



April 29, 2026

New Mexico Oil Conservation Division
506 W. Texas Ave
Artesia, NM 88210

RE: **Spud Muffin 31 CTB 1 - Closure Request Report**
Incident Number: nAPP2524019423
GPS: 32.25575506°, -104.0262478°
Eddy County, New Mexico
ESRR Project No. 7141

To Whom It May Concern:

Earth Systems Response & Restoration (ESRR), on behalf of Devon Energy (Devon), presents the following Closure Request Report (CRR) detailing excavation activities and subsequent soil sampling events associated with an inadvertent release of produced water at the Spud Muffin 31 CTB 1 (Site). Based on completed remedial actions and laboratory analytical results from recent soil sampling events, Devon is requesting No Further Action (NFA) at the Site.

Site Location & Incident Description

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**).

On August 25, 2025, a transfer pump developed a pinhole leak, causing the release of approximately 5 barrels (bbls) of produced water within a lined secondary containment (LSC), and onto the Devon operated production pad due to windblown overspray. A vacuum truck was immediately dispatched to the Site and recovered 4 bbls of fluids. ESRR conducted initial site assessment activities and mapped the observed release footprint on August 29, 2025, hereafter referred to as the Area of Concern (AOC) (**Figure 2**). Devon gave notice to the New Mexico Oil Conservation Division (NMOCD) on August 28, 2025, by Notification of Release (NOR) and was subsequently assigned Incident Number nAPP2524019423. A Corrective Action Form C-141 (Form C-141) was submitted on August 29, 2025 and approved by the NMOCD on September 2, 2025.

On November 24, 2025, Devon requested an extension of the November 24, 2025 deadline, to allow additional time for remediation activities and for ESRR to finalize this CRR. Devon was granted a 90-day extension by the NMOCD for March 2, 2025.

On March 2, 2026, Devon requested an additional extension of the March 2, 2026 deadline, to allow additional time for ESRR to finalize this CRR. Devon was granted a 30-day extension by the NMOCD for March 2, 2025.

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On March 31, 2026, Devon requested a final extension of the April 1, 2026 deadline, to allow additional time for ESRR to complete a thorough liner inspection and to finalize this CRR. Devon was granted a 30-day extension by the NMOCD for May 1, 2026.

On April 15, 2026, Devon submitted a 48-hour business day notice (Form C-141L) for an inspection date of April 21, 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:

- o Between 1,000 feet and ½ mile of any continuously flowing watercourse or any other significant watercourse;
- o Between 1,000 feet and ½ mile of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark);
- o Between 1,000 feet and ½ mile of any occupied permanent residence, school, hospital, institution or church;
- o 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;
- o Between ½ and 1 mile of any other freshwater well or spring;
- o Between 1 and 5 miles of any incorporated municipal boundary or a defined municipal fresh water well field covered under a municipal ordinance;
- o Between 1,000 feet and ½ mile of any wetland;
- o Greater than 5 miles of any subsurface mine;
- o Between 1,000 feet and ½ mile of an unstable area (i.e. non-karst); and
- o 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 Record** for the closest depth to groundwater (DTW) well is attached.

Based on the results from the desktop review, the Site is designated with medium karst potential, and DTW is estimated to be below 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 + Diesel Range Organics + Oil Range Organics
 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 soil impacts associated with the AOC. Six delineation boreholes (HA-1 through HA-6) were advanced via hand auger within and surrounding the AOC. 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 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

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chain-of-custody procedures, to Eurofins in Carlsbad, New Mexico, for analysis of the COCs. **Photographic Documentation** of all activities are attached.

Laboratory analytical results for delineation soil samples (HA-4 through HA-6) within and surrounding the AOC were compliant with the Site Closure Criteria and the reclamation standard, defining the horizontal periphery of the AOC.

Laboratory analytical results for delineation soil samples collected within the AOC (HA-1 through HA-3) indicated chloride was above the Site Closure Criteria and the reclamation standard up to 0.5 feet bgs. Elevated chloride is characterized by concentrations ranging from 5,050 mg/kg to 11,400 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**.

Remediation Activities

During February of 2026, Devon oversaw a third-party contractor perform excavation activities of identified soil impacts based on laboratory analytical results associated with delineation soil sampling activities and visual observation via mechanical equipment. The excavation was vertically advanced to a depth of approximately 1-foot bgs.

Following the removal of soil, ESRR collected five-point composite soil samples at a sampling frequency of 200 square feet from the excavation floor (CS-1 through CS-11) and sidewalls (SW-1 through SW-4). The five-point composite soil samples were comprised of five equivalent aliquots homogenized in a 1-quart resealable plastic bag. The confirmation soil samples were handled, transported, and analyzed as previously described.

Laboratory analytical results indicated that the concentration of COCs for all final confirmation soil samples were below the applicable Site Closure Criteria and the reclamation standard. Laboratory results are summarized in **Table 1**, included in the attachments. The locations of all final confirmation soil samples are shown in **Figure 3**.

Approximately 95 cubic yards (CY) of impacted soil was removed from the Site and transported to R360 Red Bluff in Orla, New Mexico under Devon approved manifests. Upon receipt of the final confirmation soil samples results, the excavation was backfilled with clean, locally sourced soil and the Site was restored to *"as close to its original state"* as possible. The final soil cover was contoured to match the Site's pre-existing grade to prevent ponding of water and erosion.

Liner Inspection

On April 21, 2026, ESRR conducted a thorough visual inspection of the LSC and found no tears, cracks, cuts, breaks, or other signs of damage within the LSC confirming no evidence of a breach of the LSC. As a result, impacts to the production pad were confirmed to have occurred due to windblown overspray of fluids from the LSC. **Photographic Documentation** of liner inspection activities is attached.

Closure Request

Based on laboratory analytical results and the recent liner inspection, impacts associated with the inadvertent release have been delineated, excavated, and removed from the Site in accordance with the

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Site Closure Criteria. Devon believes the completed remedial actions meet the requirements set forth in NMAC 19.15.29.13 regulations in order to be protective of human health, the environment, and groundwater. As such, NFA appears warranted at this time, and Devon respectfully requests Closure of this CRR associated with Incident Number nAPP2524019423.

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 that reads "Gilbert Moreno".

Gilbert Moreno
Carlsbad Operations Manager/ Project Geologist

A handwritten signature in black ink that reads "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 - Excavation Soil Sample Locations
- Referenced Well Record
- Photographic Documentation
- Table 1 - Soil Sample Analytical Results
- NMOCD Email Documentation & Correspondence
- Executed Chain-of-Custody Forms and Laboratory Analytical Reports

