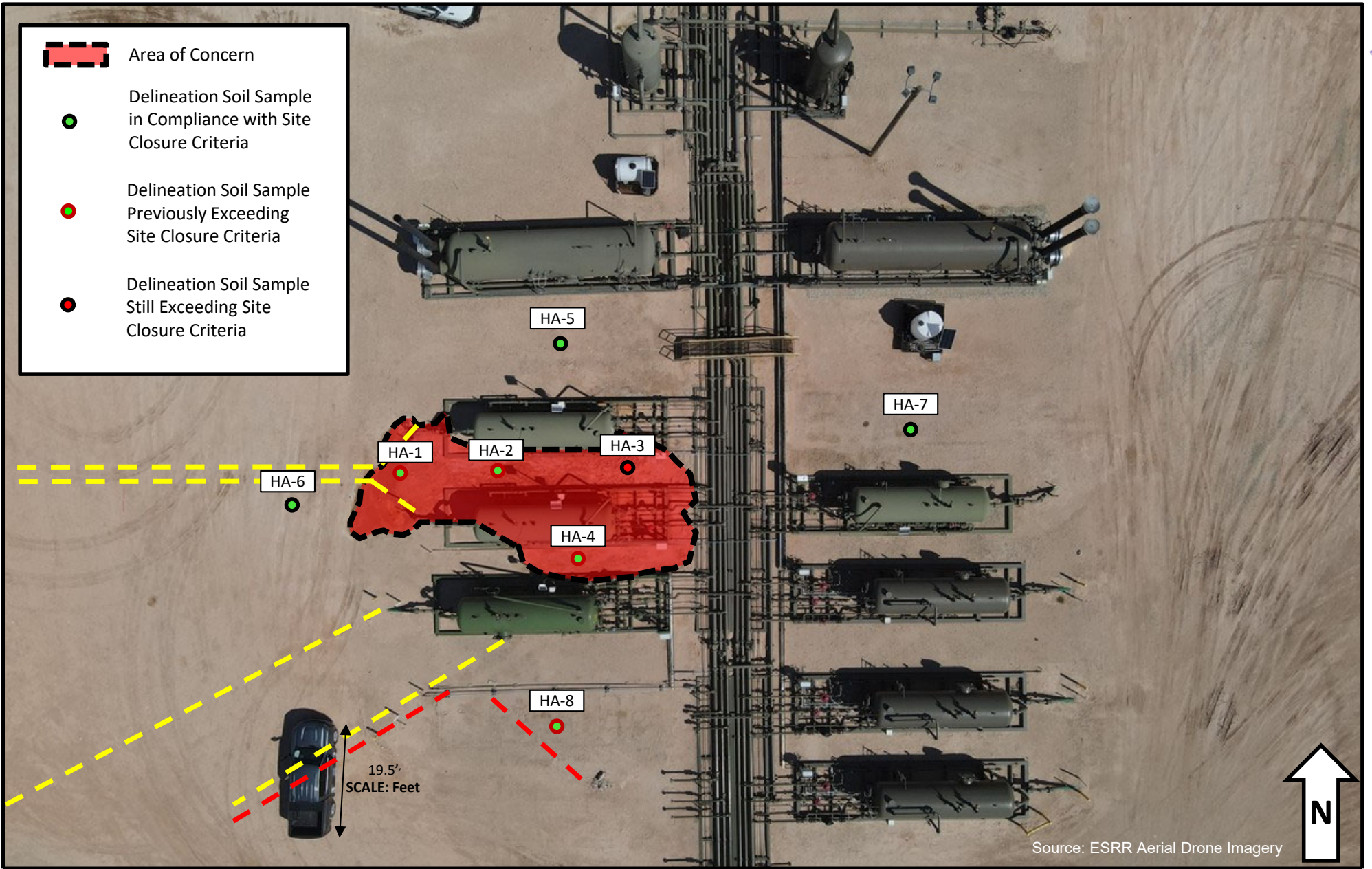
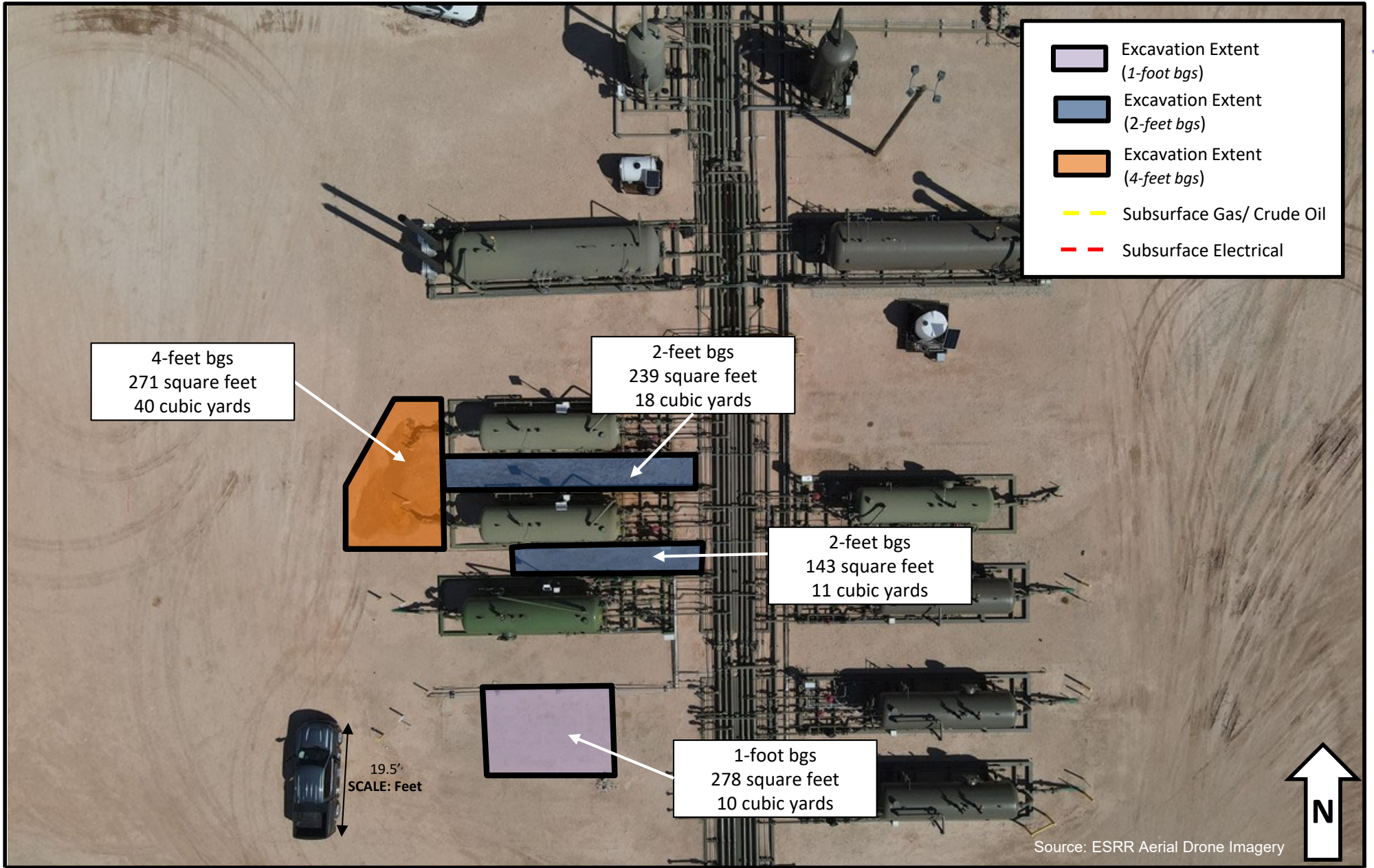


Figure 2 – Delineation Soil Sample Locations

Devon Energy Permian – Spud Muffin 31 CTB 1
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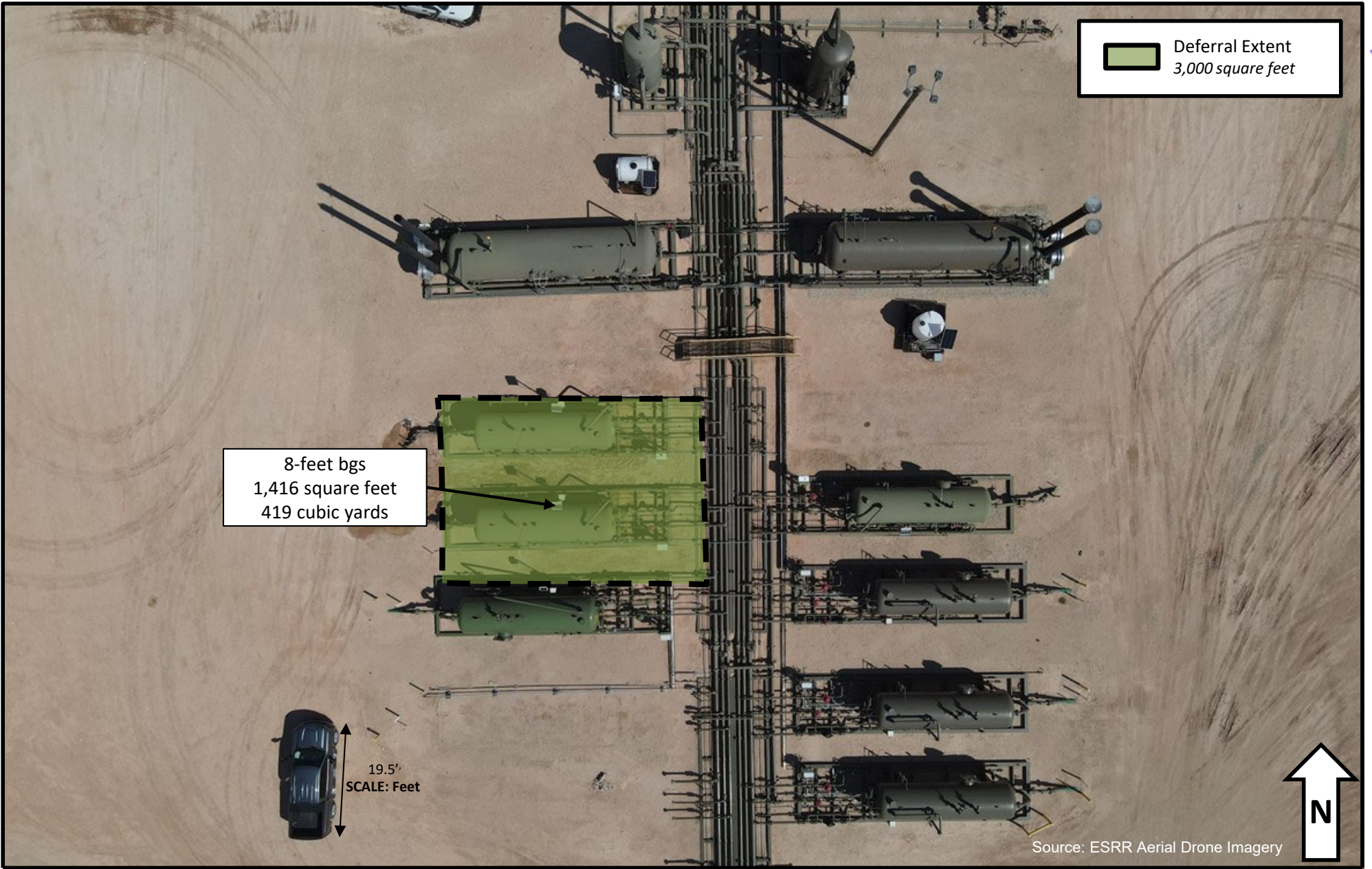


Figure 4 – Proposed Deferral Extent

Devon Energy Permian – Spud Muffin 31 CTB 1
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Table 1
SOIL SAMPLE ANALYTICAL RESULTS
Spud Muffin 31 CTB 1
Eddy County, New Mexico



Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria for Soils Impacted by a Release (NMAC 19.15.29)			10	50	NE	NE	NE	100	600
Delineation Soil Samples - nAPP2524525081									
HA-1	09/12/25	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	2,980
HA-1	09/12/25	1	<0.00201	<0.00402	<50.1	<50.1	<50.1	<50.1	2,930
HA-1	09/12/25	2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	1,310
HA-1	09/12/25	3	<0.00199	<0.00398	<50.1	<50.1	<50.1	<50.1	614
HA-1	09/12/25	4	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	443
HA-1	09/12/25	5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	264
HA-1	09/12/25	6	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	206
HA-2	09/12/25	0.5	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	3,690
HA-2	09/12/25	1	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	3,320
HA-2	09/12/25	2	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	2,010
HA-2	09/12/25	3	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	1,180
HA-2	09/12/25	4	<0.00198	<0.00396	<49.8	<49.8	<49.8	<49.8	890
HA-2	09/12/25	5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	1,740
HA-2	09/12/25	6	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	1,470
HA-2	01/23/26	8	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	127
HA-2	01/23/26	10	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	166
HA-3	09/12/25	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	6,450
HA-3	09/12/25	1	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	3,130
HA-3	09/12/25	2	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	3,800
HA-3	09/12/25	3	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	3,640
HA-3	09/12/25	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	2,910
HA-3	09/12/25	5	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	4,830
HA-3	09/12/25	6	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	2,710
HA-4	09/12/25	0.5	<0.00201	<0.00402	<50.2	<50.2	<50.2	<50.2	3,600
HA-4	09/12/25	1	0.00202	<0.00398	<50.0	<50.0	<50.0	<50.0	1,440
HA-4	09/12/25	2	<0.00199	<0.00398	<50.1	<50.1	<50.1	<50.1	3,810
HA-4	09/12/25	3	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	1,930
HA-4	09/12/25	4	0.00203	<0.00398	<49.8	<49.8	<49.8	<49.8	846



Table 1
SOIL SAMPLE ANALYTICAL RESULTS
Spud Muffin 31 CTB 1
Eddy County, New Mexico



Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria for Soils Impacted by a Release (NMAC 19.15.29)			10	50	NE	NE	NE	100	600
Delineation Soil Samples - nAPP2524525081									
HA-4	09/12/25	5	0.00232	<0.00399	<50.0	<50.0	<50.0	<50.0	105
HA-4	09/12/25	6	0.0024	<0.00404	<50.3	<50.3	<50.3	<50.3	112
HA-5	09/12/25	0.5	<0.00198	<0.00397	<50.0	<50.0	<50.0	<50.0	291
HA-5	09/12/25	2	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	73.5
HA-5	09/12/25	4	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	14.7
HA-6	09/12/25	0.5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<9.96
HA-6	09/12/25	2	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<9.94
HA-6	09/12/25	4	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<9.98
HA-7	09/12/25	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	281
HA-7	09/12/25	2	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	224
HA-7	09/12/25	4	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	59.5
HA-8	09/12/25	0.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	608
HA-8	09/12/25	2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	131
HA-8	09/12/25	4	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	149

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

Text in "grey" represents excavated soil samples

Concentrations in **bold and highlighted** exceed the NMOCD Table I Closure Criteria and/or Reclamation Standard[†] for Soils Impacted by a Release[†]The reclamation concentration requirements of 600 mg/kg chloride and 100 mg/kg TPH apply to the top 4 feet of areas to be immediately reclaimed following remediation pursuant to NMAC 19.15.17.13.

Spud Muffin 31 CTB 1- Site Characterization & Remediation Plan
Incident Number: nAPP2524525081
32.034744°, -103.875862°



PHOTO 1: Northeastern view during initial site assessment activities. 9/2/2025



PHOTO 2: Southeastern view during initial site assessment activities. 9/2/2025

Spud Muffin 31 CTB 1- Site Characterization & Remediation Plan
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PHOTO 3: Western view during initial delineation activities. 9/12/2025



PHOTO 4: Northwestern view during initial delineation activities. 9/12/2025

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PHOTO 5: Northern view during initial delineation activities. 9/12/2025

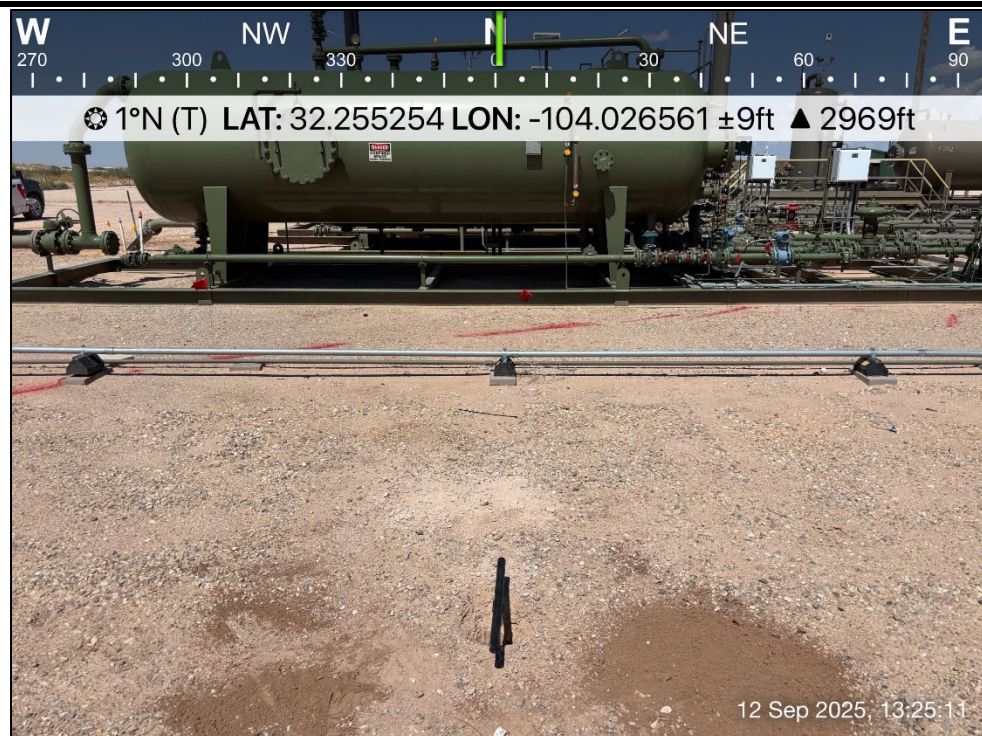


PHOTO 6: Northern view during initial delineation activities. 9/12/2025

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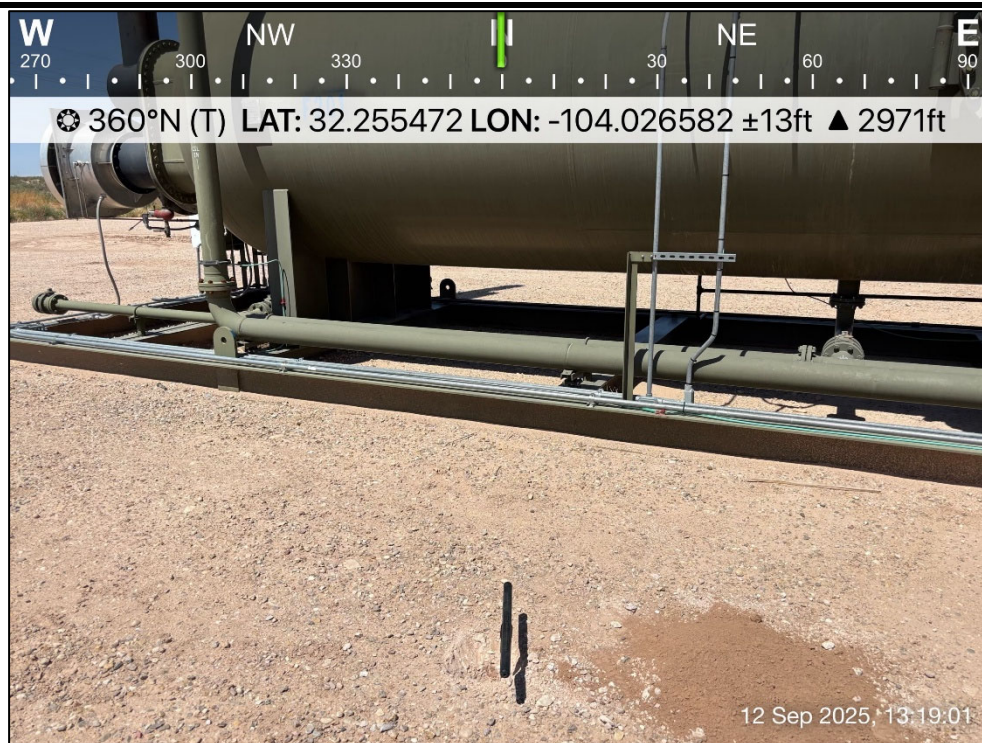


PHOTO 7: Northern view during initial delineation activities. 9/12/2025



PHOTO 8: Southern view during additional delineation activities. 1/23/2026

Spud Muffin 31 CTB 1- Site Characterization & Remediation Plan
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PHOTO 9: Southeastern view of location sign. 1/23/2026



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) C-5034 POD1		WELL TAG ID NO.		OSE FILE NO(S). C-5034 POD 1-3			
	WELL OWNER NAME(S) Energy Transfer				PHONE (OPTIONAL) 210-403-7386			
	WELL OWNER MAILING ADDRESS 19003 W. Interstate 10				CITY STATE ZIP San Antonio TX 78257			
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 15	SECONDS 32.0436 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND			
		LONGITUDE 104	1	43.086 W	* DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE NE SE NW SW Qtr of Sec 31 of 23S 29E								
2. DRILLING & CASING INFORMATION	LICENSE NO. 1874		NAME OF LICENSED DRILLER Eric Hutton			NAME OF WELL DRILLING COMPANY Savage Excavation LLC		
	DRILLING STARTED 11/22/25	DRILLING ENDED 11/22/25	DEPTH OF COMPLETED WELL (FT) No Well		BORE HOLE DEPTH (FT) 65	DEPTH WATER FIRST ENCOUNTERED (FT) N/A		
	COMPLETED WELL IS: ☐ ARTESIAN *add Centralizer info below ☒ DRY HOLE ☐ SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) Dry		DATE STATIC MEASURED 11/23/25	
	DRILLING FLUID: ☐ AIR ☐ MUD ADDITIVES - SPECIFY: None							
	DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☒ OTHER - SPECIFY: Sonic						CHECK HERE IF PITLESS ADAPTER IS INSTALLED ☐	
	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 65		6	N/A	N/A	N/A	N/A	N/A
3. ANNULAR MATERIAL	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE- RANGE BY INTERVAL *(if using Centralizers for Artesian wells- indicate the spacing below)		AMOUNT (cubic feet)	METHOD OF PLACEMENT	
				No Annular Material				

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 09/22/2022)

FILE NO. C-5034	POD NO. 1	TRN NO. 793620
LOCATION 236.29E. 31 413	WELL TAG ID NO. NA	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	63.5	63.5	Reddish Brown to Brown Sand with varying amounts of silt, gravel, and cobble	Y ✓ N	
63.5	65	1.5	Reddish Gray decomposed Siltstone (lean clay)	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: ☐ PUMP ☐ AIR LIFT ☐ BAILER ☒ OTHER – SPECIFY: N/A				TOTAL ESTIMATED WELLYIELD (gpm):	
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: Geotechnical Borehole - No well installed. OSE DTI ROSWELL NM 26 DEC '25 PM1:07					
PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:					
Eric Hutton; Taylor Beck					
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:					
			Eric W. Hutton	12/23/25	
SIGNATURE OF DRILLER / PRINT SIGNEE NAME				DATE	

FOR OSE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 09/22/2022)	
FILE NO. C-5034	POD NO. 1	TRN NO. 793620	
LOCATION 235-29E-31 413	WELL TAG ID NO. NA	PAGE 2 OF 2	

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

General Information
Phone: (505) 629-6116

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

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

QUESTIONS

Action 503719

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 503719
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2524525081
Incident Name	NAPP2524525081 SPUD MUFFIN 31 CTB 1 @ 0
Incident Type	Produced Water Release
Incident Status	Notification Accepted
Incident Facility	[fAPP2130629627] SPUD MUFFIN 31 CTB 1

Location of Release Source	
Site Name	SPUD MUFFIN 31 CTB 1
Date Release Discovered	08/29/2025
Surface Owner	Private

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	800
What is the estimated number of samples that will be gathered	20
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/12/2025
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Gilbert Moreno (832) 541-7719
Please provide any information necessary for navigation to sampling site	32.25575506, -104.0262478

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

General Information
Phone: (505) 629-6116

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

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

CONDITIONS

Action 503719

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 503719
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
jraley	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	9/8/2025
jraley	If confirmation sampling is going to take place over multiple days, individual C-141N applications must be submitted for each sampling date. Date ranges are not currently accepted on the C-141N application.	9/8/2025

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

General Information
Phone: (505) 629-6116

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

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

QUESTIONS

Action 544552

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 544552
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2524525081
Incident Name	NAPP2524525081 SPUD MUFFIN 31 CTB 1 @ FAPP2130629627
Incident Type	Produced Water Release
Incident Status	Initial C-141 Approved
Incident Facility	[fAPP2130629627] SPUD MUFFIN 31 CTB 1

Location of Release Source	
Site Name	SPUD MUFFIN 31 CTB 1
Date Release Discovered	08/29/2025
Surface Owner	Private

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	1,000
What is the estimated number of samples that will be gathered	20
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	01/23/2026
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Gilbert Moreno (832) 541-7719
Please provide any information necessary for navigation to sampling site	32.25575506, -104.0262478

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

General Information
Phone: (505) 629-6116

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

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

CONDITIONS

Action 544552

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 544552
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
jraley	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	1/20/2026
jraley	If confirmation sampling is going to take place over multiple days, individual C-141N applications must be submitted for each sampling date. Date ranges are not currently accepted on the C-141N application.	1/20/2026



Outlook

RE: [EXTERNAL] Spud Muffin 31 CTB 1 - Extension Request - nAPP2524525081

From Buchanan, Michael, EMNRD <Michael.Buchanan@emnrd.nm.gov>

Date Wed 3/4/2026 4:04 PM

To Gilbert Moreno <gmoreno@earthsys.net>

Cc Raley, Jim <jim.rale@dm.com>

Good afternoon, Gilbert

The request for an additional 30-day extension is approved to finalize the SCRP on behalf of Devon. I will update the incident file to reflect these deadline changes. The new due date to submit to OCD is now amended to 04/04/2026. Please keep this correspondence for your records and submit it along with the next report submission.

Kind regards,

From: Gilbert Moreno <gmoreno@earthsys.net>

Sent: Wednesday, March 4, 2026 1:44 PM

To: Buchanan, Michael, EMNRD <Michael.Buchanan@emnrd.nm.gov>

Cc: Raley, Jim <jim.rale@dm.com>; Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>

Subject: Re: [EXTERNAL] Spud Muffin 31 CTB 1 - Extension Request - nAPP2524525081

Good afternoon,

Earth Systems R & R (ESRR) on behalf of Devon Energy (Devon) is requesting an additional extension to the current deadline for a report required in 19.15.29.12.B(1) NMAC at the Spud Muffin 31 CTB 1 (Site).

Following the previous extension request, Devon deemed it necessary for an additional sampling event to further understand the vertical extent of impacted soil prior to commencing any remediation activities. ESRR performed the additional delineation on January 23, 2026. ESRR is drafting a Site Characterization & Remediation Plan (SCRP) and anticipates to have it completed by March 20, 2026.

Devon requests a 30-day extension of the March 5, 2026, deadline for the release associated with Incident Number nAPP2524525081, to allow additional time for ESRR to finalize the SCRP for Devon's submittal.

Regards,

Gilbert Moreno

Carlsbad Operations Manager- Project Geologist

O: (575) 323-9034 C: (832) 541-7719

gmoreno@earthsys.net

earthsys.net



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From: Buchanan, Michael, EMNRD <Michael.Buchanan@emnrd.nm.gov>
Sent: Wednesday, November 26, 2025 9:41 AM
To: Gilbert Moreno <gmoreno@earthsys.net>
Cc: Raley, Jim <jim.raley@dnv.com>
Subject: RE: [EXTERNAL] Spud Muffin 31 CTB 1 - Extension Request - nAPP2524525081

Good morning, Gilbert

Devon's request for a 90-day extension to complete remediation activities and submit a closure report for Incident # nAPP2524525081 at Spud Muffin 31 CTB is approved. I have updated the application page to reflect this change. The new deadline to submit a closure report is now 03/05/2026. Please include this correspondence in the next report submittal.

Kind regards,

From: Gilbert Moreno <gmoreno@earthsys.net>
Sent: Wednesday, November 26, 2025 8:51 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Raley, Jim <jim.raley@dnv.com>
Subject: [EXTERNAL] Spud Muffin 31 CTB 1 - Extension Request - nAPP2524525081

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

Hello,

Earth Systems R & R (ESRR) on behalf of Devon Energy (Devon) is requesting an extension to the current deadline for a report required in 19.15.29.12.B(1) NMAC at the Spud Muffin 31 CTB 1 (Site).

A produced water release was discovered on August 29, 2025 and was subsequently assigned Incident Number nAPP2524525081. Initial delineation activities were completed by ESRR on September 12, 2025. Due to an influx of remediation projects requiring Devon oversight, remediation activities have been delayed until proper oversight can be in place while excavating near subsurface pipelines and utilities. Remediation activities are anticipated to begin mid to late December, once a third-party contractor has been determined.

Devon requests a 90-day extension of the December 1, 2025, deadline for the release associated with Incident Number nAPP2524525081, to allow additional time to complete remediation activities and for ESRR to complete a subsequent corrective action closure report given favorable laboratory analytical results.

Thanks,

Gilbert Moreno

Carlsbad Operations Manager- Project Geologist

O: (575) 323-9034 C: (832) 541-7719

gmoreno@earthsys.net

earthsys.net



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ANALYTICAL REPORT

PREPARED FOR

Attn: Gilbert Moreno
Earth Systems Response and Restoration
4115 South County Road 1297
Odessa, Texas 79765

Generated 9/19/2025 2:19:09 PM

JOB DESCRIPTION

Spud Muffin 31 CTB 1
Eddy County, NM

JOB NUMBER

890-8790-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

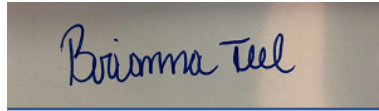
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
9/19/2025 2:19:09 PM

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

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Laboratory Job ID: 890-8790-1
SDG: Eddy County, NM

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Definitions/Glossary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: Earth Systems Response and Restoration
Project: Spud Muffin 31 CTB 1

Job ID: 890-8790-1

Job ID: 890-8790-1

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Job Narrative 890-8790-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 9/12/2025 3:29 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.8°C.

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: HA-1 (890-8790-1), HA-1 (890-8790-2), HA-1 (890-8790-3), HA-1 (890-8790-4), HA-1 (890-8790-5), HA-1 (890-8790-6), HA-1 (890-8790-7), HA-2 (890-8790-8), HA-2 (890-8790-9), HA-2 (890-8790-10), HA-2 (890-8790-11), HA-2 (890-8790-12), HA-2 (890-8790-13), HA-2 (890-8790-14), HA-3 (890-8790-15), HA-3 (890-8790-16), HA-3 (890-8790-17), HA-3 (890-8790-18), HA-3 (890-8790-19), HA-3 (890-8790-20), HA-3 (890-8790-21), HA-4 (890-8790-22), HA-4 (890-8790-23), HA-4 (890-8790-24), HA-4 (890-8790-25), HA-4 (890-8790-26), HA-4 (890-8790-27) and HA-4 (890-8790-28).

GC VOA

Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-118877 and analytical batch 880-118848 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-118877 and analytical batch 880-118848 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: HA-1 (890-8790-1), HA-1 (890-8790-3), HA-1 (890-8790-4), HA-1 (890-8790-5), HA-1 (890-8790-6), HA-2 (890-8790-8), HA-2 (890-8790-9), HA-2 (890-8790-10), HA-2 (890-8790-11), HA-2 (890-8790-13), HA-2 (890-8790-14), HA-3 (890-8790-15), HA-3 (890-8790-16), HA-3 (890-8790-18), HA-3 (890-8790-19) and (LCSD 880-118877/2-A). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

Diesel Range Organics

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-118847/2-A) and (LCSD 880-118847/3-A). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC

Method 300_ORGFM_28D - Soluble: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-118869 and analytical batch 880-118944 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 300_ORGFM_28D - Soluble: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-118870 and analytical batch 880-118945 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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Case Narrative

Client: Earth Systems Response and Restoration
Project: Spud Muffin 31 CTB 1

Job ID: 890-8790-1

Job ID: 890-8790-1 (Continued) Eurofins Carlsbad

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

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-1

Lab Sample ID: 890-8790-1

Date Collected: 09/12/25 08:00

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 12:17	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 12:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 12:17	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/15/25 10:21	09/15/25 12:17	1
o-Xylene	<0.00200	U F1	0.00200		mg/Kg		09/15/25 10:21	09/15/25 12:17	1
Xylenes, Total	<0.00399	U F1	0.00399		mg/Kg		09/15/25 10:21	09/15/25 12:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	149	S1+	70 - 130	09/15/25 10:21	09/15/25 12:17	1
1,4-Difluorobenzene (Surr)	95		70 - 130	09/15/25 10:21	09/15/25 12:17	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/15/25 12:17	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/18/25 18:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/15/25 08:12	09/18/25 18:53	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/25 08:12	09/18/25 18:53	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/25 08:12	09/18/25 18:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130	09/15/25 08:12	09/18/25 18:53	1
o-Terphenyl	95		70 - 130	09/15/25 08:12	09/18/25 18:53	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2980	F1	50.4		mg/Kg			09/15/25 20:16	5

Client Sample ID: HA-1

Lab Sample ID: 890-8790-2

Date Collected: 09/12/25 08:05

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:21	09/15/25 12:37	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:21	09/15/25 12:37	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:21	09/15/25 12:37	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/15/25 10:21	09/15/25 12:37	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:21	09/15/25 12:37	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/15/25 10:21	09/15/25 12:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	128		70 - 130	09/15/25 10:21	09/15/25 12:37	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-1

Lab Sample ID: 890-8790-2

Date Collected: 09/12/25 08:05

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	105		70 - 130	09/15/25 10:21	09/15/25 12:37	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/15/25 12:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			09/18/25 19:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		09/15/25 08:12	09/18/25 19:39	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		09/15/25 08:12	09/18/25 19:39	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		09/15/25 08:12	09/18/25 19:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130				09/15/25 08:12	09/18/25 19:39	1
o-Terphenyl	97		70 - 130				09/15/25 08:12	09/18/25 19:39	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2930		50.4		mg/Kg			09/15/25 20:33	5

Client Sample ID: HA-1

Lab Sample ID: 890-8790-3

Date Collected: 09/12/25 08:10

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 12:58	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 12:58	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 12:58	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/15/25 10:21	09/15/25 12:58	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 12:58	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/15/25 10:21	09/15/25 12:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	137	S1+	70 - 130	09/15/25 10:21	09/15/25 12:58	1
1,4-Difluorobenzene (Surr)	72		70 - 130	09/15/25 10:21	09/15/25 12:58	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/15/25 12:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/18/25 19:55	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-1

Lab Sample ID: 890-8790-3

Date Collected: 09/12/25 08:10

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 19:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 19:55	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 19:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130				09/15/25 08:12	09/18/25 19:55	1
o-Terphenyl	92		70 - 130				09/15/25 08:12	09/18/25 19:55	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1310		10.1		mg/Kg			09/15/25 20:39	1

Client Sample ID: HA-1

Lab Sample ID: 890-8790-4

Date Collected: 09/12/25 08:15

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 13:18	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 13:18	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 13:18	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/15/25 10:21	09/15/25 13:18	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 13:18	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/15/25 10:21	09/15/25 13:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	136	S1+	70 - 130				09/15/25 10:21	09/15/25 13:18	1
1,4-Difluorobenzene (Surr)	97		70 - 130				09/15/25 10:21	09/15/25 13:18	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/15/25 13:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			09/18/25 20:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		09/15/25 08:12	09/18/25 20:10	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		09/15/25 08:12	09/18/25 20:10	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		09/15/25 08:12	09/18/25 20:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130				09/15/25 08:12	09/18/25 20:10	1
o-Terphenyl	94		70 - 130				09/15/25 08:12	09/18/25 20:10	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-1

Lab Sample ID: 890-8790-4

Date Collected: 09/12/25 08:15

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 3

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	614		10.0		mg/Kg			09/15/25 20:44	1

Client Sample ID: HA-1

Lab Sample ID: 890-8790-5

Date Collected: 09/12/25 08:20

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 13:38	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 13:38	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 13:38	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/15/25 10:21	09/15/25 13:38	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 13:38	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/15/25 10:21	09/15/25 13:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	137	S1+	70 - 130				09/15/25 10:21	09/15/25 13:38	1
1,4-Difluorobenzene (Surr)	86		70 - 130				09/15/25 10:21	09/15/25 13:38	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			09/15/25 13:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/18/25 20:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 20:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 20:25	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 20:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130				09/15/25 08:12	09/18/25 20:25	1
o-Terphenyl	97		70 - 130				09/15/25 08:12	09/18/25 20:25	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	443		10.1		mg/Kg			09/15/25 20:50	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-1

Lab Sample ID: 890-8790-6

Date Collected: 09/12/25 08:25

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 13:59	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 13:59	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 13:59	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/15/25 10:21	09/15/25 13:59	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 13:59	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/15/25 10:21	09/15/25 13:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	133	S1+	70 - 130	09/15/25 10:21	09/15/25 13:59	1
1,4-Difluorobenzene (Surr)	78		70 - 130	09/15/25 10:21	09/15/25 13:59	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/15/25 13:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/18/25 20:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 20:40	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 20:40	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 20:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130	09/15/25 08:12	09/18/25 20:40	1
o-Terphenyl	95		70 - 130	09/15/25 08:12	09/18/25 20:40	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	264		9.92		mg/Kg			09/15/25 21:07	1

Client Sample ID: HA-1

Lab Sample ID: 890-8790-7

Date Collected: 09/12/25 08:30

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 14:19	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 14:19	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 14:19	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/15/25 10:21	09/15/25 14:19	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 14:19	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/15/25 10:21	09/15/25 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	128		70 - 130	09/15/25 10:21	09/15/25 14:19	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-1

Lab Sample ID: 890-8790-7

Date Collected: 09/12/25 08:30

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 6

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	89		70 - 130	09/15/25 10:21	09/15/25 14:19	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/15/25 14:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/18/25 20:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/15/25 08:12	09/18/25 20:55	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/25 08:12	09/18/25 20:55	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/25 08:12	09/18/25 20:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130				09/15/25 08:12	09/18/25 20:55	1
o-Terphenyl	92		70 - 130				09/15/25 08:12	09/18/25 20:55	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	206		9.94		mg/Kg			09/15/25 21:12	1

Client Sample ID: HA-2

Lab Sample ID: 890-8790-8

Date Collected: 09/12/25 08:35

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		09/15/25 10:21	09/15/25 14:40	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/15/25 10:21	09/15/25 14:40	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/15/25 10:21	09/15/25 14:40	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		09/15/25 10:21	09/15/25 14:40	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		09/15/25 10:21	09/15/25 14:40	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		09/15/25 10:21	09/15/25 14:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	132	S1+	70 - 130	09/15/25 10:21	09/15/25 14:40	1
1,4-Difluorobenzene (Surr)	86		70 - 130	09/15/25 10:21	09/15/25 14:40	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			09/15/25 14:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/18/25 21:10	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-2

Lab Sample ID: 890-8790-8

Date Collected: 09/12/25 08:35

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 21:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 21:10	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 21:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130				09/15/25 08:12	09/18/25 21:10	1
o-Terphenyl	95		70 - 130				09/15/25 08:12	09/18/25 21:10	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3690		49.8		mg/Kg			09/15/25 21:18	5

Client Sample ID: HA-2

Lab Sample ID: 890-8790-9

Date Collected: 09/12/25 08:40

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/15/25 10:21	09/15/25 15:00	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/15/25 10:21	09/15/25 15:00	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		09/15/25 10:21	09/15/25 15:00	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		09/15/25 10:21	09/15/25 15:00	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		09/15/25 10:21	09/15/25 15:00	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		09/15/25 10:21	09/15/25 15:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	141	S1+	70 - 130				09/15/25 10:21	09/15/25 15:00	1
1,4-Difluorobenzene (Surr)	91		70 - 130				09/15/25 10:21	09/15/25 15:00	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			09/15/25 15:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/18/25 21:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/15/25 08:12	09/18/25 21:25	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/25 08:12	09/18/25 21:25	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/25 08:12	09/18/25 21:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130				09/15/25 08:12	09/18/25 21:25	1
o-Terphenyl	95		70 - 130				09/15/25 08:12	09/18/25 21:25	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-2

Lab Sample ID: 890-8790-9

Date Collected: 09/12/25 08:40

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3320		49.6		mg/Kg			09/15/25 21:24	5

Client Sample ID: HA-2

Lab Sample ID: 890-8790-10

Date Collected: 09/12/25 08:45

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 15:21	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 15:21	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 15:21	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/15/25 10:21	09/15/25 15:21	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 15:21	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/15/25 10:21	09/15/25 15:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	45	S1-	70 - 130				09/15/25 10:21	09/15/25 15:21	1
1,4-Difluorobenzene (Surr)	84		70 - 130				09/15/25 10:21	09/15/25 15:21	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/15/25 15:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/18/25 21:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/15/25 08:12	09/18/25 21:40	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/25 08:12	09/18/25 21:40	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/25 08:12	09/18/25 21:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130				09/15/25 08:12	09/18/25 21:40	1
o-Terphenyl	90		70 - 130				09/15/25 08:12	09/18/25 21:40	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2010		49.9		mg/Kg			09/15/25 21:29	5

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-2

Lab Sample ID: 890-8790-11

Date Collected: 09/12/25 08:50

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 16:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 16:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 16:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/15/25 10:21	09/15/25 16:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 16:55	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/15/25 10:21	09/15/25 16:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	139	S1+	70 - 130	09/15/25 10:21	09/15/25 16:55	1
1,4-Difluorobenzene (Surr)	93		70 - 130	09/15/25 10:21	09/15/25 16:55	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			09/15/25 16:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/18/25 22:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 22:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 22:10	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 22:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130	09/15/25 08:12	09/18/25 22:10	1
o-Terphenyl	90		70 - 130	09/15/25 08:12	09/18/25 22:10	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1180		9.94		mg/Kg			09/15/25 21:35	1

Client Sample ID: HA-2

Lab Sample ID: 890-8790-12

Date Collected: 09/12/25 08:55

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/15/25 10:21	09/15/25 17:15	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/15/25 10:21	09/15/25 17:15	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		09/15/25 10:21	09/15/25 17:15	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		09/15/25 10:21	09/15/25 17:15	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		09/15/25 10:21	09/15/25 17:15	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		09/15/25 10:21	09/15/25 17:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	126		70 - 130	09/15/25 10:21	09/15/25 17:15	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-2

Lab Sample ID: 890-8790-12

Date Collected: 09/12/25 08:55

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 4

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	104		70 - 130	09/15/25 10:21	09/15/25 17:15	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			09/15/25 17:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			09/18/25 22:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/15/25 08:12	09/18/25 22:26	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/15/25 08:12	09/18/25 22:26	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/15/25 08:12	09/18/25 22:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130				09/15/25 08:12	09/18/25 22:26	1
o-Terphenyl	92		70 - 130				09/15/25 08:12	09/18/25 22:26	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	890		9.92		mg/Kg			09/15/25 21:52	1

Client Sample ID: HA-2

Lab Sample ID: 890-8790-13

Date Collected: 09/12/25 09:00

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:21	09/15/25 17:36	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:21	09/15/25 17:36	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:21	09/15/25 17:36	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/15/25 10:21	09/15/25 17:36	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:21	09/15/25 17:36	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/15/25 10:21	09/15/25 17:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	130		70 - 130	09/15/25 10:21	09/15/25 17:36	1
1,4-Difluorobenzene (Surr)	99		70 - 130	09/15/25 10:21	09/15/25 17:36	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/15/25 17:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/18/25 22:41	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-2