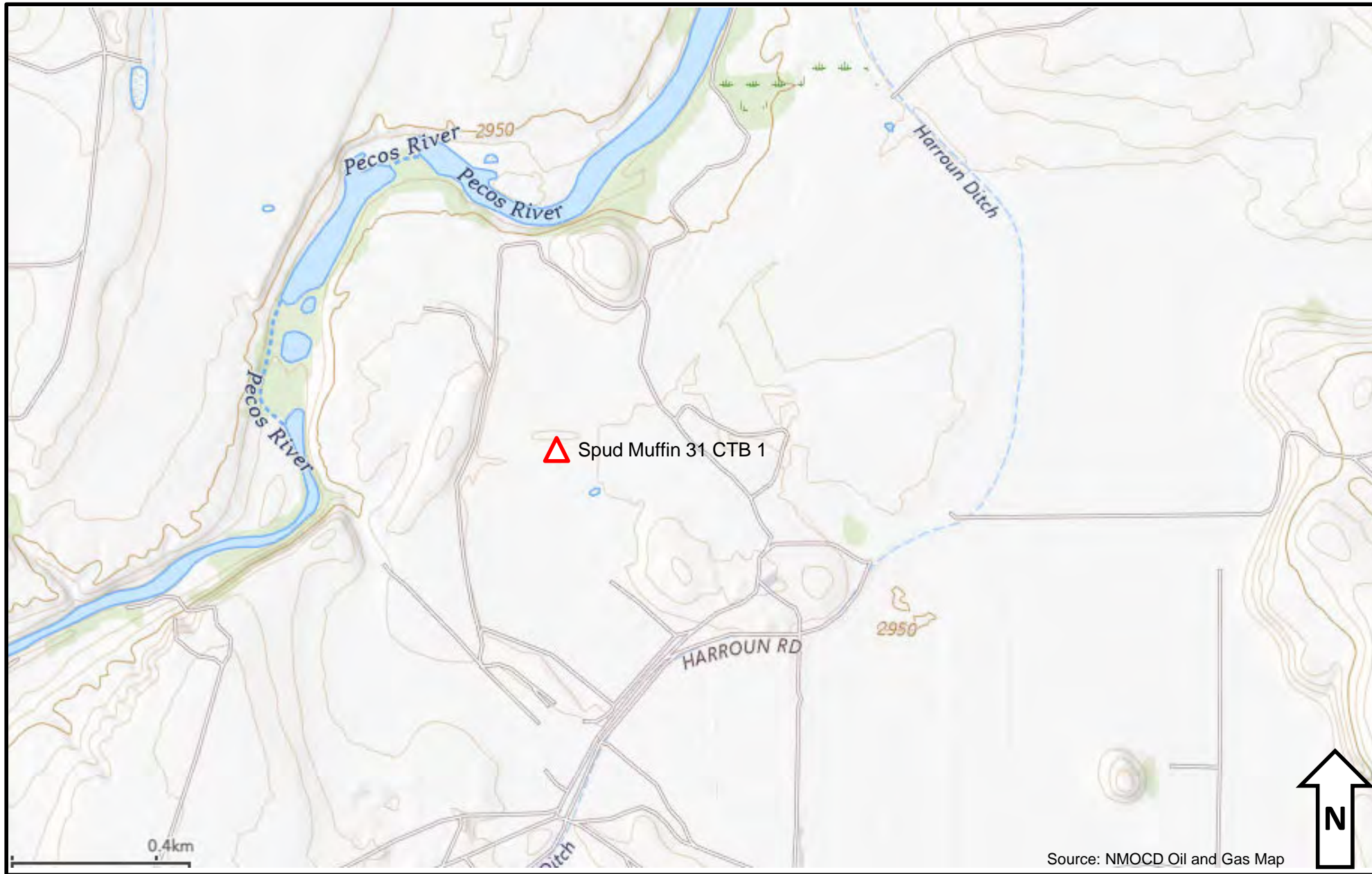


Figure 1 – Site Map

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



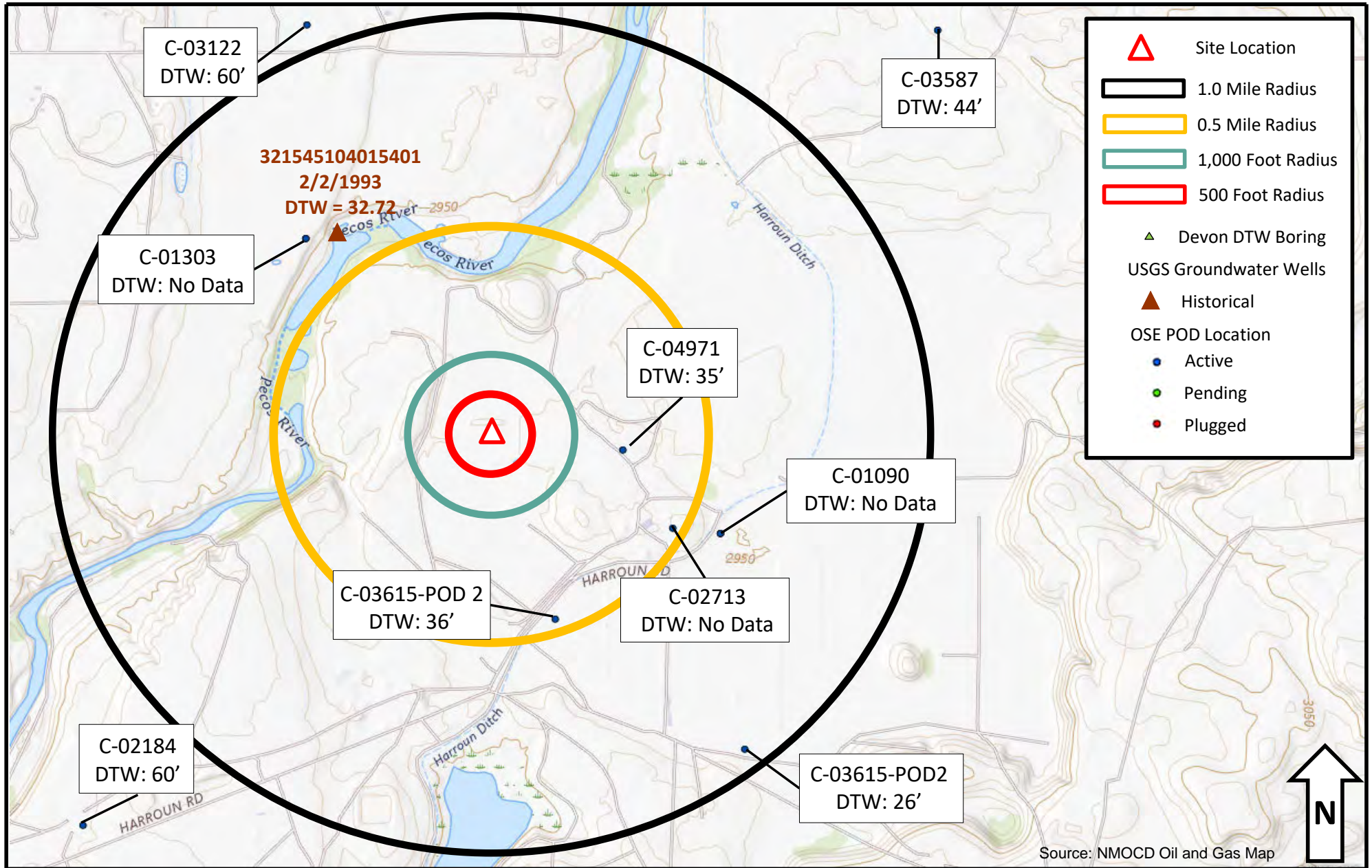


Figure 1A – Groundwater

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Eddy County, New Mexico