Lab Sample ID: 890-8790-13

Date Collected: 09/12/25 09:00

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 22:41	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 22:41	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 22:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130				09/15/25 08:12	09/18/25 22:41	1
o-Terphenyl	92		70 - 130				09/15/25 08:12	09/18/25 22:41	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1740		50.2		mg/Kg			09/15/25 21:58	5

Client Sample ID: HA-2

Lab Sample ID: 890-8790-14

Date Collected: 09/12/25 09:05

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 17:56	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 17:56	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 17:56	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/15/25 10:21	09/15/25 17:56	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 17:56	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/15/25 10:21	09/15/25 17:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	131	S1+	70 - 130				09/15/25 10:21	09/15/25 17:56	1
1,4-Difluorobenzene (Surr)	88		70 - 130				09/15/25 10:21	09/15/25 17:56	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/15/25 17:56	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			09/18/25 22:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/15/25 08:12	09/18/25 22:57	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/15/25 08:12	09/18/25 22:57	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/15/25 08:12	09/18/25 22:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130				09/15/25 08:12	09/18/25 22:57	1
o-Terphenyl	89		70 - 130				09/15/25 08:12	09/18/25 22:57	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-2

Lab Sample ID: 890-8790-14

Date Collected: 09/12/25 09:05

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 6

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1470		10.1		mg/Kg			09/15/25 22:15	1

Client Sample ID: HA-3

Lab Sample ID: 890-8790-15

Date Collected: 09/12/25 09:10

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 18:17	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 18:17	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 18:17	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/15/25 10:21	09/15/25 18:17	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 18:17	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/15/25 10:21	09/15/25 18:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	138	S1+	70 - 130				09/15/25 10:21	09/15/25 18:17	1
1,4-Difluorobenzene (Surr)	95		70 - 130				09/15/25 10:21	09/15/25 18:17	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/15/25 18:17	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/18/25 23:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/15/25 08:12	09/18/25 23:11	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/25 08:12	09/18/25 23:11	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/25 08:12	09/18/25 23:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130				09/15/25 08:12	09/18/25 23:11	1
o-Terphenyl	97		70 - 130				09/15/25 08:12	09/18/25 23:11	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6450		101		mg/Kg			09/15/25 22:20	10

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-3

Lab Sample ID: 890-8790-16

Date Collected: 09/12/25 09:15

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 18:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 18:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 18:37	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/15/25 10:21	09/15/25 18:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 18:37	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/15/25 10:21	09/15/25 18:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	63	S1-	70 - 130	09/15/25 10:21	09/15/25 18:37	1
1,4-Difluorobenzene (Surr)	71		70 - 130	09/15/25 10:21	09/15/25 18:37	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/15/25 18:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/18/25 23:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 23:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 23:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 23:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130	09/15/25 08:12	09/18/25 23:28	1
o-Terphenyl	92		70 - 130	09/15/25 08:12	09/18/25 23:28	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3130		49.8		mg/Kg			09/15/25 22:26	5

Client Sample ID: HA-3

Lab Sample ID: 890-8790-17

Date Collected: 09/12/25 09:20

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:21	09/15/25 18:57	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:21	09/15/25 18:57	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:21	09/15/25 18:57	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/15/25 10:21	09/15/25 18:57	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:21	09/15/25 18:57	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/15/25 10:21	09/15/25 18:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	126		70 - 130	09/15/25 10:21	09/15/25 18:57	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-3

Lab Sample ID: 890-8790-17

Date Collected: 09/12/25 09:20

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 2

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	84		70 - 130	09/15/25 10:21	09/15/25 18:57	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/15/25 18:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/18/25 23:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/15/25 08:12	09/18/25 23:42	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/25 08:12	09/18/25 23:42	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/25 08:12	09/18/25 23:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130				09/15/25 08:12	09/18/25 23:42	1
o-Terphenyl	92		70 - 130				09/15/25 08:12	09/18/25 23:42	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3800		49.6		mg/Kg			09/15/25 22:31	5

Client Sample ID: HA-3

Lab Sample ID: 890-8790-18

Date Collected: 09/12/25 09:25

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 19:18	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 19:18	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 19:18	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/15/25 10:21	09/15/25 19:18	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 19:18	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/15/25 10:21	09/15/25 19:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	142	S1+	70 - 130	09/15/25 10:21	09/15/25 19:18	1
1,4-Difluorobenzene (Surr)	91		70 - 130	09/15/25 10:21	09/15/25 19:18	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			09/15/25 19:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			09/18/25 23:58	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-3

Lab Sample ID: 890-8790-18

Date Collected: 09/12/25 09:25

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/15/25 08:12	09/18/25 23:58	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/15/25 08:12	09/18/25 23:58	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/15/25 08:12	09/18/25 23:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130				09/15/25 08:12	09/18/25 23:58	1
o-Terphenyl	94		70 - 130				09/15/25 08:12	09/18/25 23:58	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3640		49.7		mg/Kg			09/15/25 22:37	5

Client Sample ID: HA-3

Lab Sample ID: 890-8790-19

Date Collected: 09/12/25 09:30

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 19:38	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 19:38	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 19:38	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/15/25 10:21	09/15/25 19:38	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 19:38	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/15/25 10:21	09/15/25 19:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	138	S1+	70 - 130				09/15/25 10:21	09/15/25 19:38	1
1,4-Difluorobenzene (Surr)	87		70 - 130				09/15/25 10:21	09/15/25 19:38	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/15/25 19:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/19/25 00:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/19/25 00:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/19/25 00:13	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/19/25 00:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130				09/15/25 08:12	09/19/25 00:13	1
o-Terphenyl	94		70 - 130				09/15/25 08:12	09/19/25 00:13	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-3

Lab Sample ID: 890-8790-19

Date Collected: 09/12/25 09:30

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 4

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2910		50.1		mg/Kg			09/15/25 22:43	5

Client Sample ID: HA-3

Lab Sample ID: 890-8790-20

Date Collected: 09/12/25 09:35

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 19:59	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 19:59	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 19:59	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/15/25 10:21	09/15/25 19:59	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:21	09/15/25 19:59	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/15/25 10:21	09/15/25 19:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	130		70 - 130				09/15/25 10:21	09/15/25 19:59	1
1,4-Difluorobenzene (Surr)	85		70 - 130				09/15/25 10:21	09/15/25 19:59	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/15/25 19:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			09/19/25 00:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/15/25 08:12	09/19/25 00:28	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/15/25 08:12	09/19/25 00:28	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/15/25 08:12	09/19/25 00:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130				09/15/25 08:12	09/19/25 00:28	1
o-Terphenyl	92		70 - 130				09/15/25 08:12	09/19/25 00:28	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4830		101		mg/Kg			09/15/25 22:48	10

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-3

Lab Sample ID: 890-8790-21

Date Collected: 09/12/25 09:40

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 12:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 12:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 12:37	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/15/25 10:25	09/15/25 12:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 12:37	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/15/25 10:25	09/15/25 12:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	09/15/25 10:25	09/15/25 12:37	1
1,4-Difluorobenzene (Surr)	104		70 - 130	09/15/25 10:25	09/15/25 12:37	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/15/25 12:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/18/25 18:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/15/25 08:13	09/18/25 18:53	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/25 08:13	09/18/25 18:53	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/25 08:13	09/18/25 18:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130	09/15/25 08:13	09/18/25 18:53	1
o-Terphenyl	116		70 - 130	09/15/25 08:13	09/18/25 18:53	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2710	F1	49.5		mg/Kg			09/15/25 20:30	5

Client Sample ID: HA-4

Lab Sample ID: 890-8790-22

Date Collected: 09/12/25 09:45

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:25	09/15/25 12:57	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:25	09/15/25 12:57	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:25	09/15/25 12:57	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/15/25 10:25	09/15/25 12:57	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:25	09/15/25 12:57	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/15/25 10:25	09/15/25 12:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	09/15/25 10:25	09/15/25 12:57	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-4

Lab Sample ID: 890-8790-22

Date Collected: 09/12/25 09:45

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 0.5

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	108		70 - 130	09/15/25 10:25	09/15/25 12:57	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/15/25 12:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2		mg/Kg			09/18/25 19:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2		mg/Kg		09/15/25 08:13	09/18/25 19:39	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		09/15/25 08:13	09/18/25 19:39	1
Oil Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		09/15/25 08:13	09/18/25 19:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130				09/15/25 08:13	09/18/25 19:39	1
o-Terphenyl	122		70 - 130				09/15/25 08:13	09/18/25 19:39	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3600		49.6		mg/Kg			09/15/25 20:47	5

Client Sample ID: HA-4

Lab Sample ID: 890-8790-23

Date Collected: 09/12/25 09:50

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00202		0.00199		mg/Kg		09/15/25 10:25	09/15/25 13:18	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:25	09/15/25 13:18	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:25	09/15/25 13:18	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/15/25 10:25	09/15/25 13:18	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:25	09/15/25 13:18	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/15/25 10:25	09/15/25 13:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	09/15/25 10:25	09/15/25 13:18	1
1,4-Difluorobenzene (Surr)	103		70 - 130	09/15/25 10:25	09/15/25 13:18	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/15/25 13:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/18/25 19:55	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-4

Lab Sample ID: 890-8790-23

Date Collected: 09/12/25 09:50

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/15/25 08:13	09/18/25 19:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/25 08:13	09/18/25 19:55	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/25 08:13	09/18/25 19:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	111		70 - 130				09/15/25 08:13	09/18/25 19:55	1
o-Terphenyl	120		70 - 130				09/15/25 08:13	09/18/25 19:55	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1440		49.8		mg/Kg			09/15/25 20:53	5

Client Sample ID: HA-4

Lab Sample ID: 890-8790-24

Date Collected: 09/12/25 09:55

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:25	09/15/25 13:38	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:25	09/15/25 13:38	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:25	09/15/25 13:38	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/15/25 10:25	09/15/25 13:38	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:25	09/15/25 13:38	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/15/25 10:25	09/15/25 13:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130				09/15/25 10:25	09/15/25 13:38	1
1,4-Difluorobenzene (Surr)	100		70 - 130				09/15/25 10:25	09/15/25 13:38	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/15/25 13:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			09/18/25 20:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		09/15/25 08:13	09/18/25 20:10	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		09/15/25 08:13	09/18/25 20:10	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		09/15/25 08:13	09/18/25 20:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	115		70 - 130				09/15/25 08:13	09/18/25 20:10	1
o-Terphenyl	121		70 - 130				09/15/25 08:13	09/18/25 20:10	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-4

Lab Sample ID: 890-8790-24

Date Collected: 09/12/25 09:55

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 2

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3810		99.8		mg/Kg			09/15/25 20:59	10

Client Sample ID: HA-4

Lab Sample ID: 890-8790-25

Date Collected: 09/12/25 10:00

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 13:59	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 13:59	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 13:59	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/15/25 10:25	09/15/25 13:59	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 13:59	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/15/25 10:25	09/15/25 13:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130				09/15/25 10:25	09/15/25 13:59	1
1,4-Difluorobenzene (Surr)	101		70 - 130				09/15/25 10:25	09/15/25 13:59	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			09/15/25 13:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/18/25 20:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/15/25 08:13	09/18/25 20:25	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/25 08:13	09/18/25 20:25	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/25 08:13	09/18/25 20:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130				09/15/25 08:13	09/18/25 20:25	1
o-Terphenyl	118		70 - 130				09/15/25 08:13	09/18/25 20:25	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1930		49.7		mg/Kg			09/15/25 21:05	5

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-4

Lab Sample ID: 890-8790-26

Date Collected: 09/12/25 10:05

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00203		0.00199		mg/Kg		09/15/25 10:25	09/15/25 14:19	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:25	09/15/25 14:19	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:25	09/15/25 14:19	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/15/25 10:25	09/15/25 14:19	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:25	09/15/25 14:19	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/15/25 10:25	09/15/25 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130	09/15/25 10:25	09/15/25 14:19	1
1,4-Difluorobenzene (Surr)	99		70 - 130	09/15/25 10:25	09/15/25 14:19	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/15/25 14:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			09/18/25 20:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/15/25 08:13	09/18/25 20:40	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/15/25 08:13	09/18/25 20:40	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/15/25 08:13	09/18/25 20:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130	09/15/25 08:13	09/18/25 20:40	1
o-Terphenyl	121		70 - 130	09/15/25 08:13	09/18/25 20:40	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	846		9.94		mg/Kg			09/15/25 21:22	1

Client Sample ID: HA-4

Lab Sample ID: 890-8790-27

Date Collected: 09/12/25 10:10

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00232		0.00200		mg/Kg		09/15/25 10:25	09/15/25 14:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 14:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 14:40	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/15/25 10:25	09/15/25 14:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 14:40	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/15/25 10:25	09/15/25 14:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	09/15/25 10:25	09/15/25 14:40	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-4

Lab Sample ID: 890-8790-27

Date Collected: 09/12/25 10:10

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 5

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	104		70 - 130	09/15/25 10:25	09/15/25 14:40	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/15/25 14:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/18/25 20:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/15/25 08:13	09/18/25 20:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/25 08:13	09/18/25 20:55	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/25 08:13	09/18/25 20:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130				09/15/25 08:13	09/18/25 20:55	1
o-Terphenyl	125		70 - 130				09/15/25 08:13	09/18/25 20:55	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	105		9.98		mg/Kg			09/15/25 21:28	1

Client Sample ID: HA-4

Lab Sample ID: 890-8790-28

Date Collected: 09/12/25 10:15

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00240		0.00202		mg/Kg		09/15/25 10:25	09/15/25 15:00	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/15/25 10:25	09/15/25 15:00	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/15/25 10:25	09/15/25 15:00	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		09/15/25 10:25	09/15/25 15:00	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		09/15/25 10:25	09/15/25 15:00	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		09/15/25 10:25	09/15/25 15:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	09/15/25 10:25	09/15/25 15:00	1
1,4-Difluorobenzene (Surr)	100		70 - 130	09/15/25 10:25	09/15/25 15:00	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			09/15/25 15:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			09/18/25 21:10	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-4

Lab Sample ID: 890-8790-28

Date Collected: 09/12/25 10:15

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3		mg/Kg		09/15/25 08:13	09/18/25 21:10	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		09/15/25 08:13	09/18/25 21:10	1
Oil Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		09/15/25 08:13	09/18/25 21:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130				09/15/25 08:13	09/18/25 21:10	1
o-Terphenyl	120		70 - 130				09/15/25 08:13	09/18/25 21:10	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	112		9.96		mg/Kg			09/15/25 21:34	1

Surrogate Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-8790-1	HA-1	149 S1+	95
890-8790-1 MS	HA-1	130	85
890-8790-1 MSD	HA-1	144 S1+	89
890-8790-2	HA-1	128	105
890-8790-3	HA-1	137 S1+	72
890-8790-4	HA-1	136 S1+	97
890-8790-5	HA-1	137 S1+	86
890-8790-6	HA-1	133 S1+	78
890-8790-7	HA-1	128	89
890-8790-8	HA-2	132 S1+	86
890-8790-9	HA-2	141 S1+	91
890-8790-10	HA-2	45 S1-	84
890-8790-11	HA-2	139 S1+	93
890-8790-12	HA-2	126	104
890-8790-13	HA-2	130	99
890-8790-14	HA-2	131 S1+	88
890-8790-15	HA-3	138 S1+	95
890-8790-16	HA-3	63 S1-	71
890-8790-17	HA-3	126	84
890-8790-18	HA-3	142 S1+	91
890-8790-19	HA-3	138 S1+	87
890-8790-20	HA-3	130	85
890-8790-21	HA-3	97	104
890-8790-21 MS	HA-3	109	99
890-8790-21 MSD	HA-3	102	103
890-8790-22	HA-4	100	108
890-8790-23	HA-4	96	103
890-8790-24	HA-4	88	100
890-8790-25	HA-4	98	101
890-8790-26	HA-4	94	99
890-8790-27	HA-4	101	104
890-8790-28	HA-4	102	100
LCS 880-118877/1-A	Lab Control Sample	127	85
LCS 880-118887/1-A	Lab Control Sample	101	96
LCSD 880-118877/2-A	Lab Control Sample Dup	132 S1+	91
LCSD 880-118887/2-A	Lab Control Sample Dup	103	96
MB 880-118877/5-A	Method Blank	138 S1+	90
MB 880-118887/5-A	Method Blank	82	113
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
890-8790-1	HA-1	92	95

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Surrogate Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-8790-1 MS	HA-1	107	98
890-8790-1 MSD	HA-1	106	97
890-8790-2	HA-1	96	97
890-8790-3	HA-1	92	92
890-8790-4	HA-1	93	94
890-8790-5	HA-1	96	97
890-8790-6	HA-1	95	95
890-8790-7	HA-1	90	92
890-8790-8	HA-2	93	95
890-8790-9	HA-2	94	95
890-8790-10	HA-2	90	90
890-8790-11	HA-2	89	90
890-8790-12	HA-2	90	92
890-8790-13	HA-2	92	92
890-8790-14	HA-2	88	89
890-8790-15	HA-3	96	97
890-8790-16	HA-3	90	92
890-8790-17	HA-3	91	92
890-8790-18	HA-3	93	94
890-8790-19	HA-3	93	94
890-8790-20	HA-3	92	92
890-8790-21	HA-3	108	116
890-8790-21 MS	HA-3	98	112
890-8790-21 MSD	HA-3	99	110
890-8790-22	HA-4	112	122
890-8790-23	HA-4	111	120
890-8790-24	HA-4	115	121
890-8790-25	HA-4	110	118
890-8790-26	HA-4	112	121
890-8790-27	HA-4	114	125
890-8790-28	HA-4	110	120
LCS 880-118846/2-A	Lab Control Sample	112	125
LCS 880-118847/2-A	Lab Control Sample	127	149 S1+
LCSD 880-118846/3-A	Lab Control Sample Dup	123	114
LCSD 880-118847/3-A	Lab Control Sample Dup	128	146 S1+
MB 880-118846/1-A	Method Blank	78	81
MB 880-118847/1-A	Method Blank	89	96

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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QC Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-118877/5-A

Matrix: Solid

Analysis Batch: 118848

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 118877

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 11:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 11:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 11:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/15/25 10:21	09/15/25 11:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:21	09/15/25 11:55	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/15/25 10:21	09/15/25 11:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	138	S1+	70 - 130	09/15/25 10:21	09/15/25 11:55	1
1,4-Difluorobenzene (Surr)	90		70 - 130	09/15/25 10:21	09/15/25 11:55	1

Lab Sample ID: LCS 880-118877/1-A

Matrix: Solid

Analysis Batch: 118848

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 118877

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09561		mg/Kg		96	70 - 130
Toluene	0.100	0.1006		mg/Kg		101	70 - 130
Ethylbenzene	0.100	0.1180		mg/Kg		118	70 - 130
m-Xylene & p-Xylene	0.200	0.2416		mg/Kg		121	70 - 130
o-Xylene	0.100	0.1261		mg/Kg		126	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	127		70 - 130
1,4-Difluorobenzene (Surr)	85		70 - 130

Lab Sample ID: LCSD 880-118877/2-A

Matrix: Solid

Analysis Batch: 118848

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 118877

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1055		mg/Kg		105	70 - 130	10	35
Toluene	0.100	0.1048		mg/Kg		105	70 - 130	4	35
Ethylbenzene	0.100	0.1210		mg/Kg		121	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.2446		mg/Kg		122	70 - 130	1	35
o-Xylene	0.100	0.1268		mg/Kg		127	70 - 130	1	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	132	S1+	70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

Lab Sample ID: 890-8790-1 MS

Matrix: Solid

Analysis Batch: 118848

Client Sample ID: HA-1

Prep Type: Total/NA

Prep Batch: 118877

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.100	0.09827		mg/Kg		98	70 - 130
Toluene	<0.00200	U	0.100	0.1040		mg/Kg		104	70 - 130

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QC Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

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

Lab Sample ID: 890-8790-1 MS

Matrix: Solid

Analysis Batch: 118848

Client Sample ID: HA-1

Prep Type: Total/NA

Prep Batch: 118877

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.100	0.1229		mg/Kg		123	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.2497		mg/Kg		125	70 - 130
o-Xylene	<0.00200	U F1	0.100	0.1274		mg/Kg		127	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	130		70 - 130
1,4-Difluorobenzene (Surr)	85		70 - 130

Lab Sample ID: 890-8790-1 MSD

Matrix: Solid

Analysis Batch: 118848

Client Sample ID: HA-1

Prep Type: Total/NA

Prep Batch: 118877

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.1096		mg/Kg		110	70 - 130	11	35
Toluene	<0.00200	U	0.100	0.1107		mg/Kg		111	70 - 130	6	35
Ethylbenzene	<0.00200	U	0.100	0.1281		mg/Kg		128	70 - 130	4	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.2595		mg/Kg		130	70 - 130	4	35
o-Xylene	<0.00200	U F1	0.100	0.1334	F1	mg/Kg		133	70 - 130	5	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	144	S1+	70 - 130
1,4-Difluorobenzene (Surr)	89		70 - 130

Lab Sample ID: MB 880-118887/5-A

Matrix: Solid

Analysis Batch: 118850

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 118887

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 12:15	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 12:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 12:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/15/25 10:25	09/15/25 12:15	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 12:15	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/15/25 10:25	09/15/25 12:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		70 - 130	09/15/25 10:25	09/15/25 12:15	1
1,4-Difluorobenzene (Surr)	113		70 - 130	09/15/25 10:25	09/15/25 12:15	1

Lab Sample ID: LCS 880-118887/1-A

Matrix: Solid

Analysis Batch: 118850

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 118887

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1065		mg/Kg		107	70 - 130
Toluene	0.100	0.1024		mg/Kg		102	70 - 130
Ethylbenzene	0.100	0.1045		mg/Kg		105	70 - 130
m-Xylene & p-Xylene	0.200	0.2012		mg/Kg		101	70 - 130

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QC Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

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

Lab Sample ID: LCS 880-118887/1-A

Matrix: Solid

Analysis Batch: 118850

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 118887

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
o-Xylene	0.100	0.1020		mg/Kg		102	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: LCSD 880-118887/2-A