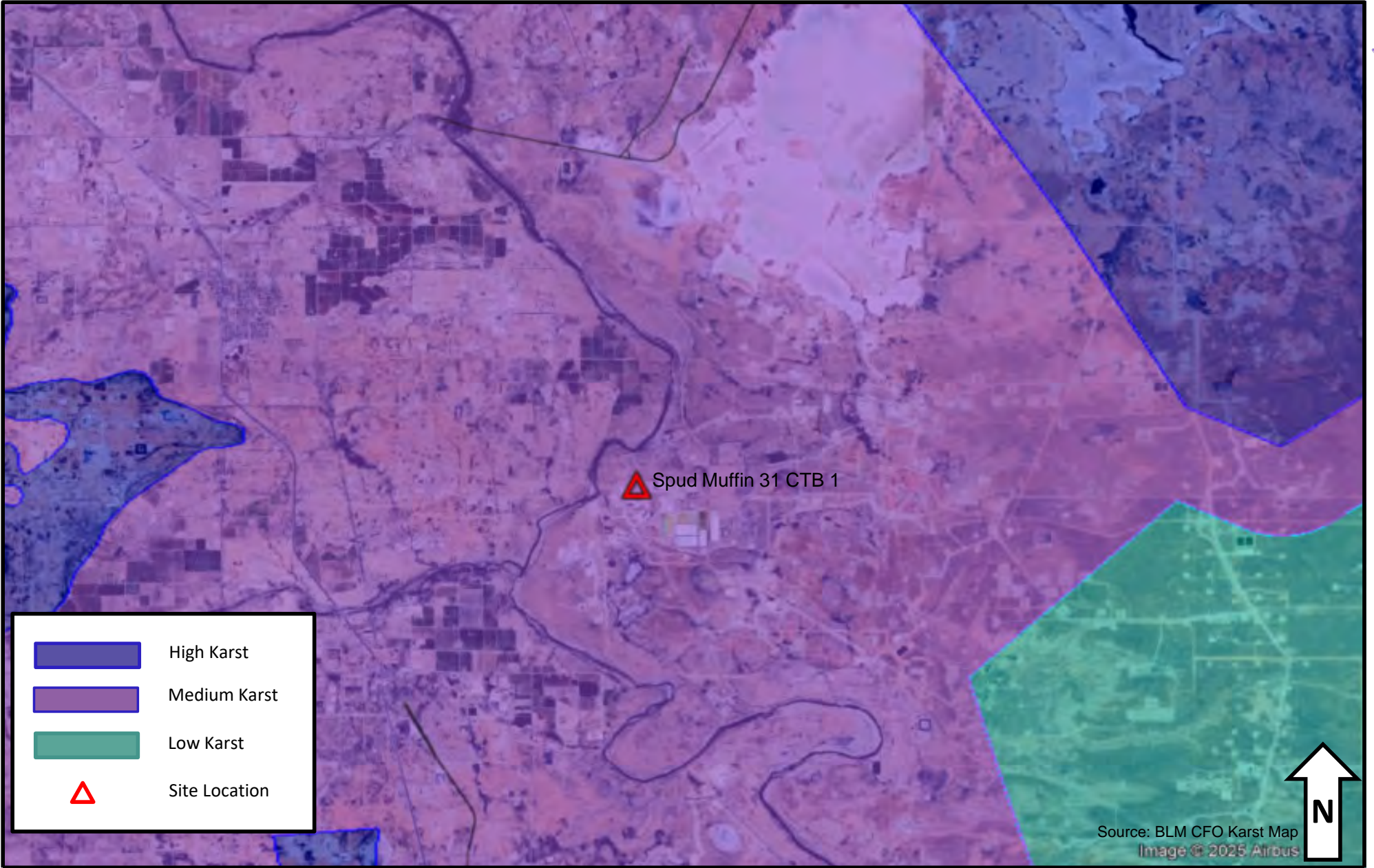


Figure 1B – Karst Potential

Devon Energy Permian – Spud Muffin 31 CTB 1
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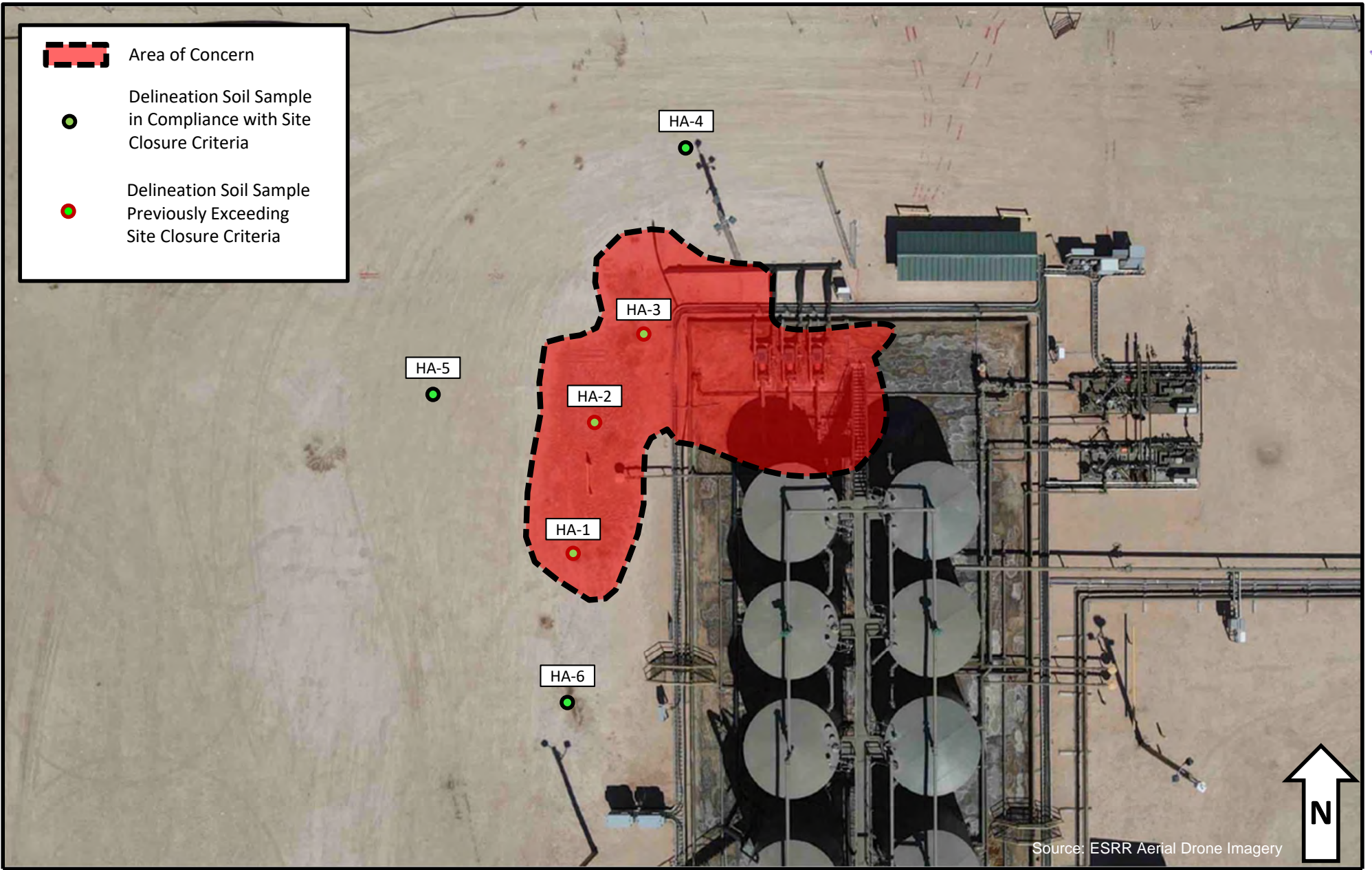