Matrix: Solid

Analysis Batch: 118850

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 118887

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1093		mg/Kg		109	70 - 130	3	35
Toluene	0.100	0.1040		mg/Kg		104	70 - 130	2	35
Ethylbenzene	0.100	0.1057		mg/Kg		106	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.2036		mg/Kg		102	70 - 130	1	35
o-Xylene	0.100	0.1036		mg/Kg		104	70 - 130	2	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: 890-8790-21 MS

Matrix: Solid

Analysis Batch: 118850

Client Sample ID: HA-3

Prep Type: Total/NA

Prep Batch: 118887

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.100	0.09688		mg/Kg		95	70 - 130
Toluene	<0.00200	U	0.100	0.09457		mg/Kg		95	70 - 130
Ethylbenzene	<0.00200	U	0.100	0.09782		mg/Kg		98	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1896		mg/Kg		95	70 - 130
o-Xylene	<0.00200	U	0.100	0.09470		mg/Kg		95	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: 890-8790-21 MSD

Matrix: Solid

Analysis Batch: 118850

Client Sample ID: HA-3

Prep Type: Total/NA

Prep Batch: 118887

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.1074		mg/Kg		106	70 - 130	10	35
Toluene	<0.00200	U	0.100	0.1029		mg/Kg		103	70 - 130	8	35
Ethylbenzene	<0.00200	U	0.100	0.1044		mg/Kg		104	70 - 130	7	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.2032		mg/Kg		102	70 - 130	7	35
o-Xylene	<0.00200	U	0.100	0.1016		mg/Kg		102	70 - 130	7	35

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QC Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

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

Lab Sample ID: 890-8790-21 MSD

Matrix: Solid

Analysis Batch: 118850

Client Sample ID: HA-3

Prep Type: Total/NA

Prep Batch: 118887

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

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

Lab Sample ID: MB 880-118846/1-A

Matrix: Solid

Analysis Batch: 119192

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 118846

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 18:09	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 18:09	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/25 08:12	09/18/25 18:09	1
Surrogate	MB MB		Limits				Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier							
1-Chlorooctane	78		70 - 130				09/15/25 08:12	09/18/25 18:09	1
o-Terphenyl	81		70 - 130				09/15/25 08:12	09/18/25 18:09	1

Lab Sample ID: LCS 880-118846/2-A

Matrix: Solid

Analysis Batch: 119192

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 118846

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	1000	1156		mg/Kg		116	70 - 130		
Diesel Range Organics (Over C10-C28)	1000	1210		mg/Kg		121	70 - 130		
Surrogate	LCS LCS		Limits						
	%Recovery	Qualifier							
1-Chlorooctane	112		70 - 130						
o-Terphenyl	125		70 - 130						

Lab Sample ID: LCSD 880-118846/3-A

Matrix: Solid

Analysis Batch: 119192

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 118846

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1086		mg/Kg		109	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	1000	1040		mg/Kg		104	70 - 130	15	20
Surrogate	LCSD LCSD		Limits						
	%Recovery	Qualifier							
1-Chlorooctane	123		70 - 130						
o-Terphenyl	114		70 - 130						

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QC Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

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

Lab Sample ID: 890-8790-1 MS

Matrix: Solid

Analysis Batch: 119192

Client Sample ID: HA-1

Prep Type: Total/NA

Prep Batch: 118846

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	906.3		mg/Kg		91	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	999	842.6		mg/Kg		84	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane	107		70 - 130						
o-Terphenyl	98		70 - 130						

Lab Sample ID: 890-8790-1 MSD

Matrix: Solid

Analysis Batch: 119192

Client Sample ID: HA-1

Prep Type: Total/NA

Prep Batch: 118846

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	901.0		mg/Kg		90	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	839.7		mg/Kg		84	70 - 130	0	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	106		70 - 130								
o-Terphenyl	97		70 - 130								

Lab Sample ID: MB 880-118847/1-A

Matrix: Solid

Analysis Batch: 119194

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 118847

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/15/25 08:13	09/18/25 18:09	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/25 08:13	09/18/25 18:09	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/25 08:13	09/18/25 18:09	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130				09/15/25 08:13	09/18/25 18:09	1
o-Terphenyl	96		70 - 130				09/15/25 08:13	09/18/25 18:09	1

Lab Sample ID: LCS 880-118847/2-A

Matrix: Solid

Analysis Batch: 119194

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 118847

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1060		mg/Kg		106	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1006		mg/Kg		101	70 - 130

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QC Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

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

Lab Sample ID: LCS 880-118847/2-A

Matrix: Solid

Analysis Batch: 119194

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 118847

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	127		70 - 130
o-Terphenyl	149	S1+	70 - 130

Lab Sample ID: LCSD 880-118847/3-A

Matrix: Solid

Analysis Batch: 119194

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 118847

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1083		mg/Kg		108	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	1006		mg/Kg		101	70 - 130	0	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	128		70 - 130
o-Terphenyl	146	S1+	70 - 130

Lab Sample ID: 890-8790-21 MS

Matrix: Solid

Analysis Batch: 119194

Client Sample ID: HA-3

Prep Type: Total/NA

Prep Batch: 118847

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	900.7		mg/Kg		90	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	999	766.4		mg/Kg		77	70 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	98		70 - 130
o-Terphenyl	112		70 - 130

Lab Sample ID: 890-8790-21 MSD

Matrix: Solid

Analysis Batch: 119194

Client Sample ID: HA-3

Prep Type: Total/NA

Prep Batch: 118847

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	904.2		mg/Kg		91	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<50.0	U	999	780.2		mg/Kg		78	70 - 130	2	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	110		70 - 130

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QC Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-118869/1-A

Matrix: Solid

Analysis Batch: 118944

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			09/15/25 19:59	1

Lab Sample ID: LCS 880-118869/2-A

Matrix: Solid

Analysis Batch: 118944

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	261.0		mg/Kg		104	90 - 110

Lab Sample ID: LCSD 880-118869/3-A

Matrix: Solid

Analysis Batch: 118944

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	261.4		mg/Kg		105	90 - 110	0	20

Lab Sample ID: 890-8790-1 MS

Matrix: Solid

Analysis Batch: 118944

Client Sample ID: HA-1

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	2980	F1	1260	4454	F1	mg/Kg		117	90 - 110

Lab Sample ID: 890-8790-1 MSD

Matrix: Solid

Analysis Batch: 118944

Client Sample ID: HA-1

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	2980	F1	1260	4462	F1	mg/Kg		118	90 - 110	0	20

Lab Sample ID: 890-8790-11 MS

Matrix: Solid

Analysis Batch: 118944

Client Sample ID: HA-2

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1180		249	1377	4	mg/Kg		77	90 - 110

Lab Sample ID: 890-8790-11 MSD

Matrix: Solid

Analysis Batch: 118944

Client Sample ID: HA-2

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1180		249	1380	4	mg/Kg		79	90 - 110	0	20

Lab Sample ID: MB 880-118870/1-A

Matrix: Solid

Analysis Batch: 118945

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			09/15/25 20:12	1

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QC Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCS 880-118870/2-A

Matrix: Solid

Analysis Batch: 118945

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	271.2		mg/Kg		108	90 - 110

Lab Sample ID: LCSD 880-118870/3-A

Matrix: Solid

Analysis Batch: 118945

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	270.9		mg/Kg		108	90 - 110	0	20

Lab Sample ID: 890-8790-21 MS

Matrix: Solid

Analysis Batch: 118945

Client Sample ID: HA-3

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	2710	F1	1240	4539	F1	mg/Kg		148	90 - 110

Lab Sample ID: 890-8790-21 MSD

Matrix: Solid

Analysis Batch: 118945

Client Sample ID: HA-3

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	2710	F1	1240	4529	F1	mg/Kg		147	90 - 110	0	20

QC Association Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

GC VOA

Analysis Batch: 118848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8790-1	HA-1	Total/NA	Solid	8021B	118877
890-8790-2	HA-1	Total/NA	Solid	8021B	118877
890-8790-3	HA-1	Total/NA	Solid	8021B	118877
890-8790-4	HA-1	Total/NA	Solid	8021B	118877
890-8790-5	HA-1	Total/NA	Solid	8021B	118877
890-8790-6	HA-1	Total/NA	Solid	8021B	118877
890-8790-7	HA-1	Total/NA	Solid	8021B	118877
890-8790-8	HA-2	Total/NA	Solid	8021B	118877
890-8790-9	HA-2	Total/NA	Solid	8021B	118877
890-8790-10	HA-2	Total/NA	Solid	8021B	118877
890-8790-11	HA-2	Total/NA	Solid	8021B	118877
890-8790-12	HA-2	Total/NA	Solid	8021B	118877
890-8790-13	HA-2	Total/NA	Solid	8021B	118877
890-8790-14	HA-2	Total/NA	Solid	8021B	118877
890-8790-15	HA-3	Total/NA	Solid	8021B	118877
890-8790-16	HA-3	Total/NA	Solid	8021B	118877
890-8790-17	HA-3	Total/NA	Solid	8021B	118877
890-8790-18	HA-3	Total/NA	Solid	8021B	118877
890-8790-19	HA-3	Total/NA	Solid	8021B	118877
890-8790-20	HA-3	Total/NA	Solid	8021B	118877
MB 880-118877/5-A	Method Blank	Total/NA	Solid	8021B	118877
LCS 880-118877/1-A	Lab Control Sample	Total/NA	Solid	8021B	118877
LCSD 880-118877/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	118877
890-8790-1 MS	HA-1	Total/NA	Solid	8021B	118877
890-8790-1 MSD	HA-1	Total/NA	Solid	8021B	118877

Analysis Batch: 118850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8790-21	HA-3	Total/NA	Solid	8021B	118887
890-8790-22	HA-4	Total/NA	Solid	8021B	118887
890-8790-23	HA-4	Total/NA	Solid	8021B	118887
890-8790-24	HA-4	Total/NA	Solid	8021B	118887
890-8790-25	HA-4	Total/NA	Solid	8021B	118887
890-8790-26	HA-4	Total/NA	Solid	8021B	118887
890-8790-27	HA-4	Total/NA	Solid	8021B	118887
890-8790-28	HA-4	Total/NA	Solid	8021B	118887
MB 880-118887/5-A	Method Blank	Total/NA	Solid	8021B	118887
LCS 880-118887/1-A	Lab Control Sample	Total/NA	Solid	8021B	118887
LCSD 880-118887/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	118887
890-8790-21 MS	HA-3	Total/NA	Solid	8021B	118887
890-8790-21 MSD	HA-3	Total/NA	Solid	8021B	118887

Prep Batch: 118877

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8790-1	HA-1	Total/NA	Solid	5035	
890-8790-2	HA-1	Total/NA	Solid	5035	
890-8790-3	HA-1	Total/NA	Solid	5035	
890-8790-4	HA-1	Total/NA	Solid	5035	
890-8790-5	HA-1	Total/NA	Solid	5035	
890-8790-6	HA-1	Total/NA	Solid	5035	
890-8790-7	HA-1	Total/NA	Solid	5035	

Eurofins Carlsbad

QC Association Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

GC VOA (Continued)

Prep Batch: 118877 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8790-8	HA-2	Total/NA	Solid	5035	
890-8790-9	HA-2	Total/NA	Solid	5035	
890-8790-10	HA-2	Total/NA	Solid	5035	
890-8790-11	HA-2	Total/NA	Solid	5035	
890-8790-12	HA-2	Total/NA	Solid	5035	
890-8790-13	HA-2	Total/NA	Solid	5035	
890-8790-14	HA-2	Total/NA	Solid	5035	
890-8790-15	HA-3	Total/NA	Solid	5035	
890-8790-16	HA-3	Total/NA	Solid	5035	
890-8790-17	HA-3	Total/NA	Solid	5035	
890-8790-18	HA-3	Total/NA	Solid	5035	
890-8790-19	HA-3	Total/NA	Solid	5035	
890-8790-20	HA-3	Total/NA	Solid	5035	
MB 880-118877/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-118877/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-118877/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-8790-1 MS	HA-1	Total/NA	Solid	5035	
890-8790-1 MSD	HA-1	Total/NA	Solid	5035	

Prep Batch: 118887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8790-21	HA-3	Total/NA	Solid	5035	
890-8790-22	HA-4	Total/NA	Solid	5035	
890-8790-23	HA-4	Total/NA	Solid	5035	
890-8790-24	HA-4	Total/NA	Solid	5035	
890-8790-25	HA-4	Total/NA	Solid	5035	
890-8790-26	HA-4	Total/NA	Solid	5035	
890-8790-27	HA-4	Total/NA	Solid	5035	
890-8790-28	HA-4	Total/NA	Solid	5035	
MB 880-118887/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-118887/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-118887/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-8790-21 MS	HA-3	Total/NA	Solid	5035	
890-8790-21 MSD	HA-3	Total/NA	Solid	5035	

Analysis Batch: 119028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8790-1	HA-1	Total/NA	Solid	Total BTEX	
890-8790-2	HA-1	Total/NA	Solid	Total BTEX	
890-8790-3	HA-1	Total/NA	Solid	Total BTEX	
890-8790-4	HA-1	Total/NA	Solid	Total BTEX	
890-8790-5	HA-1	Total/NA	Solid	Total BTEX	
890-8790-6	HA-1	Total/NA	Solid	Total BTEX	
890-8790-7	HA-1	Total/NA	Solid	Total BTEX	
890-8790-8	HA-2	Total/NA	Solid	Total BTEX	
890-8790-9	HA-2	Total/NA	Solid	Total BTEX	
890-8790-10	HA-2	Total/NA	Solid	Total BTEX	
890-8790-11	HA-2	Total/NA	Solid	Total BTEX	
890-8790-12	HA-2	Total/NA	Solid	Total BTEX	
890-8790-13	HA-2	Total/NA	Solid	Total BTEX	
890-8790-14	HA-2	Total/NA	Solid	Total BTEX	

Eurofins Carlsbad

QC Association Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

GC VOA (Continued)

Analysis Batch: 119028 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8790-15	HA-3	Total/NA	Solid	Total BTEX	
890-8790-16	HA-3	Total/NA	Solid	Total BTEX	
890-8790-17	HA-3	Total/NA	Solid	Total BTEX	
890-8790-18	HA-3	Total/NA	Solid	Total BTEX	
890-8790-19	HA-3	Total/NA	Solid	Total BTEX	
890-8790-20	HA-3	Total/NA	Solid	Total BTEX	
890-8790-21	HA-3	Total/NA	Solid	Total BTEX	
890-8790-22	HA-4	Total/NA	Solid	Total BTEX	
890-8790-23	HA-4	Total/NA	Solid	Total BTEX	
890-8790-24	HA-4	Total/NA	Solid	Total BTEX	
890-8790-25	HA-4	Total/NA	Solid	Total BTEX	
890-8790-26	HA-4	Total/NA	Solid	Total BTEX	
890-8790-27	HA-4	Total/NA	Solid	Total BTEX	
890-8790-28	HA-4	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 118846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8790-1	HA-1	Total/NA	Solid	8015NM Prep	
890-8790-2	HA-1	Total/NA	Solid	8015NM Prep	
890-8790-3	HA-1	Total/NA	Solid	8015NM Prep	
890-8790-4	HA-1	Total/NA	Solid	8015NM Prep	
890-8790-5	HA-1	Total/NA	Solid	8015NM Prep	
890-8790-6	HA-1	Total/NA	Solid	8015NM Prep	
890-8790-7	HA-1	Total/NA	Solid	8015NM Prep	
890-8790-8	HA-2	Total/NA	Solid	8015NM Prep	
890-8790-9	HA-2	Total/NA	Solid	8015NM Prep	
890-8790-10	HA-2	Total/NA	Solid	8015NM Prep	
890-8790-11	HA-2	Total/NA	Solid	8015NM Prep	
890-8790-12	HA-2	Total/NA	Solid	8015NM Prep	
890-8790-13	HA-2	Total/NA	Solid	8015NM Prep	
890-8790-14	HA-2	Total/NA	Solid	8015NM Prep	
890-8790-15	HA-3	Total/NA	Solid	8015NM Prep	
890-8790-16	HA-3	Total/NA	Solid	8015NM Prep	
890-8790-17	HA-3	Total/NA	Solid	8015NM Prep	
890-8790-18	HA-3	Total/NA	Solid	8015NM Prep	
890-8790-19	HA-3	Total/NA	Solid	8015NM Prep	
890-8790-20	HA-3	Total/NA	Solid	8015NM Prep	
MB 880-118846/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-118846/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-118846/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-8790-1 MS	HA-1	Total/NA	Solid	8015NM Prep	
890-8790-1 MSD	HA-1	Total/NA	Solid	8015NM Prep	

Prep Batch: 118847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8790-21	HA-3	Total/NA	Solid	8015NM Prep	
890-8790-22	HA-4	Total/NA	Solid	8015NM Prep	
890-8790-23	HA-4	Total/NA	Solid	8015NM Prep	
890-8790-24	HA-4	Total/NA	Solid	8015NM Prep	

Eurofins Carlsbad

QC Association Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

GC Semi VOA (Continued)

Prep Batch: 118847 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8790-25	HA-4	Total/NA	Solid	8015NM Prep	
890-8790-26	HA-4	Total/NA	Solid	8015NM Prep	
890-8790-27	HA-4	Total/NA	Solid	8015NM Prep	
890-8790-28	HA-4	Total/NA	Solid	8015NM Prep	
MB 880-118847/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-118847/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-118847/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-8790-21 MS	HA-3	Total/NA	Solid	8015NM Prep	
890-8790-21 MSD	HA-3	Total/NA	Solid	8015NM Prep	

Analysis Batch: 119192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8790-1	HA-1	Total/NA	Solid	8015B NM	118846
890-8790-2	HA-1	Total/NA	Solid	8015B NM	118846
890-8790-3	HA-1	Total/NA	Solid	8015B NM	118846
890-8790-4	HA-1	Total/NA	Solid	8015B NM	118846
890-8790-5	HA-1	Total/NA	Solid	8015B NM	118846
890-8790-6	HA-1	Total/NA	Solid	8015B NM	118846
890-8790-7	HA-1	Total/NA	Solid	8015B NM	118846
890-8790-8	HA-2	Total/NA	Solid	8015B NM	118846
890-8790-9	HA-2	Total/NA	Solid	8015B NM	118846
890-8790-10	HA-2	Total/NA	Solid	8015B NM	118846
890-8790-11	HA-2	Total/NA	Solid	8015B NM	118846
890-8790-12	HA-2	Total/NA	Solid	8015B NM	118846
890-8790-13	HA-2	Total/NA	Solid	8015B NM	118846
890-8790-14	HA-2	Total/NA	Solid	8015B NM	118846
890-8790-15	HA-3	Total/NA	Solid	8015B NM	118846
890-8790-16	HA-3	Total/NA	Solid	8015B NM	118846
890-8790-17	HA-3	Total/NA	Solid	8015B NM	118846
890-8790-18	HA-3	Total/NA	Solid	8015B NM	118846
890-8790-19	HA-3	Total/NA	Solid	8015B NM	118846
890-8790-20	HA-3	Total/NA	Solid	8015B NM	118846
MB 880-118846/1-A	Method Blank	Total/NA	Solid	8015B NM	118846
LCS 880-118846/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	118846
LCSD 880-118846/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	118846
890-8790-1 MS	HA-1	Total/NA	Solid	8015B NM	118846
890-8790-1 MSD	HA-1	Total/NA	Solid	8015B NM	118846

Analysis Batch: 119194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8790-21	HA-3	Total/NA	Solid	8015B NM	118847
890-8790-22	HA-4	Total/NA	Solid	8015B NM	118847
890-8790-23	HA-4	Total/NA	Solid	8015B NM	118847
890-8790-24	HA-4	Total/NA	Solid	8015B NM	118847
890-8790-25	HA-4	Total/NA	Solid	8015B NM	118847
890-8790-26	HA-4	Total/NA	Solid	8015B NM	118847
890-8790-27	HA-4	Total/NA	Solid	8015B NM	118847
890-8790-28	HA-4	Total/NA	Solid	8015B NM	118847
MB 880-118847/1-A	Method Blank	Total/NA	Solid	8015B NM	118847
LCS 880-118847/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	118847
LCSD 880-118847/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	118847

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QC Association Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

GC Semi VOA (Continued)

Analysis Batch: 119194 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8790-21 MS	HA-3	Total/NA	Solid	8015B NM	118847
890-8790-21 MSD	HA-3	Total/NA	Solid	8015B NM	118847

Analysis Batch: 119294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8790-1	HA-1	Total/NA	Solid	8015 NM	
890-8790-2	HA-1	Total/NA	Solid	8015 NM	
890-8790-3	HA-1	Total/NA	Solid	8015 NM	
890-8790-4	HA-1	Total/NA	Solid	8015 NM	
890-8790-5	HA-1	Total/NA	Solid	8015 NM	
890-8790-6	HA-1	Total/NA	Solid	8015 NM	
890-8790-7	HA-1	Total/NA	Solid	8015 NM	
890-8790-8	HA-2	Total/NA	Solid	8015 NM	
890-8790-9	HA-2	Total/NA	Solid	8015 NM	
890-8790-10	HA-2	Total/NA	Solid	8015 NM	
890-8790-11	HA-2	Total/NA	Solid	8015 NM	
890-8790-12	HA-2	Total/NA	Solid	8015 NM	
890-8790-13	HA-2	Total/NA	Solid	8015 NM	
890-8790-14	HA-2	Total/NA	Solid	8015 NM	
890-8790-15	HA-3	Total/NA	Solid	8015 NM	
890-8790-16	HA-3	Total/NA	Solid	8015 NM	
890-8790-17	HA-3	Total/NA	Solid	8015 NM	
890-8790-18	HA-3	Total/NA	Solid	8015 NM	
890-8790-19	HA-3	Total/NA	Solid	8015 NM	
890-8790-20	HA-3	Total/NA	Solid	8015 NM	
890-8790-21	HA-3	Total/NA	Solid	8015 NM	
890-8790-22	HA-4	Total/NA	Solid	8015 NM	
890-8790-23	HA-4	Total/NA	Solid	8015 NM	
890-8790-24	HA-4	Total/NA	Solid	8015 NM	
890-8790-25	HA-4	Total/NA	Solid	8015 NM	
890-8790-26	HA-4	Total/NA	Solid	8015 NM	
890-8790-27	HA-4	Total/NA	Solid	8015 NM	
890-8790-28	HA-4	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 118869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8790-1	HA-1	Soluble	Solid	DI Leach	
890-8790-2	HA-1	Soluble	Solid	DI Leach	
890-8790-3	HA-1	Soluble	Solid	DI Leach	
890-8790-4	HA-1	Soluble	Solid	DI Leach	
890-8790-5	HA-1	Soluble	Solid	DI Leach	
890-8790-6	HA-1	Soluble	Solid	DI Leach	
890-8790-7	HA-1	Soluble	Solid	DI Leach	
890-8790-8	HA-2	Soluble	Solid	DI Leach	
890-8790-9	HA-2	Soluble	Solid	DI Leach	
890-8790-10	HA-2	Soluble	Solid	DI Leach	
890-8790-11	HA-2	Soluble	Solid	DI Leach	
890-8790-12	HA-2	Soluble	Solid	DI Leach	
890-8790-13	HA-2	Soluble	Solid	DI Leach	

Eurofins Carlsbad

QC Association Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

HPLC/IC (Continued)

Leach Batch: 118869 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8790-14	HA-2	Soluble	Solid	DI Leach	
890-8790-15	HA-3	Soluble	Solid	DI Leach	
890-8790-16	HA-3	Soluble	Solid	DI Leach	
890-8790-17	HA-3	Soluble	Solid	DI Leach	
890-8790-18	HA-3	Soluble	Solid	DI Leach	
890-8790-19	HA-3	Soluble	Solid	DI Leach	
890-8790-20	HA-3	Soluble	Solid	DI Leach	
MB 880-118869/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-118869/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-118869/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-8790-1 MS	HA-1	Soluble	Solid	DI Leach	
890-8790-1 MSD	HA-1	Soluble	Solid	DI Leach	
890-8790-11 MS	HA-2	Soluble	Solid	DI Leach	
890-8790-11 MSD	HA-2	Soluble	Solid	DI Leach	

Leach Batch: 118870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8790-21	HA-3	Soluble	Solid	DI Leach	
890-8790-22	HA-4	Soluble	Solid	DI Leach	
890-8790-23	HA-4	Soluble	Solid	DI Leach	
890-8790-24	HA-4	Soluble	Solid	DI Leach	
890-8790-25	HA-4	Soluble	Solid	DI Leach	
890-8790-26	HA-4	Soluble	Solid	DI Leach	
890-8790-27	HA-4	Soluble	Solid	DI Leach	
890-8790-28	HA-4	Soluble	Solid	DI Leach	
MB 880-118870/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-118870/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-118870/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-8790-21 MS	HA-3	Soluble	Solid	DI Leach	
890-8790-21 MSD	HA-3	Soluble	Solid	DI Leach	

Analysis Batch: 118944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8790-1	HA-1	Soluble	Solid	300.0	118869
890-8790-2	HA-1	Soluble	Solid	300.0	118869
890-8790-3	HA-1	Soluble	Solid	300.0	118869
890-8790-4	HA-1	Soluble	Solid	300.0	118869
890-8790-5	HA-1	Soluble	Solid	300.0	118869
890-8790-6	HA-1	Soluble	Solid	300.0	118869
890-8790-7	HA-1	Soluble	Solid	300.0	118869
890-8790-8	HA-2	Soluble	Solid	300.0	118869
890-8790-9	HA-2	Soluble	Solid	300.0	118869
890-8790-10	HA-2	Soluble	Solid	300.0	118869
890-8790-11	HA-2	Soluble	Solid	300.0	118869
890-8790-12	HA-2	Soluble	Solid	300.0	118869
890-8790-13	HA-2	Soluble	Solid	300.0	118869
890-8790-14	HA-2	Soluble	Solid	300.0	118869
890-8790-15	HA-3	Soluble	Solid	300.0	118869
890-8790-16	HA-3	Soluble	Solid	300.0	118869
890-8790-17	HA-3	Soluble	Solid	300.0	118869
890-8790-18	HA-3	Soluble	Solid	300.0	118869

Eurofins Carlsbad

QC Association Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

HPLC/IC (Continued)

Analysis Batch: 118944 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8790-19	HA-3	Soluble	Solid	300.0	118869
890-8790-20	HA-3	Soluble	Solid	300.0	118869
MB 880-118869/1-A	Method Blank	Soluble	Solid	300.0	118869
LCS 880-118869/2-A	Lab Control Sample	Soluble	Solid	300.0	118869
LCSD 880-118869/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	118869
890-8790-1 MS	HA-1	Soluble	Solid	300.0	118869
890-8790-1 MSD	HA-1	Soluble	Solid	300.0	118869
890-8790-11 MS	HA-2	Soluble	Solid	300.0	118869
890-8790-11 MSD	HA-2	Soluble	Solid	300.0	118869

Analysis Batch: 118945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8790-21	HA-3	Soluble	Solid	300.0	118870
890-8790-22	HA-4	Soluble	Solid	300.0	118870
890-8790-23	HA-4	Soluble	Solid	300.0	118870
890-8790-24	HA-4	Soluble	Solid	300.0	118870
890-8790-25	HA-4	Soluble	Solid	300.0	118870
890-8790-26	HA-4	Soluble	Solid	300.0	118870
890-8790-27	HA-4	Soluble	Solid	300.0	118870
890-8790-28	HA-4	Soluble	Solid	300.0	118870
MB 880-118870/1-A	Method Blank	Soluble	Solid	300.0	118870
LCS 880-118870/2-A	Lab Control Sample	Soluble	Solid	300.0	118870
LCSD 880-118870/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	118870
890-8790-21 MS	HA-3	Soluble	Solid	300.0	118870
890-8790-21 MSD	HA-3	Soluble	Solid	300.0	118870

Eurofins Carlsbad

Lab Chronicle

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-1

Lab Sample ID: 890-8790-1

Date Collected: 09/12/25 08:00

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	118877	09/15/25 10:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118848	09/15/25 12:17	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 12:17	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/18/25 18:53	SA	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	118846	09/15/25 08:12	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/18/25 18:53	TKC	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	118869	09/15/25 09:54	SA	EET MID
Soluble	Analysis	300.0		5	10 mL	10 mL	118944	09/15/25 20:16	CS	EET MID

Client Sample ID: HA-1

Lab Sample ID: 890-8790-2

Date Collected: 09/12/25 08:05

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	118877	09/15/25 10:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118848	09/15/25 12:37	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 12:37	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/18/25 19:39	SA	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	118846	09/15/25 08:12	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/18/25 19:39	TKC	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	118869	09/15/25 09:54	SA	EET MID
Soluble	Analysis	300.0		5	10 mL	10 mL	118944	09/15/25 20:33	CS	EET MID

Client Sample ID: HA-1

Lab Sample ID: 890-8790-3

Date Collected: 09/12/25 08:10

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	118877	09/15/25 10:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118848	09/15/25 12:58	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 12:58	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/18/25 19:55	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	118846	09/15/25 08:12	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/18/25 19:55	TKC	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	118869	09/15/25 09:54	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118944	09/15/25 20:39	CS	EET MID

Client Sample ID: HA-1

Lab Sample ID: 890-8790-4

Date Collected: 09/12/25 08:15

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	118877	09/15/25 10:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118848	09/15/25 13:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 13:18	SA	EET MID

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Lab Chronicle

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-1

Lab Sample ID: 890-8790-4

Date Collected: 09/12/25 08:15

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			119294	09/18/25 20:10	SA	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	118846	09/15/25 08:12	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/18/25 20:10	TKC	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	118869	09/15/25 09:54	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118944	09/15/25 20:44	CS	EET MID

Client Sample ID: HA-1

Lab Sample ID: 890-8790-5

Date Collected: 09/12/25 08:20

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	118877	09/15/25 10:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118848	09/15/25 13:38	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 13:38	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/18/25 20:25	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	118846	09/15/25 08:12	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/18/25 20:25	TKC	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	118869	09/15/25 09:54	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118944	09/15/25 20:50	CS	EET MID

Client Sample ID: HA-1

Lab Sample ID: 890-8790-6

Date Collected: 09/12/25 08:25

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	118877	09/15/25 10:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118848	09/15/25 13:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 13:59	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/18/25 20:40	SA	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	118846	09/15/25 08:12	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/18/25 20:40	TKC	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	118869	09/15/25 09:54	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118944	09/15/25 21:07	CS	EET MID

Client Sample ID: HA-1

Lab Sample ID: 890-8790-7

Date Collected: 09/12/25 08:30

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	118877	09/15/25 10:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118848	09/15/25 14:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 14:19	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/18/25 20:55	SA	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	118846	09/15/25 08:12	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/18/25 20:55	TKC	EET MID

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Lab Chronicle

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-1

Lab Sample ID: 890-8790-7

Date Collected: 09/12/25 08:30

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.03 g	50 mL	118869	09/15/25 09:54	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118944	09/15/25 21:12	CS	EET MID

Client Sample ID: HA-2

Lab Sample ID: 890-8790-8

Date Collected: 09/12/25 08:35

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	118877	09/15/25 10:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118848	09/15/25 14:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 14:40	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/18/25 21:10	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	118846	09/15/25 08:12	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/18/25 21:10	TKC	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	118869	09/15/25 09:54	SA	EET MID
Soluble	Analysis	300.0		5	10 mL	10 mL	118944	09/15/25 21:18	CS	EET MID

Client Sample ID: HA-2

Lab Sample ID: 890-8790-9

Date Collected: 09/12/25 08:40

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	118877	09/15/25 10:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118848	09/15/25 15:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 15:00	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/18/25 21:25	SA	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	118846	09/15/25 08:12	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/18/25 21:25	TKC	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	118869	09/15/25 09:54	SA	EET MID
Soluble	Analysis	300.0		5	10 mL	10 mL	118944	09/15/25 21:24	CS	EET MID

Client Sample ID: HA-2

Lab Sample ID: 890-8790-10

Date Collected: 09/12/25 08:45

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	118877	09/15/25 10:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118848	09/15/25 15:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 15:21	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/18/25 21:40	SA	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	118846	09/15/25 08:12	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/18/25 21:40	TKC	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	118869	09/15/25 09:54	SA	EET MID
Soluble	Analysis	300.0		5	10 mL	10 mL	118944	09/15/25 21:29	CS	EET MID

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Lab Chronicle

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-2

Lab Sample ID: 890-8790-11

Date Collected: 09/12/25 08:50

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	118877	09/15/25 10:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118848	09/15/25 16:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 16:55	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/18/25 22:10	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	118846	09/15/25 08:12	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/18/25 22:10	TKC	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	118869	09/15/25 09:54	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118944	09/15/25 21:35	CS	EET MID

Client Sample ID: HA-2

Lab Sample ID: 890-8790-12

Date Collected: 09/12/25 08:55

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	118877	09/15/25 10:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118848	09/15/25 17:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 17:15	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/18/25 22:26	SA	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	118846	09/15/25 08:12	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/18/25 22:26	TKC	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	118869	09/15/25 09:54	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118944	09/15/25 21:52	CS	EET MID

Client Sample ID: HA-2

Lab Sample ID: 890-8790-13

Date Collected: 09/12/25 09:00

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	118877	09/15/25 10:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118848	09/15/25 17:36	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 17:36	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/18/25 22:41	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	118846	09/15/25 08:12	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/18/25 22:41	TKC	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	118869	09/15/25 09:54	SA	EET MID
Soluble	Analysis	300.0		5	10 mL	10 mL	118944	09/15/25 21:58	CS	EET MID

Client Sample ID: HA-2

Lab Sample ID: 890-8790-14

Date Collected: 09/12/25 09:05

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	118877	09/15/25 10:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118848	09/15/25 17:56	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 17:56	SA	EET MID

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Lab Chronicle

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-2

Lab Sample ID: 890-8790-14

Date Collected: 09/12/25 09:05

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			119294	09/18/25 22:57	SA	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	118846	09/15/25 08:12	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/18/25 22:57	TKC	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	118869	09/15/25 09:54	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118944	09/15/25 22:15	CS	EET MID

Client Sample ID: HA-3

Lab Sample ID: 890-8790-15

Date Collected: 09/12/25 09:10

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	118877	09/15/25 10:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118848	09/15/25 18:17	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 18:17	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/18/25 23:11	SA	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	118846	09/15/25 08:12	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/18/25 23:11	TKC	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	118869	09/15/25 09:54	SA	EET MID
Soluble	Analysis	300.0		10	10 mL	10 mL	118944	09/15/25 22:20	CS	EET MID

Client Sample ID: HA-3

Lab Sample ID: 890-8790-16

Date Collected: 09/12/25 09:15

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	118877	09/15/25 10:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118848	09/15/25 18:37	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 18:37	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/18/25 23:28	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	118846	09/15/25 08:12	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/18/25 23:28	TKC	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	118869	09/15/25 09:54	SA	EET MID
Soluble	Analysis	300.0		5	10 mL	10 mL	118944	09/15/25 22:26	CS	EET MID

Client Sample ID: HA-3

Lab Sample ID: 890-8790-17

Date Collected: 09/12/25 09:20

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	118877	09/15/25 10:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118848	09/15/25 18:57	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 18:57	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/18/25 23:42	SA	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	118846	09/15/25 08:12	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/18/25 23:42	TKC	EET MID

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Lab Chronicle

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-3**Lab Sample ID: 890-8790-17****Date Collected: 09/12/25 09:20****Matrix: Solid****Date Received: 09/12/25 15:29**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.04 g	50 mL	118869	09/15/25 09:54	SA	EET MID
Soluble	Analysis	300.0		5	10 mL	10 mL	118944	09/15/25 22:31	CS	EET MID

Client Sample ID: HA-3**Lab Sample ID: 890-8790-18****Date Collected: 09/12/25 09:25****Matrix: Solid****Date Received: 09/12/25 15:29**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	118877	09/15/25 10:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118848	09/15/25 19:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 19:18	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/18/25 23:58	SA	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	118846	09/15/25 08:12	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/18/25 23:58	TKC	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	118869	09/15/25 09:54	SA	EET MID
Soluble	Analysis	300.0		5	10 mL	10 mL	118944	09/15/25 22:37	CS	EET MID

Client Sample ID: HA-3**Lab Sample ID: 890-8790-19****Date Collected: 09/12/25 09:30****Matrix: Solid****Date Received: 09/12/25 15:29**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	118877	09/15/25 10:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118848	09/15/25 19:38	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 19:38	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/19/25 00:13	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	118846	09/15/25 08:12	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/19/25 00:13	TKC	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	118869	09/15/25 09:54	SA	EET MID
Soluble	Analysis	300.0		5	10 mL	10 mL	118944	09/15/25 22:43	CS	EET MID

Client Sample ID: HA-3**Lab Sample ID: 890-8790-20****Date Collected: 09/12/25 09:35****Matrix: Solid****Date Received: 09/12/25 15:29**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	118877	09/15/25 10:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118848	09/15/25 19:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 19:59	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/19/25 00:28	SA	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	118846	09/15/25 08:12	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/19/25 00:28	TKC	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	118869	09/15/25 09:54	SA	EET MID
Soluble	Analysis	300.0		10	10 mL	10 mL	118944	09/15/25 22:48	CS	EET MID

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Lab Chronicle

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-3

Lab Sample ID: 890-8790-21

Date Collected: 09/12/25 09:40

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	118887	09/15/25 10:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118850	09/15/25 12:37	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 12:37	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/18/25 18:53	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	118847	09/15/25 08:13	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119194	09/18/25 18:53	TKC	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	118870	09/15/25 09:57	SA	EET MID
Soluble	Analysis	300.0		5	10 mL	10 mL	118945	09/15/25 20:30	CS	EET MID

Client Sample ID: HA-4

Lab Sample ID: 890-8790-22

Date Collected: 09/12/25 09:45

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	118887	09/15/25 10:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118850	09/15/25 12:57	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 12:57	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/18/25 19:39	SA	EET MID
Total/NA	Prep	8015NM Prep			9.96 g	10 mL	118847	09/15/25 08:13	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119194	09/18/25 19:39	TKC	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	118870	09/15/25 09:57	SA	EET MID
Soluble	Analysis	300.0		5	10 mL	10 mL	118945	09/15/25 20:47	CS	EET MID

Client Sample ID: HA-4

Lab Sample ID: 890-8790-23

Date Collected: 09/12/25 09:50

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	118887	09/15/25 10:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118850	09/15/25 13:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 13:18	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/18/25 19:55	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	118847	09/15/25 08:13	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119194	09/18/25 19:55	TKC	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	118870	09/15/25 09:57	SA	EET MID
Soluble	Analysis	300.0		5	10 mL	10 mL	118945	09/15/25 20:53	CS	EET MID

Client Sample ID: HA-4

Lab Sample ID: 890-8790-24

Date Collected: 09/12/25 09:55

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	118887	09/15/25 10:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118850	09/15/25 13:38	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 13:38	SA	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-4

Lab Sample ID: 890-8790-24

Date Collected: 09/12/25 09:55

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			119294	09/18/25 20:10	SA	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	118847	09/15/25 08:13	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119194	09/18/25 20:10	TKC	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	118870	09/15/25 09:57	SA	EET MID
Soluble	Analysis	300.0		10	10 mL	10 mL	118945	09/15/25 20:59	CS	EET MID

Client Sample ID: HA-4

Lab Sample ID: 890-8790-25

Date Collected: 09/12/25 10:00

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	118887	09/15/25 10:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118850	09/15/25 13:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 13:59	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/18/25 20:25	SA	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	118847	09/15/25 08:13	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119194	09/18/25 20:25	TKC	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	118870	09/15/25 09:57	SA	EET MID
Soluble	Analysis	300.0		5	10 mL	10 mL	118945	09/15/25 21:05	CS	EET MID

Client Sample ID: HA-4

Lab Sample ID: 890-8790-26

Date Collected: 09/12/25 10:05

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	118887	09/15/25 10:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118850	09/15/25 14:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 14:19	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/18/25 20:40	SA	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	118847	09/15/25 08:13	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119194	09/18/25 20:40	TKC	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	118870	09/15/25 09:57	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118945	09/15/25 21:22	CS	EET MID

Client Sample ID: HA-4

Lab Sample ID: 890-8790-27

Date Collected: 09/12/25 10:10

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	118887	09/15/25 10:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118850	09/15/25 14:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 14:40	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/18/25 20:55	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	118847	09/15/25 08:13	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119194	09/18/25 20:55	TKC	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Client Sample ID: HA-4
Date Collected: 09/12/25 10:10
Date Received: 09/12/25 15:29

Lab Sample ID: 890-8790-27
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	118870	09/15/25 09:57	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118945	09/15/25 21:28	CS	EET MID

Client Sample ID: HA-4
Date Collected: 09/12/25 10:15
Date Received: 09/12/25 15:29

Lab Sample ID: 890-8790-28
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	118887	09/15/25 10:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118850	09/15/25 15:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119028	09/15/25 15:00	SA	EET MID
Total/NA	Analysis	8015 NM		1			119294	09/18/25 21:10	SA	EET MID
Total/NA	Prep	8015NM Prep			9.95 g	10 mL	118847	09/15/25 08:13	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119194	09/18/25 21:10	TKC	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	118870	09/15/25 09:57	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118945	09/15/25 21:34	CS	EET MID

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

Accreditation/Certification Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400	06-30-26
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8790-1
SDG: Eddy County, NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-8790-1	HA-1	Solid	09/12/25 08:00	09/12/25 15:29	0.5
890-8790-2	HA-1	Solid	09/12/25 08:05	09/12/25 15:29	1
890-8790-3	HA-1	Solid	09/12/25 08:10	09/12/25 15:29	2
890-8790-4	HA-1	Solid	09/12/25 08:15	09/12/25 15:29	3
890-8790-5	HA-1	Solid	09/12/25 08:20	09/12/25 15:29	4
890-8790-6	HA-1	Solid	09/12/25 08:25	09/12/25 15:29	5
890-8790-7	HA-1	Solid	09/12/25 08:30	09/12/25 15:29	6
890-8790-8	HA-2	Solid	09/12/25 08:35	09/12/25 15:29	0.5
890-8790-9	HA-2	Solid	09/12/25 08:40	09/12/25 15:29	1
890-8790-10	HA-2	Solid	09/12/25 08:45	09/12/25 15:29	2
890-8790-11	HA-2	Solid	09/12/25 08:50	09/12/25 15:29	3
890-8790-12	HA-2	Solid	09/12/25 08:55	09/12/25 15:29	4
890-8790-13	HA-2	Solid	09/12/25 09:00	09/12/25 15:29	5
890-8790-14	HA-2	Solid	09/12/25 09:05	09/12/25 15:29	6
890-8790-15	HA-3	Solid	09/12/25 09:10	09/12/25 15:29	0.5
890-8790-16	HA-3	Solid	09/12/25 09:15	09/12/25 15:29	1
890-8790-17	HA-3	Solid	09/12/25 09:20	09/12/25 15:29	2
890-8790-18	HA-3	Solid	09/12/25 09:25	09/12/25 15:29	3
890-8790-19	HA-3	Solid	09/12/25 09:30	09/12/25 15:29	4
890-8790-20	HA-3	Solid	09/12/25 09:35	09/12/25 15:29	5
890-8790-21	HA-3	Solid	09/12/25 09:40	09/12/25 15:29	6
890-8790-22	HA-4	Solid	09/12/25 09:45	09/12/25 15:29	0.5
890-8790-23	HA-4	Solid	09/12/25 09:50	09/12/25 15:29	1
890-8790-24	HA-4	Solid	09/12/25 09:55	09/12/25 15:29	2
890-8790-25	HA-4	Solid	09/12/25 10:00	09/12/25 15:29	3
890-8790-26	HA-4	Solid	09/12/25 10:05	09/12/25 15:29	4
890-8790-27	HA-4	Solid	09/12/25 10:10	09/12/25 15:29	5
890-8790-28	HA-4	Solid	09/12/25 10:15	09/12/25 15:29	6