Figure 2 – Delineation Soil Sample Locations

Devon Energy Permian – Spud Muffin 31 CTB 1
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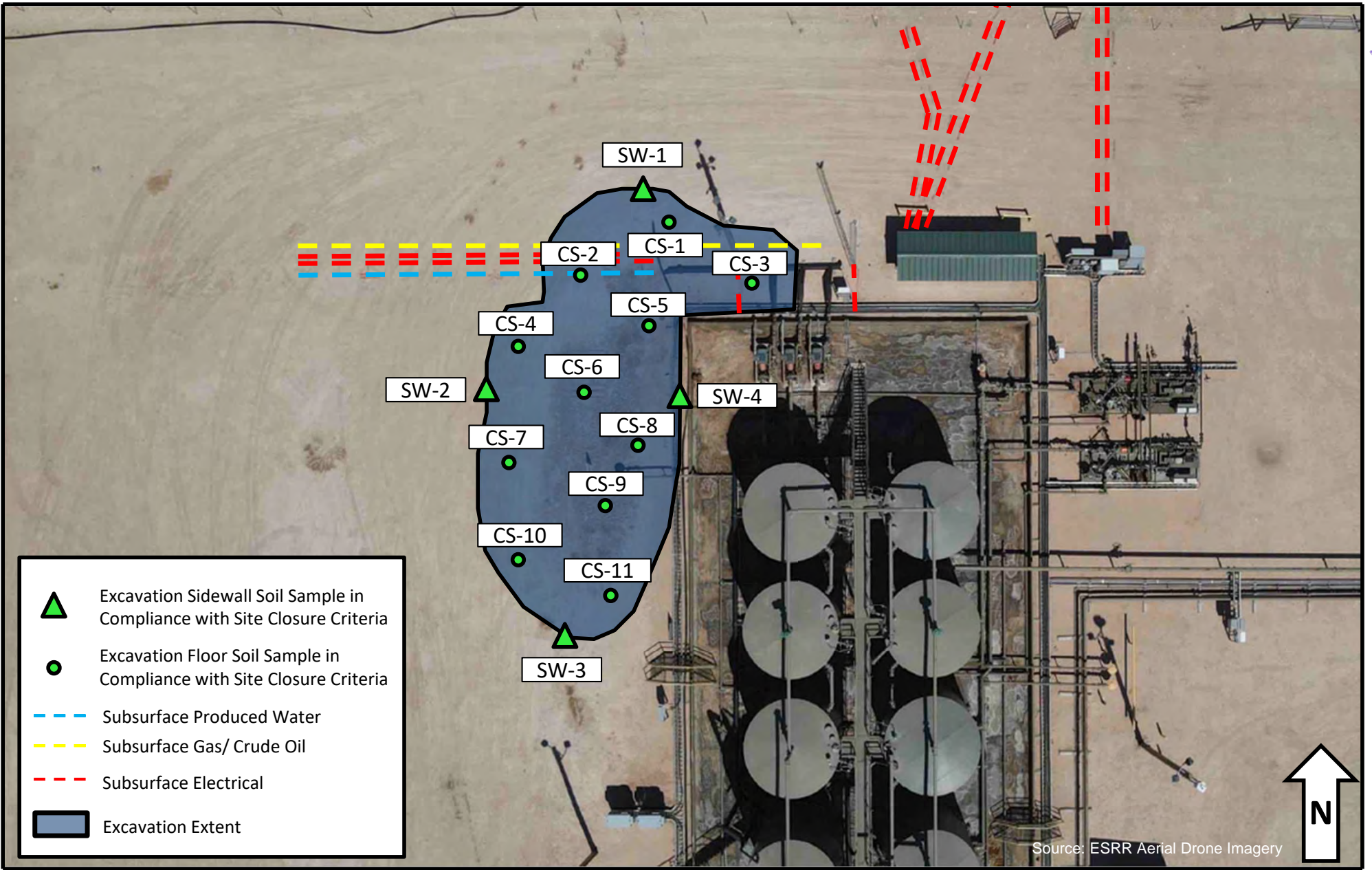


Figure 3 – Excavation Soil Sample Locations

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



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD 1 (TW-1)		WELL TAG ID NO. N/A		OSE FILE NO(S). C-4971			
	WELL OWNER NAME(S) Devon Energy				PHONE (OPTIONAL) 575-689-7597			
	WELL OWNER MAILING ADDRESS 5315 Buena Vista Dr				CITY Carlsbad	STATE NM	ZIP 88220	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 15	SECONDS 18.8	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND		
		LONGITUDE 104	1	16.0	W	* DATUM REQUIRED: WGS 84		
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE SE SW SE Sec. 31 T23S R29E, NMPM, SPUD MUFFIN 31 30 #304H -30-015-53831								
2. DRILLING & CASING INFORMATION	LICENSE NO. 1249		NAME OF LICENSED DRILLER Jackie D. Atkins			NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.		
	DRILLING STARTED 06/12/2025	DRILLING ENDED 06/12/2025	DEPTH OF COMPLETED WELL (FT) Temporary Well Material	BORE HOLE DEPTH (FT) ±40	DEPTH WATER FIRST ENCOUNTERED (FT) ±35			
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN *add Centralizer info below <input type="checkbox"/> DRY HOLE <input checked="" type="checkbox"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) 35.7	DATE STATIC MEASURED 06/12/2025		
	DRILLING FLUID: <input type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input checked="" type="checkbox"/> OTHER - SPECIFY: Hollow Stem Auger					CHECK HERE IF PITLESS ADAPTER IS INSTALLED <input type="checkbox"/>		
	DEPTH (feet bgl)		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)
	FROM	TO						
	0	40	±6.25	Soil Boring	--	--	--	--
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE- RANGE BY INTERVAL <i>*(if using Centralizers for Artesian wells- indicate the spacing below)</i>	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
				N/A				

OSE DTI ROSWELL NM
25 JUL '25 AM 10:51

FOR OSE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 09/22/2022)			
FILE NO.	C-04971	POD NO.	1	TRN NO.	786108
LOCATION	23S. 29E. 31. 434	WELL TAG ID NO.		PAGE 1 OF 2	

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PHOTO 1: Southeastern view during initial site assessment. 8/25/2025



PHOTO 2: Southwestern view during initial site assessment. 8/25/2025

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PHOTO 3: Northern aerial view during delineation activities. 9/12/2025



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

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



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

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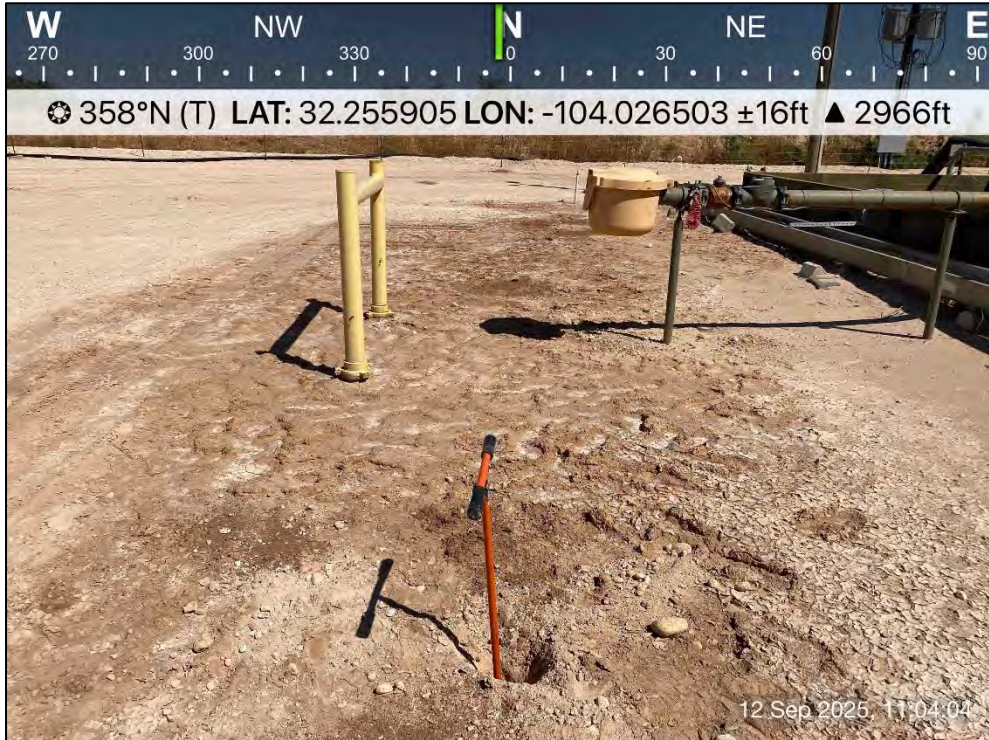


PHOTO 7: Northern view during delineation activities. 9/12/2025



PHOTO 8: Northeastern view during delineation activities. 9/12/2025

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PHOTO 9: Northeastern view during excavation activities. 2/11/2026