390-8790 Chain of Custody

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Chain of Custody

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Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Environment Testing
Xenco



Project Manager:	Gilbert Moreno	Bill to: (if different)	Jim Raley
Company Name:	Earth Systems R&R	Company Name:	Devon Energy
Address:	1910 Resource Ct.	Address:	
City, State ZIP:	Carlsbad, NM, 88220	City, State ZIP:	
Phone:	832-541-7719	Email:	gmoreno@earthsys.net

Work Order Comments	
Program: ☐ UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐	
State of Project:	
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐	
Deliverables: EDD ☐ ADaPT ☐ Other:	

Project Name:		Spud Muffin 31 CTB 1		Turn Around		Pres. Code	ANALYSIS REQUEST										Preservative Codes		
Project Number:		7146		☒ Routine	☐ Rush														
Project Location:		Eddy County, NM		Due Date:		Routine TAT													
Sampler's Name:		Santiago Giron		TAT starts the day received by the lab, if received by 4:30pm															
CCWO #:		21682317																	
SAMPLE RECEIPT				Temp Blank:	Yes No	Wet Ice:	(Yes) No												
Samples Received Intact:				Yes No	Thermometer ID:	TUNCO													
Cooler Custody Seals:				Yes No	N/A	Correction Factor:	-0.2												
Sample Custody Seals:				Yes No	N/A	Temperature Reading:	-5.9												
Total Containers:						Corrected Temperature:	-4.9												
Sample Identification		Matrix	Date Sampled	Time Sampled	Depth (feet)	# of Cont	TPH -NM	Chloride -NM	BTEX -NM	Hold	24 Hr Flush						Sample Comments		
HA-1		S	9.12.25	8:00	0.5	Grab/ Comp	X	X	X							Incident Number nAPP2524525081			
HA-1		S	9.12.25	8:05	1	Grab/	X	X	X										
HA-1		S	9.12.25	8:10	2	Grab/	X	X	X										
HA-1		S	9.12.25	8:15	3	Grab/	X	X	X										
HA-1		S	9.12.25	8:20	4	Grab/	X	X	X										
HA-1		S	9.12.25	8:25	5	Grab/	X	X	X										
HA-1		S	9.12.25	8:30	6	Grab/	X	X	X										
HA-2		S	9.12.25	8:35	0.5	Grab/	X	X	X										
HA-2		S	9.12.25	8:40	1	Grab/	X	X	X										

Total	200.7 / 6010	200.8 / 6020:	8RCRA	13PPM	Texas 11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO ₂	Na	Sr	Ti	Sn	U	V	Zn								
																																Hg: 1631 / 245.1 / 7470 / 7471									

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$65.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
0 		9/1/2 1529 ²			
3					
5					

Revised Date: 08/25/2020 Rev 2020 2

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199



Environment Testing
 Xenco

Work Order No:

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Project Manager:	Gilbert Moreno	Bill to: (if different)	Jim Raley
Company Name:	Earth Systems R&R	Company Name:	Devon Energy
Address:	1910 Resource Ct.	Address:	
City, State ZIP:	Carlsbad, NM, 88220	City, State ZIP:	
Phone:	832-541-7719	Email:	gmoreno@earthsys.net

Project Name:	Spud Muffin 31 CTB 1	Turn Around	Pres. Code
Project Number:	7146	☒ Routine ☐ Rush	
Project Location:	Eddy County, NM	Due Date:	
Sampler's Name:	Santiago Giron	TAT starts the day received by the lab, if received by 4:30pm	
CC/WO #:	21682317		

Sample Identification		Matrix	Date Sampled	Time Sampled	Depth (feet)	Grab/Comp	# of Cont	TPH - NM	Chloride - NM	BTEX - NM	Hold	24 Hr Rush																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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Total	200.7 / 6010	200.8 / 6020:	8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed			

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	9/12/1529 ²			
		4			
		6			

Revised Date: 08/25/2020 Rev. 2020.2



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Environment Testing
Xenco

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Work Order No:

Page 3 of 4
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Project Manager: Gilbert Moreno		Bill to: (if different) Jim Raley	
Company Name: Earth Systems R&R		Company Name: Devon Energy	
Address: 1910 Resource Ct.		Address:	
City, State ZIP: Carlsbad, NM, 88220		City, State ZIP:	
Phone: 832-541-7719		Email: gmoreno@earthsys.net	

Project Name: Spud Muffin 31 CTB 1		Turn Around		Pres. Code	
Project Number: 7146		☒ Routine ☐ Rush			
Project Location: Eddy County, NM		Due Date: Routine TAT			
Sampler's Name: Santiago Giron		TAT starts the day received by the lab, if received by 4:30pm			
CC/MO #: 21682317					

SAMPLE RECEIPT		Temp Blank: Yes No		Wet Ice: Yes No	
Samples Received Intact: Yes No		Thermometer ID: TUN007			
Cooler Custody Seals: Yes No N/A		Correction Factor: -0.2			
Sample Custody Seals: Yes No N/A		Temperature Reading: -5.0			
Total Containers:		Corrected Temperature: -4.8			

Sample Identification		Matrix	Date Sampled	Time Sampled	Depth (feet)	Grab/Comp	Cont #	Parameters	Pres. Code
HA-3		S	9.12.25	9:30	4	Grab/1	1	TFH-NM	
HA-3		S	9.12.25	9:35	5	Grab/1	1	Chlor de-NM	
HA-3		S	9.12.25	9:40	6	Grab/1	1	BTEX-NM	
HA-4		S	9.12.25	9:45	0.5	Grab/1	1		
HA-4		S	9.12.25	9:50	1	Grab/1	1		
HA-4		S	9.12.25	9:55	2	Grab/1	1		
HA-4		S	9.12.25	10:00	3	Grab/1	1		
HA-4		S	9.12.25	10:05	4	Grab/1	1		
HA-4		S	9.12.25	10:10	5	Grab/1	1		

Total 200.7 / 6010 200.8 / 6020:		8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Ti Sn U V Zn	
Circle Method(s) and Metal(s) to be analyzed		Hg: 1631 / 245.1 / 7470 / 7471	

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Rel			

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Environment Testing
Xenco



Work Order No:

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Page 2 of 4

Project Manager:	Gilbert Moreno	Bill to: (if different)	Jim Raley
Company Name:	Earth Systems R&R	Company Name:	Devon Energy
Address:	1910 Resource Ct	Address:	
City, State ZIP:	Carlsbad, NM, 88220	City, State ZIP:	
Phone:	832-541-7719	Email:	gmoreno@earthsys.net

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐

State of Project:

Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐

Deliverables: EDD ☐ ADaPT ☐ Other: _____

[illegible]

Total	200.7 / 6010	200.8 / 6020:	8RCRA	13PPM	Texas 11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO ₂	Na	Sr	Tl	Sn	U	V	Zn
Circle Method(s) and Metal(s) to be analyzed			Hg: 1631 / 245.1 / 7470 / 7471																														

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
0 		9/12/15			
3					
4					
5					
6					

Revised Date: 08/25/2020 Rev 2020 2

Eurofins Carlsbad

1089 N Canal St.
Carlsbad, NM 88220
Phone: 575-988-3199 Fax: 575-988-3199

Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab)		Sampler:	N/A	Lab PM:	Teel, Brianna	Carrier Tracking No(s):	N/A	COC No:	890-5864.1					
Client Contact:		Phone:	N/A	E-Mail:	Brianna_Teel@eurofins.com	State of Origin:	New Mexico	Page:	Page 1 of 4					
Company:	Eurofins Environment Testing South Cent			Accreditations Required (See note):	NE LAP - Texas			Job #:	890-8790-1					
Address:	1211 W. Florida Ave.	Due Date Requested:	9/18/2025	Analysis Requested				Preservation Codes:						
City:	Midland	TAT Requested (days):	N/A											
State, Zip:	TX, 79701													
Phone:	432-704-5440(Tel)	PO #:	N/A											
Email:	N/A	WO #:	N/A											
Project Name:	spud muffin 31 CTB 1	Project #:	88001228											
Site:	N/A	SSOW#:	N/A											
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=oil, B=bitumen, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total BTEX_GCV	8021B/5035FP_CalcBTEX	300_ORGFM_28D/DI_LEACHChloride	8015MOD_Calc	8015MOD_NM/8015NM_S_Prep8015 NM	Total Number of containers	Special Instructions/Note:
HA-1 (890-8790-1)		9/12/25	08:00	G	Solid	X	X	X	X	X	X	X	1	
HA-1 (890-8790-2)		9/12/25	08:05	G	Solid	X	X	X	X	X	X	X	1	
HA-1 (890-8790-3)		9/12/25	08:10	G	Solid	X	X	X	X	X	X	X	1	
HA-1 (890-8790-4)		9/12/25	08:15	G	Solid	X	X	X	X	X	X	X	1	
HA-1 (890-8790-5)		9/12/25	08:20	G	Solid	X	X	X	X	X	X	X	1	
HA-1 (890-8790-6)		9/12/25	08:25	G	Solid	X	X	X	X	X	X	X	1	
HA-1 (890-8790-7)		9/12/25	08:30	G	Solid	X	X	X	X	X	X	X	1	
HA-2 (890-8790-8)		9/12/25	08:35	G	Solid	X	X	X	X	X	X	X	1	
HA-2 (890-8790-9)		9/12/25	08:40	G	Solid	X	X	X	X	X	X	X	1	
Possible Hazard Identification														
Unconfirmed														
Deliverable Requested: I, II, III, IV, Other (specify): Primary Deliverable Rank: 2														
Empty Kit Relinquished by: Date: Time: Method of Shipment:														
Relinquished by: Date: Time: Company:														
Relinquished by: Date: Time: Company:														
Custody Seals Intact: Custody Seal No.: Cooler Temperature(s) °C and Other Remarks:														
Ver: 10/10/2024														

Login Sample Receipt Checklist

Client: Earth Systems Response and Restoration

Job Number: 890-8790-1

SDG Number: Eddy County, NM

Login Number: 8790

List Number: 1

Creator: Lopez, Abraham

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Earth Systems Response and Restoration

Job Number: 890-8790-1

SDG Number: Eddy County, NM

Login Number: 8790

List Number: 2

Creator: Laing, Edmundo

List Source: Eurofins Midland

List Creation: 09/15/25 09:06 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Gilbert Moreno
Earth Systems Response and Restoration
4115 South County Road 1297
Odessa, Texas 79765

Generated 9/19/2025 2:19:42 PM

JOB DESCRIPTION

Spud Muffin 31 CTB 1
Eddy County, NM

JOB NUMBER

890-8793-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

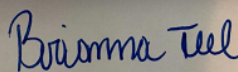
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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9/19/2025 2:19:42 PM

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

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Laboratory Job ID: 890-8793-1
SDG: Eddy County, NM

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Definitions/Glossary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Earth Systems Response and Restoration
Project: Spud Muffin 31 CTB 1

Job ID: 890-8793-1

Job ID: 890-8793-1

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Job Narrative 890-8793-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 9/12/2025 3:29 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -4.8°C.

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: HA - 5 (890-8793-1), HA - 5 (890-8793-2), HA - 5 (890-8793-3), HA - 6 (890-8793-4), HA - 6 (890-8793-5), HA - 6 (890-8793-6), HA - 7 (890-8793-7), HA - 7 (890-8793-8), HA - 7 (890-8793-9), HA - 8 (890-8793-10), HA - 8 (890-8793-11) and HA - 8 (890-8793-12).

GC VOA

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

Diesel Range Organics

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

HPLC/IC

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

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

Client Sample ID: HA - 5

Lab Sample ID: 890-8793-1

Date Collected: 09/12/25 10:20

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/15/25 10:06	09/15/25 14:47	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/15/25 10:06	09/15/25 14:47	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		09/15/25 10:06	09/15/25 14:47	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		09/15/25 10:06	09/15/25 14:47	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		09/15/25 10:06	09/15/25 14:47	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		09/15/25 10:06	09/15/25 14:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	09/15/25 10:06	09/15/25 14:47	1
1,4-Difluorobenzene (Surr)	89		70 - 130	09/15/25 10:06	09/15/25 14:47	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			09/15/25 14:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/19/25 03:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/15/25 09:42	09/19/25 03:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/25 09:42	09/19/25 03:30	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/25 09:42	09/19/25 03:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130	09/15/25 09:42	09/19/25 03:30	1
o-Terphenyl	93		70 - 130	09/15/25 09:42	09/19/25 03:30	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	291		9.94		mg/Kg			09/16/25 00:30	1

Client Sample ID: HA - 5

Lab Sample ID: 890-8793-2

Date Collected: 09/12/25 10:25

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:06	09/15/25 15:08	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:06	09/15/25 15:08	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:06	09/15/25 15:08	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/15/25 10:06	09/15/25 15:08	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:06	09/15/25 15:08	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/15/25 10:06	09/15/25 15:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		70 - 130	09/15/25 10:06	09/15/25 15:08	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

Client Sample ID: HA - 5

Lab Sample ID: 890-8793-2

Date Collected: 09/12/25 10:25

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 2

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	74		70 - 130	09/15/25 10:06	09/15/25 15:08	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/15/25 15:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			09/19/25 03:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/15/25 09:42	09/19/25 03:46	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/15/25 09:42	09/19/25 03:46	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/15/25 09:42	09/19/25 03:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130				09/15/25 09:42	09/19/25 03:46	1
o-Terphenyl	96		70 - 130				09/15/25 09:42	09/19/25 03:46	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	73.5		9.92		mg/Kg			09/16/25 00:35	1

Client Sample ID: HA - 5

Lab Sample ID: 890-8793-3

Date Collected: 09/12/25 10:30

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:06	09/15/25 17:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:06	09/15/25 17:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:06	09/15/25 17:44	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/15/25 10:06	09/15/25 17:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:06	09/15/25 17:44	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/15/25 10:06	09/15/25 17:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130	09/15/25 10:06	09/15/25 17:44	1
1,4-Difluorobenzene (Surr)	84		70 - 130	09/15/25 10:06	09/15/25 17:44	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			09/15/25 17:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/19/25 04:01	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

Client Sample ID: HA - 5

Lab Sample ID: 890-8793-3

Date Collected: 09/12/25 10:30

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/15/25 09:42	09/19/25 04:01	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/25 09:42	09/19/25 04:01	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/25 09:42	09/19/25 04:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130				09/15/25 09:42	09/19/25 04:01	1
o-Terphenyl	97		70 - 130				09/15/25 09:42	09/19/25 04:01	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14.7		10.0		mg/Kg			09/16/25 00:41	1

Client Sample ID: HA - 6

Lab Sample ID: 890-8793-4

Date Collected: 09/12/25 10:35

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/15/25 10:06	09/15/25 18:05	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/15/25 10:06	09/15/25 18:05	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		09/15/25 10:06	09/15/25 18:05	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		09/15/25 10:06	09/15/25 18:05	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		09/15/25 10:06	09/15/25 18:05	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		09/15/25 10:06	09/15/25 18:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130				09/15/25 10:06	09/15/25 18:05	1
1,4-Difluorobenzene (Surr)	90		70 - 130				09/15/25 10:06	09/15/25 18:05	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			09/15/25 18:05	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/19/25 04:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/15/25 09:42	09/19/25 04:16	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/25 09:42	09/19/25 04:16	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/25 09:42	09/19/25 04:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130				09/15/25 09:42	09/19/25 04:16	1
o-Terphenyl	93		70 - 130				09/15/25 09:42	09/19/25 04:16	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

Client Sample ID: HA - 6

Lab Sample ID: 890-8793-4

Date Collected: 09/12/25 10:35

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 0.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<9.96	U	9.96		mg/Kg			09/16/25 00:47	1

Client Sample ID: HA - 6

Lab Sample ID: 890-8793-5

Date Collected: 09/12/25 10:40

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:06	09/15/25 18:26	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:06	09/15/25 18:26	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:06	09/15/25 18:26	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/15/25 10:06	09/15/25 18:26	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:06	09/15/25 18:26	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/15/25 10:06	09/15/25 18:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130				09/15/25 10:06	09/15/25 18:26	1
1,4-Difluorobenzene (Surr)	86		70 - 130				09/15/25 10:06	09/15/25 18:26	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/15/25 18:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/19/25 04:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/15/25 09:42	09/19/25 04:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/25 09:42	09/19/25 04:31	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/25 09:42	09/19/25 04:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130				09/15/25 09:42	09/19/25 04:31	1
o-Terphenyl	94		70 - 130				09/15/25 09:42	09/19/25 04:31	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<9.94	U	9.94		mg/Kg			09/16/25 00:52	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

Client Sample ID: HA - 6

Lab Sample ID: 890-8793-6

Date Collected: 09/12/25 10:45

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:06	09/15/25 18:46	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:06	09/15/25 18:46	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:06	09/15/25 18:46	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/15/25 10:06	09/15/25 18:46	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:06	09/15/25 18:46	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/15/25 10:06	09/15/25 18:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	09/15/25 10:06	09/15/25 18:46	1
1,4-Difluorobenzene (Surr)	85		70 - 130	09/15/25 10:06	09/15/25 18:46	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/15/25 18:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			09/19/25 04:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/15/25 09:42	09/19/25 04:46	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/15/25 09:42	09/19/25 04:46	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/15/25 09:42	09/19/25 04:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130	09/15/25 09:42	09/19/25 04:46	1
o-Terphenyl	99		70 - 130	09/15/25 09:42	09/19/25 04:46	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<9.98	U	9.98		mg/Kg			09/16/25 01:09	1

Client Sample ID: HA - 7

Lab Sample ID: 890-8793-7

Date Collected: 09/12/25 10:50

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:06	09/15/25 19:07	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:06	09/15/25 19:07	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:06	09/15/25 19:07	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/15/25 10:06	09/15/25 19:07	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:06	09/15/25 19:07	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/15/25 10:06	09/15/25 19:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	09/15/25 10:06	09/15/25 19:07	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

Client Sample ID: HA - 7

Lab Sample ID: 890-8793-7

Date Collected: 09/12/25 10:50

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 0.5

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	90		70 - 130	09/15/25 10:06	09/15/25 19:07	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/15/25 19:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/19/25 05:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/15/25 09:42	09/19/25 05:01	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/25 09:42	09/19/25 05:01	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/25 09:42	09/19/25 05:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130				09/15/25 09:42	09/19/25 05:01	1
o-Terphenyl	94		70 - 130				09/15/25 09:42	09/19/25 05:01	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	281		9.92		mg/Kg			09/16/25 01:15	1

Client Sample ID: HA - 7

Lab Sample ID: 890-8793-8

Date Collected: 09/12/25 10:55

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:06	09/15/25 19:27	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:06	09/15/25 19:27	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:06	09/15/25 19:27	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/15/25 10:06	09/15/25 19:27	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:06	09/15/25 19:27	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/15/25 10:06	09/15/25 19:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	09/15/25 10:06	09/15/25 19:27	1
1,4-Difluorobenzene (Surr)	90		70 - 130	09/15/25 10:06	09/15/25 19:27	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/15/25 19:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/19/25 05:16	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

Client Sample ID: HA - 7

Lab Sample ID: 890-8793-8

Date Collected: 09/12/25 10:55

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/15/25 09:42	09/19/25 05:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/25 09:42	09/19/25 05:16	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/25 09:42	09/19/25 05:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	83		70 - 130				09/15/25 09:42	09/19/25 05:16	1
o-Terphenyl	88		70 - 130				09/15/25 09:42	09/19/25 05:16	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	224		10.0		mg/Kg			09/16/25 01:32	1

Client Sample ID: HA - 7

Lab Sample ID: 890-8793-9

Date Collected: 09/12/25 11:00

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:06	09/15/25 19:48	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:06	09/15/25 19:48	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:06	09/15/25 19:48	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/15/25 10:06	09/15/25 19:48	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:06	09/15/25 19:48	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/15/25 10:06	09/15/25 19:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130				09/15/25 10:06	09/15/25 19:48	1
1,4-Difluorobenzene (Surr)	84		70 - 130				09/15/25 10:06	09/15/25 19:48	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/15/25 19:48	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			09/19/25 10:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/15/25 09:42	09/19/25 10:27	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/15/25 09:42	09/19/25 10:27	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/15/25 09:42	09/19/25 10:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130				09/15/25 09:42	09/19/25 10:27	1
o-Terphenyl	91		70 - 130				09/15/25 09:42	09/19/25 10:27	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

Client Sample ID: HA - 7

Lab Sample ID: 890-8793-9

Date Collected: 09/12/25 11:00

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 4

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	59.5		9.94		mg/Kg			09/16/25 01:37	1

Client Sample ID: HA - 8

Lab Sample ID: 890-8793-10

Date Collected: 09/12/25 11:05

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:06	09/15/25 20:08	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:06	09/15/25 20:08	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:06	09/15/25 20:08	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/15/25 10:06	09/15/25 20:08	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:06	09/15/25 20:08	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/15/25 10:06	09/15/25 20:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130				09/15/25 10:06	09/15/25 20:08	1
1,4-Difluorobenzene (Surr)	85		70 - 130				09/15/25 10:06	09/15/25 20:08	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			09/15/25 20:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/19/25 10:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/15/25 09:42	09/19/25 10:42	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/25 09:42	09/19/25 10:42	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/25 09:42	09/19/25 10:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130				09/15/25 09:42	09/19/25 10:42	1
o-Terphenyl	94		70 - 130				09/15/25 09:42	09/19/25 10:42	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	608		9.96		mg/Kg			09/16/25 01:43	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

Client Sample ID: HA - 8

Lab Sample ID: 890-8793-11

Date Collected: 09/12/25 11:10

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:06	09/15/25 20:29	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:06	09/15/25 20:29	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:06	09/15/25 20:29	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/15/25 10:06	09/15/25 20:29	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:06	09/15/25 20:29	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/15/25 10:06	09/15/25 20:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	09/15/25 10:06	09/15/25 20:29	1
1,4-Difluorobenzene (Surr)	83		70 - 130	09/15/25 10:06	09/15/25 20:29	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/15/25 20:29	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/19/25 10:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/15/25 09:42	09/19/25 10:58	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/25 09:42	09/19/25 10:58	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/25 09:42	09/19/25 10:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130	09/15/25 09:42	09/19/25 10:58	1
o-Terphenyl	90		70 - 130	09/15/25 09:42	09/19/25 10:58	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	131		10.0		mg/Kg			09/16/25 01:49	1

Client Sample ID: HA - 8

Lab Sample ID: 890-8793-12

Date Collected: 09/12/25 11:15

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:06	09/15/25 20:50	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:06	09/15/25 20:50	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:06	09/15/25 20:50	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/15/25 10:06	09/15/25 20:50	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:06	09/15/25 20:50	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/15/25 10:06	09/15/25 20:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	09/15/25 10:06	09/15/25 20:50	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

Client Sample ID: HA - 8

Lab Sample ID: 890-8793-12

Date Collected: 09/12/25 11:15

Matrix: Solid

Date Received: 09/12/25 15:29

Sample Depth: 4

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	84		70 - 130	09/15/25 10:06	09/15/25 20:50	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/15/25 20:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			09/19/25 11:14	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/15/25 09:42	09/19/25 11:14	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/15/25 09:42	09/19/25 11:14	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/15/25 09:42	09/19/25 11:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130				09/15/25 09:42	09/19/25 11:14	1
o-Terphenyl	87		70 - 130				09/15/25 09:42	09/19/25 11:14	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	149		9.96		mg/Kg			09/16/25 01:54	1

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Surrogate Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-8793-1	HA - 5	99	89
890-8793-2	HA - 5	74	74
890-8793-3	HA - 5	110	84
890-8793-4	HA - 6	96	90
890-8793-5	HA - 6	108	86
890-8793-6	HA - 6	109	85
890-8793-7	HA - 7	96	90
890-8793-8	HA - 7	103	90
890-8793-9	HA - 7	107	84
890-8793-10	HA - 8	110	85
890-8793-11	HA - 8	103	83
890-8793-12	HA - 8	104	84
LCS 880-118872/1-A	Lab Control Sample	117	81
LCSD 880-118872/2-A	Lab Control Sample Dup	115	87
MB 880-118872/5-A	Method Blank	110	79
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
890-8793-1	HA - 5	92	93
890-8793-2	HA - 5	96	96
890-8793-3	HA - 5	94	97
890-8793-4	HA - 6	91	93
890-8793-5	HA - 6	91	94
890-8793-6	HA - 6	100	99
890-8793-7	HA - 7	92	94
890-8793-8	HA - 7	83	88
890-8793-9	HA - 7	86	91
890-8793-10	HA - 8	92	94
890-8793-11	HA - 8	89	90
890-8793-12	HA - 8	86	87
LCS 880-118865/2-A	Lab Control Sample	104	95
LCSD 880-118865/3-A	Lab Control Sample Dup	114	105
MB 880-118865/1-A	Method Blank	97	97
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

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QC Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-118872/5-A

Matrix: Solid

Analysis Batch: 118849

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 118872

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:06	09/15/25 11:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:06	09/15/25 11:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:06	09/15/25 11:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/15/25 10:06	09/15/25 11:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:06	09/15/25 11:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/15/25 10:06	09/15/25 11:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130	09/15/25 10:06	09/15/25 11:41	1
1,4-Difluorobenzene (Surr)	79		70 - 130	09/15/25 10:06	09/15/25 11:41	1

Lab Sample ID: LCS 880-118872/1-A

Matrix: Solid

Analysis Batch: 118849

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 118872

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.08248		mg/Kg		82	70 - 130
Toluene	0.100	0.09144		mg/Kg		91	70 - 130
Ethylbenzene	0.100	0.1021		mg/Kg		102	70 - 130
m-Xylene & p-Xylene	0.200	0.2086		mg/Kg		104	70 - 130
o-Xylene	0.100	0.1033		mg/Kg		103	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	117		70 - 130
1,4-Difluorobenzene (Surr)	81		70 - 130

Lab Sample ID: LCSD 880-118872/2-A

Matrix: Solid

Analysis Batch: 118849

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 118872

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09356		mg/Kg		94	70 - 130	13	35
Toluene	0.100	0.09281		mg/Kg		93	70 - 130	1	35
Ethylbenzene	0.100	0.09764		mg/Kg		98	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.1930		mg/Kg		96	70 - 130	8	35
o-Xylene	0.100	0.09616		mg/Kg		96	70 - 130	7	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	115		70 - 130
1,4-Difluorobenzene (Surr)	87		70 - 130

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QC Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

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

Lab Sample ID: MB 880-118865/1-A

Matrix: Solid

Analysis Batch: 119192

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 118865

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/15/25 09:42	09/19/25 01:43	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/25 09:42	09/19/25 01:43	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/25 09:42	09/19/25 01:43	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130				09/15/25 09:42	09/19/25 01:43	1
o-Terphenyl	97		70 - 130				09/15/25 09:42	09/19/25 01:43	1

Lab Sample ID: LCS 880-118865/2-A

Matrix: Solid

Analysis Batch: 119192

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 118865

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	965.0		mg/Kg		96	70 - 130
Diesel Range Organics (Over C10-C28)	1000	870.3		mg/Kg		87	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	104		70 - 130				
o-Terphenyl	95		70 - 130				

Lab Sample ID: LCSD 880-118865/3-A

Matrix: Solid

Analysis Batch: 119192

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 118865

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1015		mg/Kg		101	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	1000	953.0		mg/Kg		95	70 - 130	9	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	114		70 - 130						
o-Terphenyl	105		70 - 130						

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-118871/1-A

Matrix: Solid

Analysis Batch: 118951

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			09/15/25 23:17	1

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QC Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-118871/2-A

Matrix: Solid

Analysis Batch: 118951

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	260.4		mg/Kg		104	90 - 110

Lab Sample ID: LCSD 880-118871/3-A

Matrix: Solid

Analysis Batch: 118951

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	260.4		mg/Kg		104	90 - 110	0	20

Lab Sample ID: 890-8793-5 MS

Matrix: Solid

Analysis Batch: 118951

Client Sample ID: HA - 6

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	<9.94	U	249	260.9		mg/Kg		102	90 - 110

Lab Sample ID: 890-8793-5 MSD

Matrix: Solid

Analysis Batch: 118951

Client Sample ID: HA - 6

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	<9.94	U	249	260.0		mg/Kg		101	90 - 110	0	20

QC Association Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

GC VOA

Analysis Batch: 118849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8793-1	HA - 5	Total/NA	Solid	8021B	118872
890-8793-2	HA - 5	Total/NA	Solid	8021B	118872
890-8793-3	HA - 5	Total/NA	Solid	8021B	118872
890-8793-4	HA - 6	Total/NA	Solid	8021B	118872
890-8793-5	HA - 6	Total/NA	Solid	8021B	118872
890-8793-6	HA - 6	Total/NA	Solid	8021B	118872
890-8793-7	HA - 7	Total/NA	Solid	8021B	118872
890-8793-8	HA - 7	Total/NA	Solid	8021B	118872
890-8793-9	HA - 7	Total/NA	Solid	8021B	118872
890-8793-10	HA - 8	Total/NA	Solid	8021B	118872
890-8793-11	HA - 8	Total/NA	Solid	8021B	118872
890-8793-12	HA - 8	Total/NA	Solid	8021B	118872
MB 880-118872/5-A	Method Blank	Total/NA	Solid	8021B	118872
LCS 880-118872/1-A	Lab Control Sample	Total/NA	Solid	8021B	118872
LCSD 880-118872/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	118872

Prep Batch: 118872

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8793-1	HA - 5	Total/NA	Solid	5035	
890-8793-2	HA - 5	Total/NA	Solid	5035	
890-8793-3	HA - 5	Total/NA	Solid	5035	
890-8793-4	HA - 6	Total/NA	Solid	5035	
890-8793-5	HA - 6	Total/NA	Solid	5035	
890-8793-6	HA - 6	Total/NA	Solid	5035	
890-8793-7	HA - 7	Total/NA	Solid	5035	
890-8793-8	HA - 7	Total/NA	Solid	5035	
890-8793-9	HA - 7	Total/NA	Solid	5035	
890-8793-10	HA - 8	Total/NA	Solid	5035	
890-8793-11	HA - 8	Total/NA	Solid	5035	
890-8793-12	HA - 8	Total/NA	Solid	5035	
MB 880-118872/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-118872/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-118872/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 119014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8793-1	HA - 5	Total/NA	Solid	Total BTEX	
890-8793-2	HA - 5	Total/NA	Solid	Total BTEX	
890-8793-3	HA - 5	Total/NA	Solid	Total BTEX	
890-8793-4	HA - 6	Total/NA	Solid	Total BTEX	
890-8793-5	HA - 6	Total/NA	Solid	Total BTEX	
890-8793-6	HA - 6	Total/NA	Solid	Total BTEX	
890-8793-7	HA - 7	Total/NA	Solid	Total BTEX	
890-8793-8	HA - 7	Total/NA	Solid	Total BTEX	
890-8793-9	HA - 7	Total/NA	Solid	Total BTEX	
890-8793-10	HA - 8	Total/NA	Solid	Total BTEX	
890-8793-11	HA - 8	Total/NA	Solid	Total BTEX	
890-8793-12	HA - 8	Total/NA	Solid	Total BTEX	

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QC Association Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

GC Semi VOA

Prep Batch: 118865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8793-1	HA - 5	Total/NA	Solid	8015NM Prep	
890-8793-2	HA - 5	Total/NA	Solid	8015NM Prep	
890-8793-3	HA - 5	Total/NA	Solid	8015NM Prep	
890-8793-4	HA - 6	Total/NA	Solid	8015NM Prep	
890-8793-5	HA - 6	Total/NA	Solid	8015NM Prep	
890-8793-6	HA - 6	Total/NA	Solid	8015NM Prep	
890-8793-7	HA - 7	Total/NA	Solid	8015NM Prep	
890-8793-8	HA - 7	Total/NA	Solid	8015NM Prep	
890-8793-9	HA - 7	Total/NA	Solid	8015NM Prep	
890-8793-10	HA - 8	Total/NA	Solid	8015NM Prep	
890-8793-11	HA - 8	Total/NA	Solid	8015NM Prep	
890-8793-12	HA - 8	Total/NA	Solid	8015NM Prep	
MB 880-118865/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-118865/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-118865/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 119192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8793-1	HA - 5	Total/NA	Solid	8015B NM	118865
890-8793-2	HA - 5	Total/NA	Solid	8015B NM	118865
890-8793-3	HA - 5	Total/NA	Solid	8015B NM	118865
890-8793-4	HA - 6	Total/NA	Solid	8015B NM	118865
890-8793-5	HA - 6	Total/NA	Solid	8015B NM	118865
890-8793-6	HA - 6	Total/NA	Solid	8015B NM	118865
890-8793-7	HA - 7	Total/NA	Solid	8015B NM	118865
890-8793-8	HA - 7	Total/NA	Solid	8015B NM	118865
890-8793-9	HA - 7	Total/NA	Solid	8015B NM	118865
890-8793-10	HA - 8	Total/NA	Solid	8015B NM	118865
890-8793-11	HA - 8	Total/NA	Solid	8015B NM	118865
890-8793-12	HA - 8	Total/NA	Solid	8015B NM	118865
MB 880-118865/1-A	Method Blank	Total/NA	Solid	8015B NM	118865
LCS 880-118865/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	118865
LCSD 880-118865/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	118865

Analysis Batch: 119295

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8793-1	HA - 5	Total/NA	Solid	8015 NM	
890-8793-2	HA - 5	Total/NA	Solid	8015 NM	
890-8793-3	HA - 5	Total/NA	Solid	8015 NM	
890-8793-4	HA - 6	Total/NA	Solid	8015 NM	
890-8793-5	HA - 6	Total/NA	Solid	8015 NM	
890-8793-6	HA - 6	Total/NA	Solid	8015 NM	
890-8793-7	HA - 7	Total/NA	Solid	8015 NM	
890-8793-8	HA - 7	Total/NA	Solid	8015 NM	
890-8793-9	HA - 7	Total/NA	Solid	8015 NM	
890-8793-10	HA - 8	Total/NA	Solid	8015 NM	
890-8793-11	HA - 8	Total/NA	Solid	8015 NM	
890-8793-12	HA - 8	Total/NA	Solid	8015 NM	

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QC Association Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

HPLC/IC

Leach Batch: 118871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8793-1	HA - 5	Soluble	Solid	DI Leach	
890-8793-2	HA - 5	Soluble	Solid	DI Leach	
890-8793-3	HA - 5	Soluble	Solid	DI Leach	
890-8793-4	HA - 6	Soluble	Solid	DI Leach	
890-8793-5	HA - 6	Soluble	Solid	DI Leach	
890-8793-6	HA - 6	Soluble	Solid	DI Leach	
890-8793-7	HA - 7	Soluble	Solid	DI Leach	
890-8793-8	HA - 7	Soluble	Solid	DI Leach	
890-8793-9	HA - 7	Soluble	Solid	DI Leach	
890-8793-10	HA - 8	Soluble	Solid	DI Leach	
890-8793-11	HA - 8	Soluble	Solid	DI Leach	
890-8793-12	HA - 8	Soluble	Solid	DI Leach	
MB 880-118871/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-118871/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-118871/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-8793-5 MS	HA - 6	Soluble	Solid	DI Leach	
890-8793-5 MSD	HA - 6	Soluble	Solid	DI Leach	

Analysis Batch: 118951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8793-1	HA - 5	Soluble	Solid	300.0	118871
890-8793-2	HA - 5	Soluble	Solid	300.0	118871
890-8793-3	HA - 5	Soluble	Solid	300.0	118871
890-8793-4	HA - 6	Soluble	Solid	300.0	118871
890-8793-5	HA - 6	Soluble	Solid	300.0	118871
890-8793-6	HA - 6	Soluble	Solid	300.0	118871
890-8793-7	HA - 7	Soluble	Solid	300.0	118871
890-8793-8	HA - 7	Soluble	Solid	300.0	118871
890-8793-9	HA - 7	Soluble	Solid	300.0	118871
890-8793-10	HA - 8	Soluble	Solid	300.0	118871
890-8793-11	HA - 8	Soluble	Solid	300.0	118871
890-8793-12	HA - 8	Soluble	Solid	300.0	118871
MB 880-118871/1-A	Method Blank	Soluble	Solid	300.0	118871
LCS 880-118871/2-A	Lab Control Sample	Soluble	Solid	300.0	118871
LCSD 880-118871/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	118871
890-8793-5 MS	HA - 6	Soluble	Solid	300.0	118871
890-8793-5 MSD	HA - 6	Soluble	Solid	300.0	118871

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Lab Chronicle

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

Client Sample ID: HA - 5

Lab Sample ID: 890-8793-1

Date Collected: 09/12/25 10:20

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	118872	09/15/25 10:06	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118849	09/15/25 14:47	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119014	09/15/25 14:47	SA	EET MID
Total/NA	Analysis	8015 NM		1			119295	09/19/25 03:30	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	118865	09/15/25 09:42	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/19/25 03:30	TKC	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	118871	09/15/25 10:00	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118951	09/16/25 00:30	CS	EET MID

Client Sample ID: HA - 5

Lab Sample ID: 890-8793-2

Date Collected: 09/12/25 10:25

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	118872	09/15/25 10:06	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118849	09/15/25 15:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119014	09/15/25 15:08	SA	EET MID
Total/NA	Analysis	8015 NM		1			119295	09/19/25 03:46	SA	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	118865	09/15/25 09:42	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/19/25 03:46	TKC	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	118871	09/15/25 10:00	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118951	09/16/25 00:35	CS	EET MID

Client Sample ID: HA - 5

Lab Sample ID: 890-8793-3

Date Collected: 09/12/25 10:30

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	118872	09/15/25 10:06	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118849	09/15/25 17:44	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119014	09/15/25 17:44	SA	EET MID
Total/NA	Analysis	8015 NM		1			119295	09/19/25 04:01	SA	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	118865	09/15/25 09:42	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/19/25 04:01	TKC	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	118871	09/15/25 10:00	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118951	09/16/25 00:41	CS	EET MID

Client Sample ID: HA - 6

Lab Sample ID: 890-8793-4

Date Collected: 09/12/25 10:35

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	118872	09/15/25 10:06	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118849	09/15/25 18:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119014	09/15/25 18:05	SA	EET MID

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Lab Chronicle

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

Client Sample ID: HA - 6

Lab Sample ID: 890-8793-4

Date Collected: 09/12/25 10:35

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			119295	09/19/25 04:16	SA	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	118865	09/15/25 09:42	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/19/25 04:16	TKC	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	118871	09/15/25 10:00	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118951	09/16/25 00:47	CS	EET MID

Client Sample ID: HA - 6

Lab Sample ID: 890-8793-5

Date Collected: 09/12/25 10:40

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	118872	09/15/25 10:06	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118849	09/15/25 18:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119014	09/15/25 18:26	SA	EET MID
Total/NA	Analysis	8015 NM		1			119295	09/19/25 04:31	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	118865	09/15/25 09:42	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/19/25 04:31	TKC	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	118871	09/15/25 10:00	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118951	09/16/25 00:52	CS	EET MID

Client Sample ID: HA - 6

Lab Sample ID: 890-8793-6

Date Collected: 09/12/25 10:45

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	118872	09/15/25 10:06	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118849	09/15/25 18:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119014	09/15/25 18:46	SA	EET MID
Total/NA	Analysis	8015 NM		1			119295	09/19/25 04:46	SA	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	118865	09/15/25 09:42	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/19/25 04:46	TKC	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	118871	09/15/25 10:00	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118951	09/16/25 01:09	CS	EET MID

Client Sample ID: HA - 7

Lab Sample ID: 890-8793-7

Date Collected: 09/12/25 10:50

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	118872	09/15/25 10:06	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118849	09/15/25 19:07	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119014	09/15/25 19:07	SA	EET MID
Total/NA	Analysis	8015 NM		1			119295	09/19/25 05:01	SA	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	118865	09/15/25 09:42	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/19/25 05:01	TKC	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

Client Sample ID: HA - 7

Lab Sample ID: 890-8793-7

Date Collected: 09/12/25 10:50

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.04 g	50 mL	118871	09/15/25 10:00	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118951	09/16/25 01:15	CS	EET MID

Client Sample ID: HA - 7

Lab Sample ID: 890-8793-8

Date Collected: 09/12/25 10:55

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	118872	09/15/25 10:06	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118849	09/15/25 19:27	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119014	09/15/25 19:27	SA	EET MID
Total/NA	Analysis	8015 NM		1			119295	09/19/25 05:16	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	118865	09/15/25 09:42	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/19/25 05:16	TKC	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	118871	09/15/25 10:00	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118951	09/16/25 01:32	CS	EET MID

Client Sample ID: HA - 7

Lab Sample ID: 890-8793-9

Date Collected: 09/12/25 11:00

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	118872	09/15/25 10:06	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118849	09/15/25 19:48	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119014	09/15/25 19:48	SA	EET MID
Total/NA	Analysis	8015 NM		1			119295	09/19/25 10:27	SA	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	118865	09/15/25 09:42	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/19/25 10:27	TKC	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	118871	09/15/25 10:00	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118951	09/16/25 01:37	CS	EET MID

Client Sample ID: HA - 8

Lab Sample ID: 890-8793-10

Date Collected: 09/12/25 11:05

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	118872	09/15/25 10:06	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118849	09/15/25 20:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119014	09/15/25 20:08	SA	EET MID
Total/NA	Analysis	8015 NM		1			119295	09/19/25 10:42	SA	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	118865	09/15/25 09:42	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/19/25 10:42	TKC	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	118871	09/15/25 10:00	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118951	09/16/25 01:43	CS	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

Client Sample ID: HA - 8

Lab Sample ID: 890-8793-11

Date Collected: 09/12/25 11:10

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	118872	09/15/25 10:06	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118849	09/15/25 20:29	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119014	09/15/25 20:29	SA	EET MID
Total/NA	Analysis	8015 NM		1			119295	09/19/25 10:58	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	118865	09/15/25 09:42	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/19/25 10:58	TKC	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	118871	09/15/25 10:00	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118951	09/16/25 01:49	CS	EET MID

Client Sample ID: HA - 8

Lab Sample ID: 890-8793-12

Date Collected: 09/12/25 11:15

Matrix: Solid

Date Received: 09/12/25 15:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	118872	09/15/25 10:06	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118849	09/15/25 20:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119014	09/15/25 20:50	SA	EET MID
Total/NA	Analysis	8015 NM		1			119295	09/19/25 11:14	SA	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	118865	09/15/25 09:42	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119192	09/19/25 11:14	TKC	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	118871	09/15/25 10:00	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118951	09/16/25 01:54	CS	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400	06-30-26
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

- ASTM = ASTM International
- EPA = US Environmental Protection Agency
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
- TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-8793-1
SDG: Eddy County, NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-8793-1	HA - 5	Solid	09/12/25 10:20	09/12/25 15:29	0.5
890-8793-2	HA - 5	Solid	09/12/25 10:25	09/12/25 15:29	2
890-8793-3	HA - 5	Solid	09/12/25 10:30	09/12/25 15:29	4
890-8793-4	HA - 6	Solid	09/12/25 10:35	09/12/25 15:29	0.5
890-8793-5	HA - 6	Solid	09/12/25 10:40	09/12/25 15:29	2
890-8793-6	HA - 6	Solid	09/12/25 10:45	09/12/25 15:29	4
890-8793-7	HA - 7	Solid	09/12/25 10:50	09/12/25 15:29	0.5
890-8793-8	HA - 7	Solid	09/12/25 10:55	09/12/25 15:29	2
890-8793-9	HA - 7	Solid	09/12/25 11:00	09/12/25 15:29	4
890-8793-10	HA - 8	Solid	09/12/25 11:05	09/12/25 15:29	0.5
890-8793-11	HA - 8	Solid	09/12/25 11:10	09/12/25 15:29	2
890-8793-12	HA - 8	Solid	09/12/25 11:15	09/12/25 15:29	4



Environment Testing
Xenco

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Work Order No:

www.xenco.com

Page 1 of 2

Project Manager:	Gilbert Moreno	Bill to: (if different)	Jim Raley
Company Name:	Earth Systems R&R	Company Name:	Devon Energy
Address:	1910 Resource Ct.	Address:	
City, State ZIP:	Carlsbad, NM, 88220	City, State ZIP:	
Phone:	832-541-7719	Email:	gmoreno@earthsys.net