PHOTO 10: Southern view during excavation activities. 2/11/2026

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PHOTO 11: Northwestern view of excavation extent. 2/11/2026



PHOTO 12: Southeastern view of excavation extent. 2/11/2026

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PHOTO 13: Northwestern view of excavation extent. 2/11/2026



PHOTO 14: Northeastern view of excavation extent. 2/11/2026

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PHOTO 15: Western view following restoration activities. 2/27/2026



PHOTO 16: Northeastern view following restoration activities. 2/27/2026

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PHOTO 17: Southwestern view following restoration activities. 2/27/2026



PHOTO 18: Southern view outside of containment during liner inspection activities. 4/21/2026

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PHOTO 19: Northeastern view outside of containment during liner inspection activities. 4/21/2026



PHOTO 20: Southeastern view outside of containment during liner inspection activities. 4/21/2026

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PHOTO 21: Western view outside of containment during liner inspection activities. 4/21/2026



PHOTO 22: Southwestern view outside of containment during liner inspection activities. 4/21/2026

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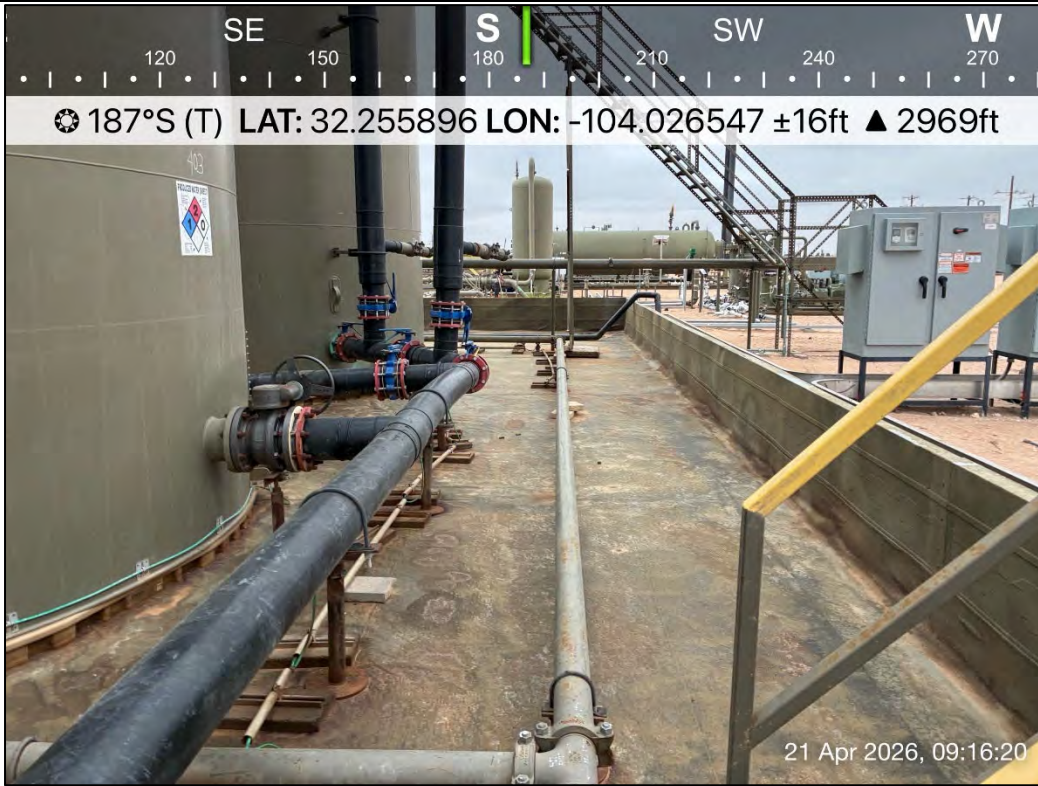


PHOTO 23: Southern view during liner inspection activities. 4/21/2026

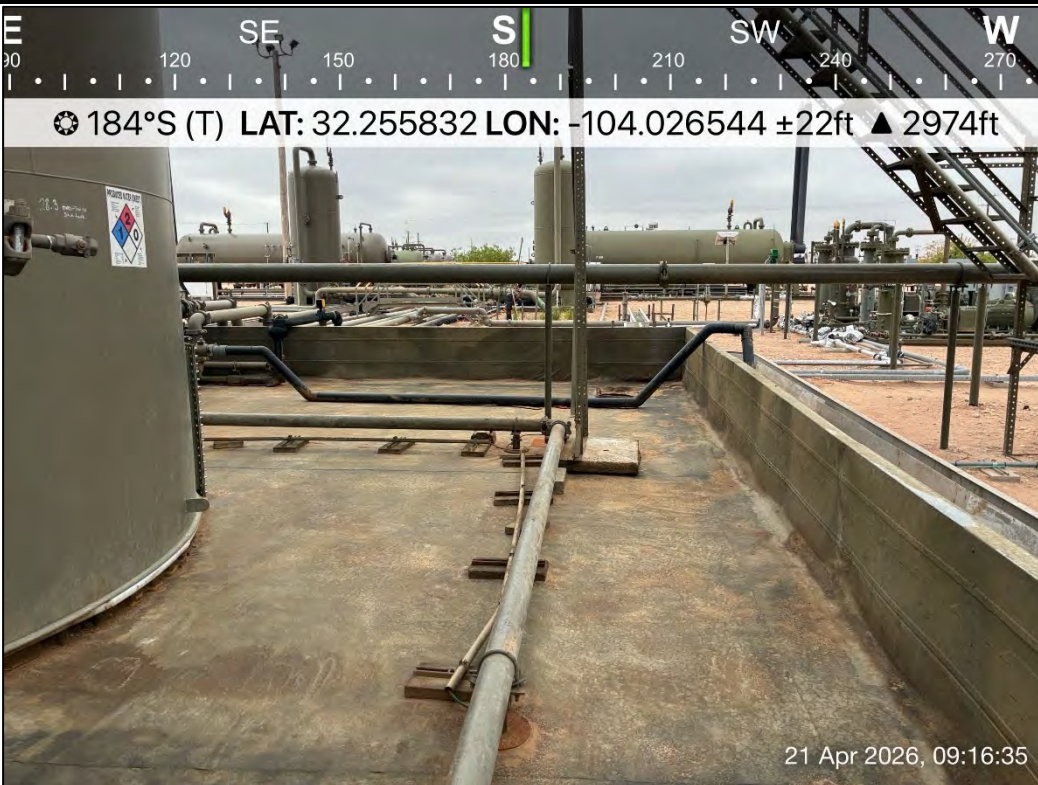


PHOTO 24: Southern view during liner inspection activities. 4/21/2026

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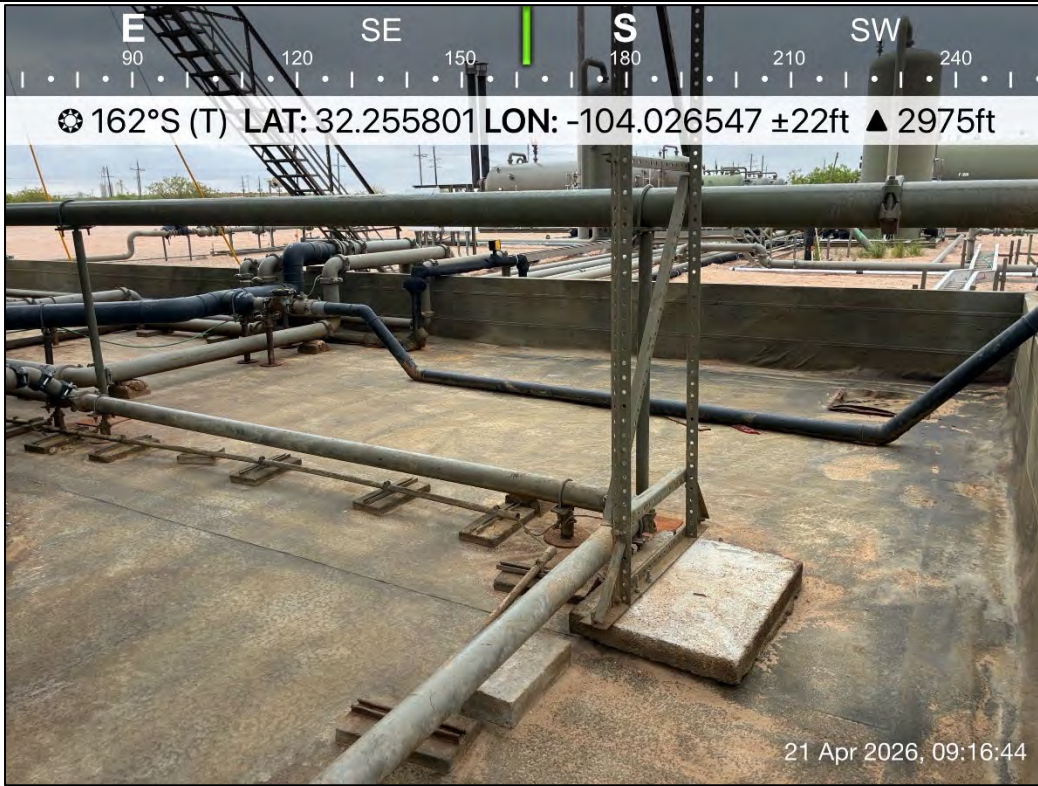


PHOTO 25: Southeastern view during liner inspection activities. 4/21/2026

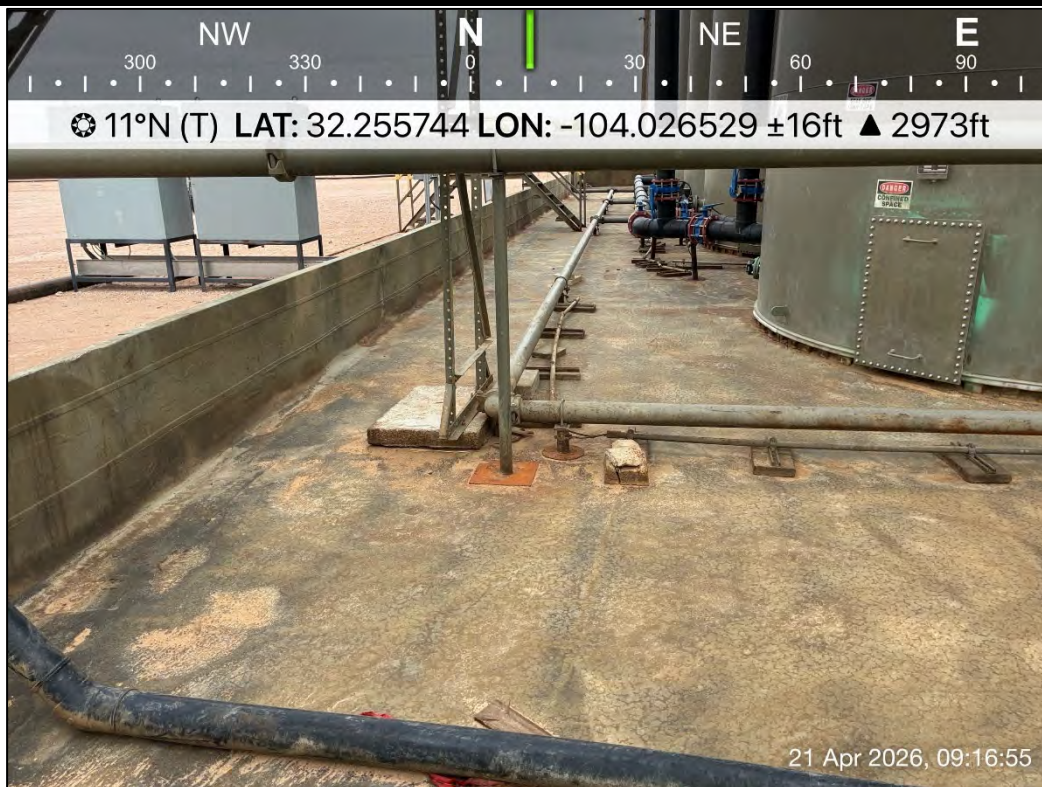


PHOTO 26: Northeastern view during liner inspection activities. 4/21/2026

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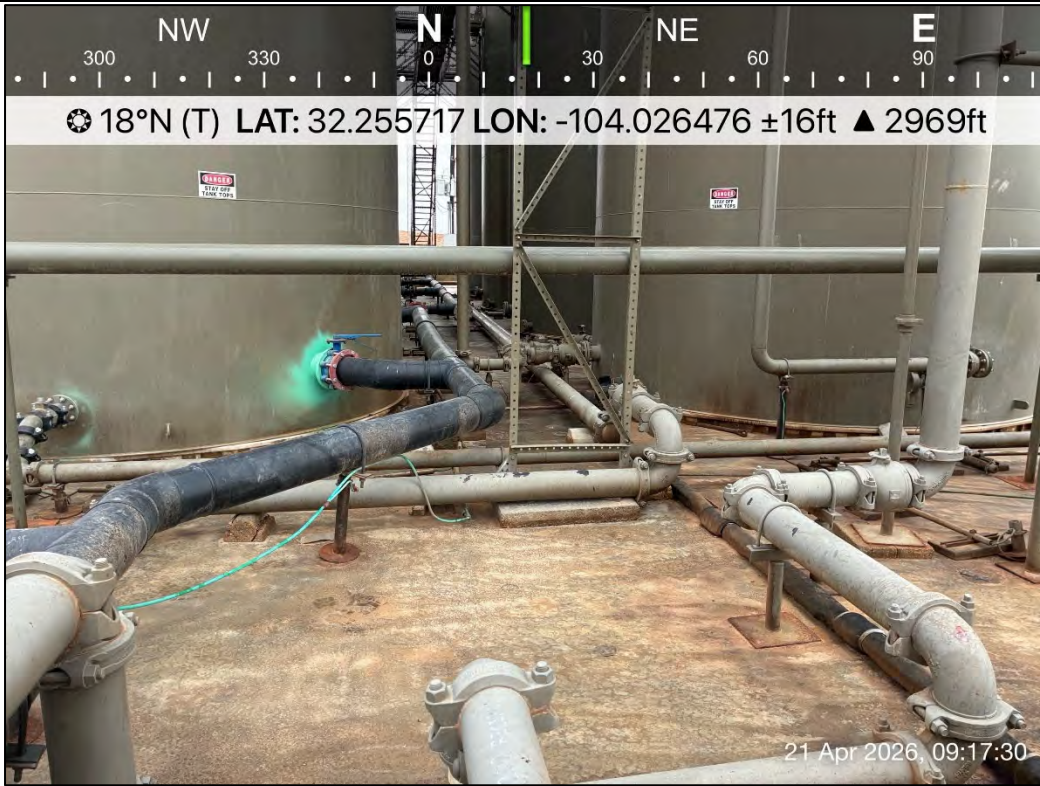