SAMPLE RECEIPT		Turn Around		ANALYSIS REQUEST		Preservative Codes	
Project Name:	Spud Muffin 31 CTB 1	☒ Routine ☐ Rush				None: NO	DI Water: H ₂ O
Project Number:	7146	Due Date:	Routine TAT			Cool: Cool	MeOH: Me
Project Location:	Eddy County, NM	TAT starts the day received by the lab, if received by 4:30pm				HCL: HC	HNO ₃ : HN
Sampler's Name:	Santiago Giron					H ₂ SO ₄ : H ₂	NaOH: Na
CC/WO #:	21682317					H ₃ PO ₄ : HP	
Samples Received Intact:		Temp Blank:	Yes No	Wet Ice:	Yes No	NaHSO ₄ : NABIS	
Cooler Custody Seals:	Yes No	Thermometer ID:				Na ₂ S ₂ O ₃ : NaSO ₃	
Sample Custody Seals:	Yes No	Correction Factor:				Zn Acetate+NaOH: Zn	
Total Containers:		Temperature Reading:				NaOH+Ascorbic Acid: SAPC	
		Corrected Temperature:					

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
0					
1					
2					
3					
4					
5					

Revised Date: 06/25/2020 Rev. 2020.2

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199



Environment Testing
 Xenco

Work Order No:

www.xenco.com Page 1 of 2

Project Manager:	Gilbert Moreno	Bill to: (if different)	Jim Raley
Company Name:	Earth Systems R&R	Company Name:	Devon Energy
Address:	1910 Resource Ct.	Address:	
City, State ZIP:	Carlsbad, NM, 88220	City, State ZIP:	
Phone:	832-541-7719	Email:	gmoreno@earthsys.net

Project Name:	Spud Muffin 31 CTB 1	Turn Around	☒ Routine ☐ Rush	Pres. Code	
Project Number:	7146	Due Date:	Routine TAT		
Project Location:	Eddy County, NM	TAT starts the day received by the lab, if received by 4:30pm			
Sampler's Name:	Santiago Giron	Temp Blank:	Yes No	Wet Ice:	Yes No
CCWO #:	21682317	Samples Received Intact:	Yes No	Thermometer ID:	
		Cooler Custody Seals:	Yes No	Correction Factor:	
		Sample Custody Seals:	Yes No	Temperature Reading:	
		Total Containers:		Corrected Temperature:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth (feet)	Grab/		# of Cont	TPH -NM	Chloride -NM	BTEX -NM	24 Hr Rush																	Sample Comments																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$65.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	9/12/15			

Revised Date: 06/25/2020 Rev. 2020.2

Chain of Custody Record

Carlsbad, NM 88520
Phone: 575-988-3199 Fax: 575-988-3199

Ver: 10/10/2024

Login Sample Receipt Checklist

Client: Earth Systems Response and Restoration

Job Number: 890-8793-1
SDG Number: Eddy County, NM

Login Number: 8793

List Number: 1

Creator: Bruns, Shannon

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Earth Systems Response and Restoration

Job Number: 890-8793-1

SDG Number: Eddy County, NM

Login Number: 8793

List Number: 2

Creator: Laing, Edmundo

List Source: Eurofins Midland

List Creation: 09/15/25 09:06 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing

- 1
- 2
- 3
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- 11
- 12
- 13
- 14

ANALYTICAL REPORT

PREPARED FOR

Attn: Gilbert Moreno
Earth Systems Response and Restoration
4115 South County Road 1297
Odessa, Texas 79765
Generated 2/2/2026 4:52:51 PM

JOB DESCRIPTION

Spud Muffin 31 CTB 1
Eddy County, NM

JOB NUMBER

890-9405-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

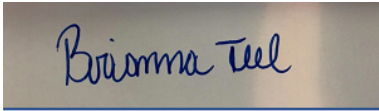
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Laboratory Job ID: 890-9405-1
SDG: Eddy County, NM

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Definitions/Glossary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-9405-1
SDG: Eddy County, NM

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Earth Systems Response and Restoration
Project: Spud Muffin 31 CTB 1

Job ID: 890-9405-1

Job ID: 890-9405-1

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Job Narrative 890-9405-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 1/23/2026 2:07 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -17.0°C.

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: HA-2 (890-9405-1) and HA-2 (890-9405-2).

GC VOA

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

Diesel Range Organics

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

HPLC/IC

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

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-9405-1
SDG: Eddy County, NM

Client Sample ID: HA-2

Lab Sample ID: 890-9405-1

Date Collected: 01/23/26 08:00

Matrix: Solid

Date Received: 01/23/26 14:07

Sample Depth: 8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		02/01/26 20:00	02/02/26 16:24	1
Toluene	<0.00202	U	0.00202		mg/Kg		02/01/26 20:00	02/02/26 16:24	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		02/01/26 20:00	02/02/26 16:24	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		02/01/26 20:00	02/02/26 16:24	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		02/01/26 20:00	02/02/26 16:24	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		02/01/26 20:00	02/02/26 16:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	02/01/26 20:00	02/02/26 16:24	1
1,4-Difluorobenzene (Surr)	91		70 - 130	02/01/26 20:00	02/02/26 16:24	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			02/02/26 16:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/31/26 04:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/23/26 16:16	01/31/26 04:18	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/23/26 16:16	01/31/26 04:18	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/23/26 16:16	01/31/26 04:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130	01/23/26 16:16	01/31/26 04:18	1
o-Terphenyl	98		70 - 130	01/23/26 16:16	01/31/26 04:18	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	127		9.90		mg/Kg			01/27/26 14:25	1

Client Sample ID: HA-2

Lab Sample ID: 890-9405-2

Date Collected: 01/23/26 08:05

Matrix: Solid

Date Received: 01/23/26 14:07

Sample Depth: 10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/01/26 20:00	02/02/26 16:45	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/01/26 20:00	02/02/26 16:45	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/01/26 20:00	02/02/26 16:45	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/01/26 20:00	02/02/26 16:45	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/01/26 20:00	02/02/26 16:45	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/01/26 20:00	02/02/26 16:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	02/01/26 20:00	02/02/26 16:45	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-9405-1
SDG: Eddy County, NM

Client Sample ID: HA-2

Lab Sample ID: 890-9405-2

Date Collected: 01/23/26 08:05

Matrix: Solid

Date Received: 01/23/26 14:07

Sample Depth: 10

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	92		70 - 130	02/01/26 20:00	02/02/26 16:45	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/02/26 16:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			01/31/26 04:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		01/23/26 16:16	01/31/26 04:33	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		01/23/26 16:16	01/31/26 04:33	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		01/23/26 16:16	01/31/26 04:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	109		70 - 130				01/23/26 16:16	01/31/26 04:33	1
o-Terphenyl	112		70 - 130				01/23/26 16:16	01/31/26 04:33	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	166		9.98		mg/Kg			01/27/26 14:39	1

Surrogate Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-9405-1
SDG: Eddy County, NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-9405-1	HA-2	96	91
890-9405-2	HA-2	100	92
LCS 880-130484/1-A	Lab Control Sample	95	106
LCSD 880-130484/2-A	Lab Control Sample Dup	96	100
MB 880-130484/5-A	Method Blank	100	89
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-9405-1	HA-2	96	98
890-9405-2	HA-2	109	112
LCS 880-129869/2-A	Lab Control Sample	91	94
LCSD 880-129869/3-A	Lab Control Sample Dup	91	93
MB 880-129869/1-A	Method Blank	89	86
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-9405-1
SDG: Eddy County, NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-130484/5-A

Matrix: Solid

Analysis Batch: 130493

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 130484

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/01/26 20:00	02/02/26 03:02	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/01/26 20:00	02/02/26 03:02	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/01/26 20:00	02/02/26 03:02	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/01/26 20:00	02/02/26 03:02	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/01/26 20:00	02/02/26 03:02	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/01/26 20:00	02/02/26 03:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	02/01/26 20:00	02/02/26 03:02	1
1,4-Difluorobenzene (Surr)	89		70 - 130	02/01/26 20:00	02/02/26 03:02	1

Lab Sample ID: LCS 880-130484/1-A

Matrix: Solid

Analysis Batch: 130493

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 130484

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09614		mg/Kg		96	70 - 130
Toluene	0.100	0.08403		mg/Kg		84	70 - 130
Ethylbenzene	0.100	0.1187		mg/Kg		119	70 - 130
m-Xylene & p-Xylene	0.200	0.2150		mg/Kg		107	70 - 130
o-Xylene	0.100	0.1040		mg/Kg		104	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		70 - 130
1,4-Difluorobenzene (Surr)	106		70 - 130

Lab Sample ID: LCSD 880-130484/2-A

Matrix: Solid

Analysis Batch: 130493

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 130484

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08932		mg/Kg		89	70 - 130	7	35
Toluene	0.100	0.07673		mg/Kg		77	70 - 130	9	35
Ethylbenzene	0.100	0.1066		mg/Kg		107	70 - 130	11	35
m-Xylene & p-Xylene	0.200	0.1645		mg/Kg		82	70 - 130	27	35
o-Xylene	0.100	0.09539		mg/Kg		95	70 - 130	9	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

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QC Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-9405-1
SDG: Eddy County, NM

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

Lab Sample ID: MB 880-129869/1-A

Matrix: Solid

Analysis Batch: 130355

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 129869

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/23/26 16:16	01/31/26 00:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/23/26 16:16	01/31/26 00:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/23/26 16:16	01/31/26 00:04	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130				01/23/26 16:16	01/31/26 00:04	1
o-Terphenyl	86		70 - 130				01/23/26 16:16	01/31/26 00:04	1

Lab Sample ID: LCS 880-129869/2-A

Matrix: Solid

Analysis Batch: 130355

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 129869

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	879.0		mg/Kg		88	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1013		mg/Kg		101	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	91		70 - 130				
o-Terphenyl	94		70 - 130				

Lab Sample ID: LCSD 880-129869/3-A

Matrix: Solid

Analysis Batch: 130355

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 129869

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	884.7		mg/Kg		88	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	1000	1012		mg/Kg		101	70 - 130	0	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	91		70 - 130						
o-Terphenyl	93		70 - 130						

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-129957/1-A

Matrix: Solid

Analysis Batch: 129978

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			01/27/26 13:01	1

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QC Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-9405-1
SDG: Eddy County, NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-129957/2-A

Matrix: Solid

Analysis Batch: 129978

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	241.8		mg/Kg		97	90 - 110

Lab Sample ID: LCSD 880-129957/3-A

Matrix: Solid

Analysis Batch: 129978

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	241.8		mg/Kg		97	90 - 110	0	20

Lab Sample ID: 890-9405-1 MS

Matrix: Solid

Analysis Batch: 129978

Client Sample ID: HA-2

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	127		248	380.4		mg/Kg		102	90 - 110

Lab Sample ID: 890-9405-1 MSD

Matrix: Solid

Analysis Batch: 129978

Client Sample ID: HA-2

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	127		248	380.4		mg/Kg		102	90 - 110	0	20

QC Association Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-9405-1
SDG: Eddy County, NM

GC VOA

Prep Batch: 130484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9405-1	HA-2	Total/NA	Solid	5035	
890-9405-2	HA-2	Total/NA	Solid	5035	
MB 880-130484/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-130484/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-130484/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 130493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9405-1	HA-2	Total/NA	Solid	8021B	130484
890-9405-2	HA-2	Total/NA	Solid	8021B	130484
MB 880-130484/5-A	Method Blank	Total/NA	Solid	8021B	130484
LCS 880-130484/1-A	Lab Control Sample	Total/NA	Solid	8021B	130484
LCSD 880-130484/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	130484

Analysis Batch: 130602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9405-1	HA-2	Total/NA	Solid	Total BTEX	
890-9405-2	HA-2	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 129869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9405-1	HA-2	Total/NA	Solid	8015NM Prep	
890-9405-2	HA-2	Total/NA	Solid	8015NM Prep	
MB 880-129869/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-129869/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-129869/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 130355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9405-1	HA-2	Total/NA	Solid	8015B NM	129869
890-9405-2	HA-2	Total/NA	Solid	8015B NM	129869
MB 880-129869/1-A	Method Blank	Total/NA	Solid	8015B NM	129869
LCS 880-129869/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	129869
LCSD 880-129869/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	129869

Analysis Batch: 130465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9405-1	HA-2	Total/NA	Solid	8015 NM	
890-9405-2	HA-2	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 129957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9405-1	HA-2	Soluble	Solid	DI Leach	
890-9405-2	HA-2	Soluble	Solid	DI Leach	
MB 880-129957/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-129957/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-129957/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-9405-1 MS	HA-2	Soluble	Solid	DI Leach	

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QC Association Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-9405-1
SDG: Eddy County, NM

HPLC/IC (Continued)

Leach Batch: 129957 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9405-1 MSD	HA-2	Soluble	Solid	DI Leach	

Analysis Batch: 129978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9405-1	HA-2	Soluble	Solid	300.0	129957
890-9405-2	HA-2	Soluble	Solid	300.0	129957
MB 880-129957/1-A	Method Blank	Soluble	Solid	300.0	129957
LCS 880-129957/2-A	Lab Control Sample	Soluble	Solid	300.0	129957
LCSD 880-129957/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	129957
890-9405-1 MS	HA-2	Soluble	Solid	300.0	129957
890-9405-1 MSD	HA-2	Soluble	Solid	300.0	129957

Lab Chronicle

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-9405-1
SDG: Eddy County, NM

Client Sample ID: HA-2

Lab Sample ID: 890-9405-1

Date Collected: 01/23/26 08:00

Matrix: Solid

Date Received: 01/23/26 14:07

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	130484	02/01/26 20:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	130493	02/02/26 16:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			130602	02/02/26 16:24	SA	EET MID
Total/NA	Analysis	8015 NM		1			130465	01/31/26 04:18	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10.00 mL	129869	01/23/26 16:16	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	130355	01/31/26 04:18	FC	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	129957	01/26/26 16:12	SMC	EET MID
Soluble	Analysis	300.0		1			129978	01/27/26 14:25	CS	EET MID

Client Sample ID: HA-2

Lab Sample ID: 890-9405-2

Date Collected: 01/23/26 08:05

Matrix: Solid

Date Received: 01/23/26 14:07

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	130484	02/01/26 20:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	130493	02/02/26 16:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			130602	02/02/26 16:45	SA	EET MID
Total/NA	Analysis	8015 NM		1			130465	01/31/26 04:33	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10.00 mL	129869	01/23/26 16:16	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	130355	01/31/26 04:33	FC	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	129957	01/26/26 16:12	SMC	EET MID
Soluble	Analysis	300.0		1			129978	01/27/26 14:39	CS	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-9405-1
SDG: Eddy County, NM

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400	06-30-26
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-9405-1
SDG: Eddy County, NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1

Job ID: 890-9405-1
SDG: Eddy County, NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-9405-1	HA-2	Solid	01/23/26 08:00	01/23/26 14:07	8
890-9405-2	HA-2	Solid	01/23/26 08:05	01/23/26 14:07	10

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14



Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Environment Testing
Xenco



www.xenpc.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐

State of Project:

Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐

Deliverables: EDD ☐ ADAPT ☐ Other: _____

Project Manager:	Gilbert Moreno	Bill to: (if different)	Jim Raley
Company Name:	Earth Systems R&R	Company Name:	Devon Energy
Address:	1910 Resource Ct.	Address:	
City, State ZIP:	Carlsbad, NM, 88220	City, State ZIP:	
Phone:	832-541-7719	Email:	gmoreno@earthsys.net, sairon@earthsys.net

[illegible]

Total	200.7 / 6010	200.8 / 6020:
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8RCRA 13PPM Texas

CRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti Sn U V Zn
 TCPLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U Hg: 163.1 / 245.1 / 7470 / 7471

Single Method(s) and Metal(s) to be analyzed

TCLP / SPLP 6010: 8

Hg: 1631 / 245.1 / 7470 / 7471

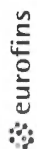
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$65.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Michael Morris	[Signature]	11/10/07	2		
3				4		
				6		

Eurofins Carlsbad

1089 N Canal St.
Carlsbad, NM 88220
Phone: 575-988-3199 Fax: 575-988-3199

Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab) Client Contact: Shipping/Receiving Company: Eurofins Environment Testing South Centr Address: 1211 W. Florida Ave, City: Midland State, Zip: TX, 79701 Phone: 432-704-5440(Tel) Email: N/A Project Name: Spud Muffin 31 CTB 1 Site: N/A		Sampler: N/A Lab PM: Teel, Brianna E-Mail: Brianna.Teel@eurofins.com Accreditations Required (See note): NELAP - Texas	Carrier Tracking No(s): N/A State of Origin: New Mexico Job #: 890-9405-1 Preservation Codes:	COC No: 890-8400.1 Page: Page 1 of 1									
Due Date Requested: 1/29/2026 TAT Requested (days): N/A		Analysis Requested											
PO #: N/A WO #: N/A Project #: 88001228 SSOW#: N/A	Sample Date 1/23/26 1/23/26	Sample Time 08:00 Mountain 08:05 Mountain	Sample Type (C=Comp, G=grab) G Solid G Solid	Matrix (W=Water, S=solid, O=Other) Solid Solid	Field Filtered Sample (Yes or No) X X	Perform MS/MSD (Yes or No) X X	Total, BTEX, GCV X X	8021B/5035FP_CalcBTEX X X	300_ORGFM_28D/DI_LEACHchloride X X	8015MOD_Calc X X	8015MOD_NM/8015NM_S_Prep8015 NM X X	Total Number of containers 1 1	Special Instructions/Note: HA-2 (890-9405-1) HA-2 (890-9405-2)
Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, LLC.													
Possible Hazard Identification Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify): Primary Deliverable Rank: 2													
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months													
Special Instructions/QC Requirements:													
Empty Kit Relinquished by: Date: Time: Method of Shipment:													
Relinquished by: Date/Time: Company: Received by: Date/Time: Company:													
Relinquished by: Date/Time: Company: Received by: Date/Time: Company:													
Relinquished by: Date/Time: Company: Received by: Date/Time: Company:													
Custody Seals Intact: Custody Seal No.: Cooler Temperature(s) °C and Other Remarks:													

Ver: 10/10/2024

Login Sample Receipt Checklist

Client: Earth Systems Response and Restoration

Job Number: 890-9405-1

SDG Number: Eddy County, NM

Login Number: 9405

List Number: 1

Creator: Lopez, Abraham

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Earth Systems Response and Restoration

Job Number: 890-9405-1

SDG Number: Eddy County, NM

Login Number: 9405

List Number: 2

Creator: Dyal, Erica

List Source: Eurofins Midland

List Creation: 01/26/26 03:50 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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

General Information
Phone: (505) 629-6116

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

QUESTIONS

Action 571112

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 571112
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2524525081
Incident Name	NAPP2524525081 SPUD MUFFIN 31 CTB 1 @ FAPP2130629627
Incident Type	Produced Water Release
Incident Status	Remediation Plan Received
Incident Facility	[fAPP2130629627] SPUD MUFFIN 31 CTB 1

Location of Release Source

Please answer all the questions in this group.

Site Name	SPUD MUFFIN 31 CTB 1
Date Release Discovered	08/29/2025
Surface Owner	Private

Incident Details

Please answer all the questions in this group.

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

Nature and Volume of Release

Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.

Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Corrosion Dump Line Produced Water Released: 5 BBL Recovered: 4 BBL Lost: 1 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Pinhole leak developed on dump line of separator. Allowing fluids to be released to pad surface.

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QUESTIONS, Page 2

Action 571112

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 571112
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	More info needed to determine if this will be treated as a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	No
Reasons why this would be considered a submission for a notification of a major release	<i>Unavailable.</i>
<i>With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.</i>	

Initial Response

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

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

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

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

I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvni.com Date: 04/06/2026
--	---

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QUESTIONS, Page 3

Action 571112

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 571112
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Site Characterization	
<i>Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 26 and 50 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1000 (ft.) and ½ (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1000 (ft.) and ½ (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1000 (ft.) and ½ (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between ½ and 1 (mi.)
Any other fresh water well or spring	Between ½ and 1 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between 1 and 5 (mi.)
A wetland	Between 300 and 500 (ft.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between 300 and 500 (ft.)
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Between 1000 (ft.) and ½ (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	6450
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	0
GRO+DRO (EPA SW-846 Method 8015M)	0
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
On what estimated date will the remediation commence	05/30/2026
On what date will (or did) the final sampling or liner inspection occur	05/30/2026
On what date will (or was) the remediation complete(d)	06/30/2026
What is the estimated surface area (in square feet) that will be reclaimed	1416
What is the estimated volume (in cubic yards) that will be reclaimed	0
What is the estimated surface area (in square feet) that will be remediated	931
What is the estimated volume (in cubic yards) that will be remediated	80
<i>These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.</i>	
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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QUESTIONS, Page 4

Action 571112

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 571112
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Remediation Plan (continued)	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for off-site disposal	fEEM0112334510 HALFWAY DISPOSAL AND LANDFILL
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
OR is the off-site disposal site, to be used, out-of-state	Not answered.
OR is the off-site disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Not answered.
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dv.com Date: 04/06/2026
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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QUESTIONS, Page 5

Action 571112

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 571112
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS, Page 6

Action 571112

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 571112
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	544552
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	01/23/2026
What was the (estimated) number of samples that were to be gathered	20
What was the sampling surface area in square feet	1000

Remediation Closure Request

Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.

Requesting a remediation closure approval with this submission	No
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Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/oecd/contact-us>

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

CONDITIONS

Action 571112

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 571112
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Site Characterization and Remediation Plan is approved with the following Conditions of Approval (COAs): 1. The request for deferral is denied based on lack of full delineation, both horizontally and vertically. Deferrals will not be granted until the release is defined edgewise, laterally at surface to 600 mg/Kg for chloride and 100 mg/Kg for TPH. Areas are not given deferral, only sample points with full delineation will be considered. HA-1, HA-2, HA-3, HA-4 and HA-8 must be further defined by the step out method.	4/14/2026