PHOTO 27: Northeastern view during liner inspection activities. 4/21/2026

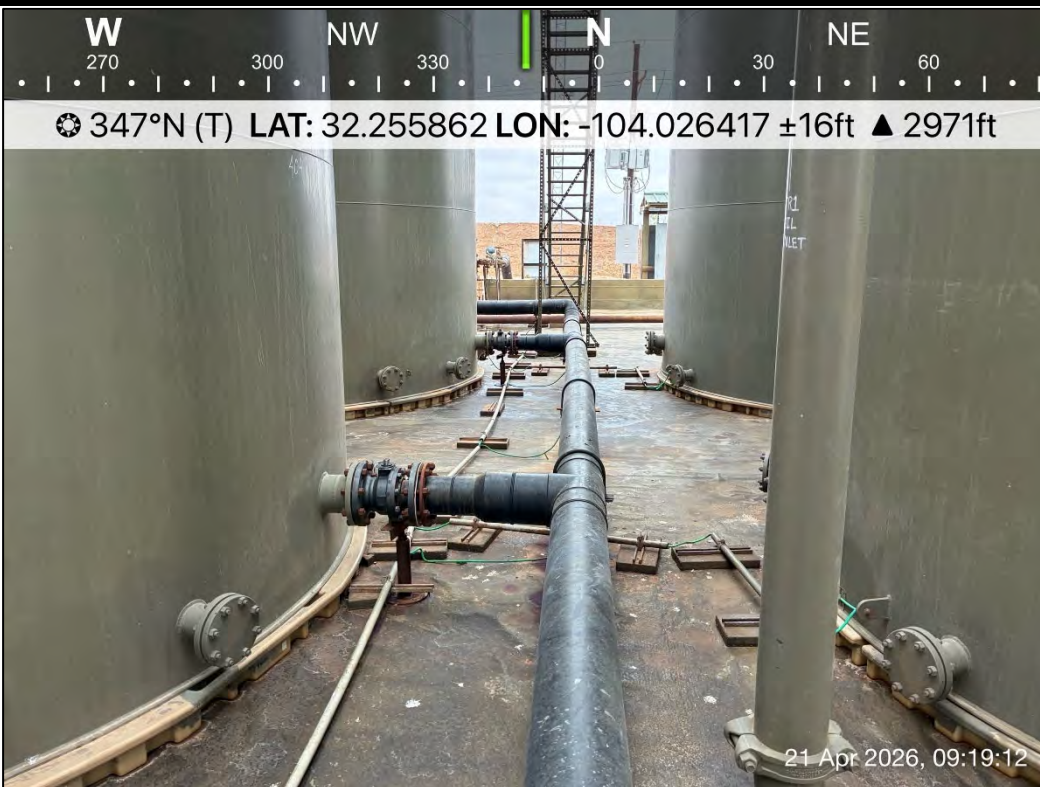


PHOTO 28: Northwestern view during liner inspection activities. 4/21/2026

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PHOTO 29: Northern view during liner inspection activities. 4/21/2026



PHOTO 30: Eastern view during liner inspection activities. 4/21/2026

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PHOTO 31: Southeastern view during liner inspection activities. 4/21/2026



PHOTO 32: Southeastern view during liner inspection activities. 4/21/2026

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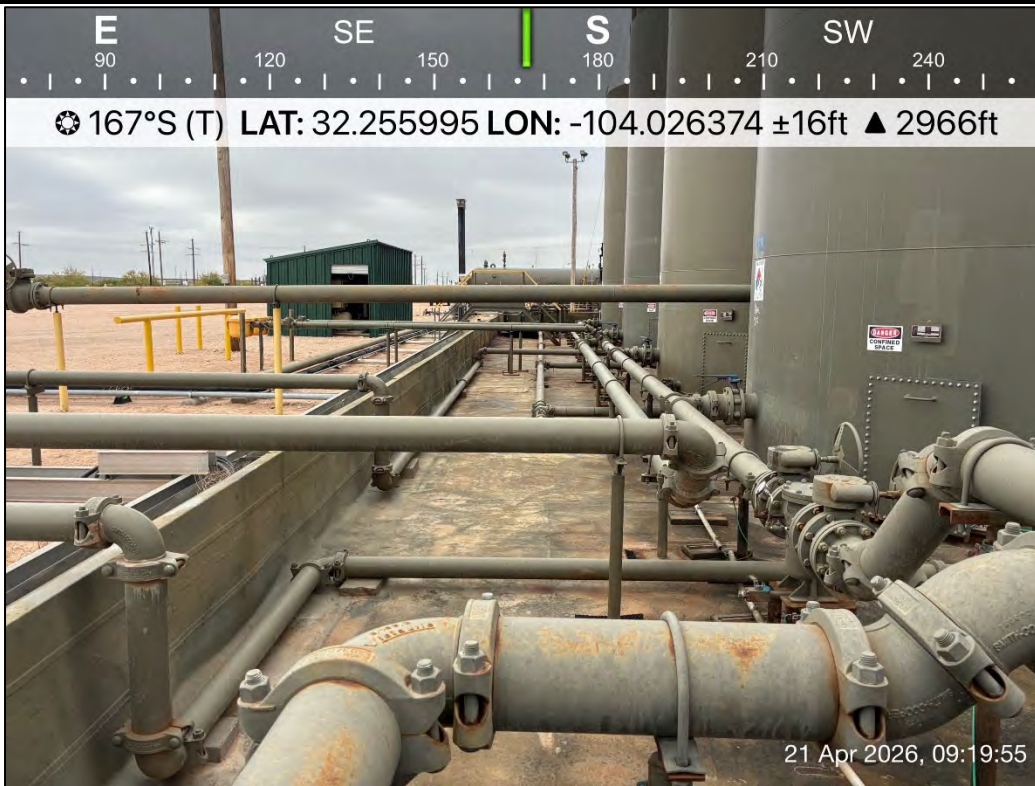


PHOTO 33: Southeastern view during liner inspection activities. 4/21/2026

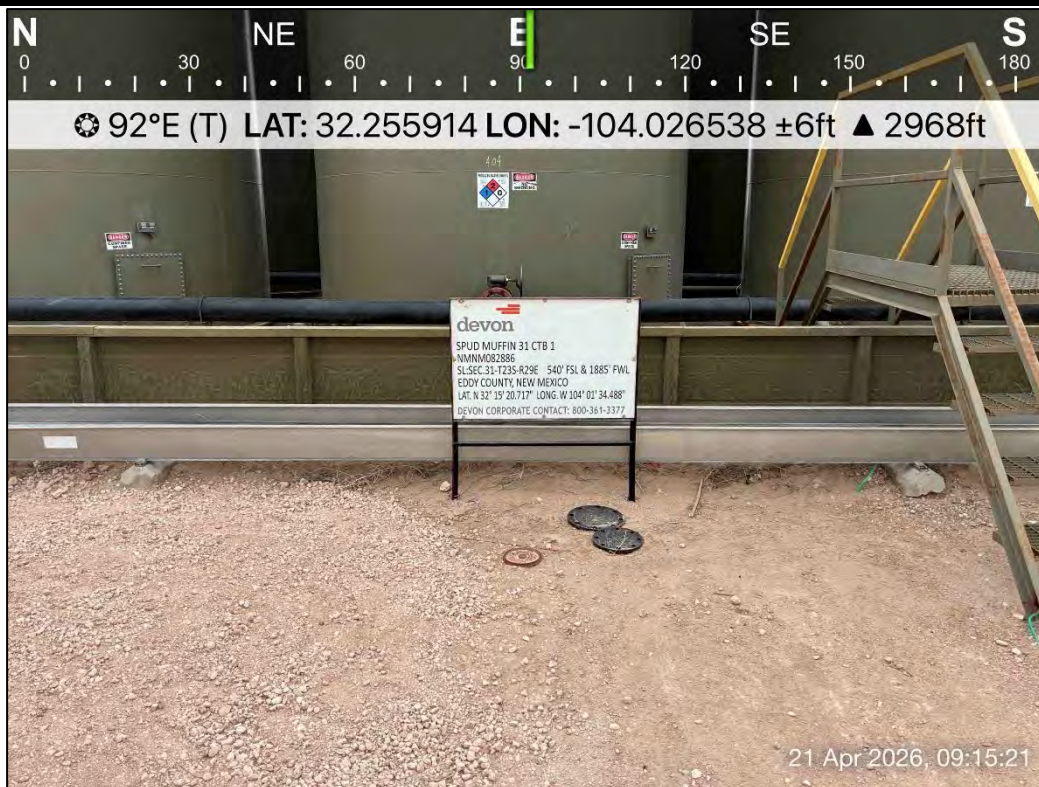


PHOTO 34: Eastern view of location sign. 4/21/2026



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 - nAPP2524019423									
HA - 1	09/12/25	0.5	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	5,050
HA - 1	09/12/25	1	0.00269	<0.00399	<49.9	<49.9	<49.9	<49.9	64.0
HA - 1	09/12/25	2	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	29.5
HA - 2	09/12/25	0.5	<0.00198	<0.00396	<49.7	<49.7	<49.7	<49.7	11,400
HA - 2	09/12/25	1	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	81.8
HA - 2	09/12/25	2	0.00256	<0.00398	<50.0	<50.0	<50.0	<50.0	17.7
HA - 3	09/12/25	0.5	0.00236	<0.00398	<49.8	<49.8	<49.8	<49.8	6,290
HA - 3	09/12/25	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	179
HA - 3	09/12/25	2	0.00203	<0.00402	<49.9	<49.9	<49.9	<49.9	191
HA - 4	09/12/25	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	51.2
HA - 4	09/12/25	1	0.00216	<0.00401	<49.9	<49.9	<49.9	<49.9	<10.1
HA - 4	09/12/25	2	0.00233	<0.00398	<50.0	<50.0	<50.0	<50.0	<9.92
HA - 5	09/12/25	0.5	0.00208	<0.00398	<50.0	<50.0	<50.0	<50.0	38.7
HA - 5	09/12/25	1	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	14.9
HA - 5	09/12/25	2	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	25.1
HA - 6	09/12/25	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	97.6
HA - 6	09/12/25	1	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	14.0
HA - 6	09/12/25	2	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<9.96
Confirmation Soil Samples - nAPP2524019423									
SW - 1	02/11/26	0-1	<0.00198	<0.00396	<50.5	<50.5	<50.5	<50.5	53.2
SW - 2	02/11/26	0-1	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	85.3
SW - 3	02/11/26	0-1	<0.00200	<0.00399	<50.5	<50.5	<50.5	<50.5	<9.90
SW - 4	02/11/26	0-1	<0.00201	<0.00402	<50.1	<50.1	<50.1	<50.1	33.0
CS - 1	02/11/26	1	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	319
CS - 2	02/11/26	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<10.0
CS - 3	02/11/26	1	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	17.0
CS - 4	02/11/26	1	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	21.2
CS - 5	02/11/26	1	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	404



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
Confirmation Soil Samples - nAPP2524019423									
CS - 6	02/11/26	1	<0.00200	<0.00399	<50.1	<50.1	<50.1	<50.1	387
CS - 7	02/11/26	1	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	14.9
CS - 8	02/11/26	1	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	69.4
CS - 9	02/11/26	1	<0.00200	<0.00401	<50.5	<50.5	<50.5	<50.5	67.0
CS - 10	02/11/26	1	<0.00201	<0.00402	<50.1	<50.1	<50.1	<50.1	52.1
CS - 11	02/11/26	1	<0.00199	<0.00398	<49.6	<49.6	<49.6	<49.6	11.7

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.

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 503718

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 503718
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2524019423
Incident Name	NAPP2524019423 SPUD MUFFIN 31 CTB 1 @ 0
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	08/25/2025
Surface Owner	Private

Sampling Event General Information	
<i>Please answer all the questions in this group.</i>	
What is the sampling surface area in square feet	400
What is the estimated number of samples that will be gathered	10
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
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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

CONDITIONS

Action 503718

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 503718
	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



RE: [EXTERNAL] Spud Muffin 31 CTB 1 - Extension Request - nAPP2524019423

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

Date Tue 11/25/2025 8:22 AM

To Gilbert Moreno <gmoreno@earthsys.net>

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

Good morning,

Devon is approved for a 90-day extension to complete remediation activities and submit the closure report for the incident. I have updated the incident page and application to reflect this change. The final deadline to submit is 03/02/2026. Please go ahead and include this correspondence with the next report submittal.

Thank you,

From: Gilbert Moreno <gmoreno@earthsys.net>

Sent: Tuesday, November 25, 2025 7:15 AM

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

Cc: Raley, Jim <jim.rale@dn.com>

Subject: Re: [EXTERNAL] Spud Muffin 31 CTB 1 - Extension Request - nAPP2524019423

Apologies on the delayed response. If no unexpected delays, a 90-day extension should be sufficient.

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: Monday, November 24, 2025 4:08 PM
To: Gilbert Moreno <gmoreno@earthsys.net>
Cc: Raley, Jim <jim.ralej@dm.com>
Subject: RE: [EXTERNAL] Spud Muffin 31 CTB 1 - Extension Request - nAPP2524019423

Good afternoon, Gilbert

How much of an extension is needed to complete the remediation activities and submit for closure?

Mike

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 and crude oil release was discovered on August 25, 2025 and was subsequently assigned Incident Number nAPP2524019423. 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 an extension of the November 24, 2025, deadline for the release associated with Incident Number nAPP2524019423, 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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**State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505**

QUESTIONS

Action 551796

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 551796
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2524019423
Incident Name	NAPP2524019423 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	08/25/2025
Surface Owner	Private

Sampling Event General Information	
<i>Please answer all the questions in this group.</i>	
What is the sampling surface area in square feet	2,117
What is the estimated number of samples that will be gathered	15
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	02/11/2026
Time sampling will commence	11:00 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

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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

CONDITIONS

Action 551796

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 551796
	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.	2/9/2026
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.	2/9/2026



Outlook

RE: [EXTERNAL] Spud Muffin 31 CTB 1 - Extension Request - nAPP2524019423

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

Date Mon 3/2/2026 11:31 AM

To Gilbert Moreno <gmoreno@earthsys.net>

Cc CFO_Spill, BLM_NM <blm_nm_cfo_spill@blm.gov>; Raley, Jim <jim.raley@dvn.com>

Good morning,

The request for an additional 30-day extension from the current deadline of 03/02/2026 is approved. The incident file has been updated to amend the current deadline to 04/01/2026. Please keep a copy of this approval for your records and include it with the closure report submission.

Thanks,

From: Gilbert Moreno <gmoreno@earthsys.net>

Sent: Monday, March 2, 2026 11:16 AM

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

Cc: CFO_Spill, BLM_NM <blm_nm_cfo_spill@blm.gov>; Raley, Jim <jim.raley@dvn.com>

Subject: [EXTERNAL] Spud Muffin 31 CTB 1 - Extension Request - nAPP2524019423

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 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).

Devon oversaw a 3rd-party contractor perform excavation activities early February 2026. As of February 27, 2026, the site has been restored to its original state. ESRR anticipates the subsequent corrective action closure report to be completed by April 1, 2026.

Devon requests a 30-day extension of the March 2, 2026, deadline for the release associated with Incident Number nAPP2524019423, to allow additional time for ESRR to finalize the subsequent corrective action closure report.

Thanks,

Gilbert Moreno

Carlsbad Operations Manager- Project Geologist

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



RE: [EXTERNAL] Spud Muffin 31 CTB 1 - Extension Request - nAPP2524019423

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

Date Wed 4/1/2026 9:09 AM

To Gilbert Moreno <gmoreno@earthsys.net>

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

Good morning, Mr. Moreno

The request for a 30-day extension from the current deadline of 04/01/2026 is approved. I have updated the incident file for Incident Number nAPP2524019423 to reflect this change. Please include this approval thread with the closure report as part of the documentation. Final closure report due date has been adjusted to 05/01/2026.

Thank you,

From: Gilbert Moreno <gmoreno@earthsys.net>

Sent: Tuesday, March 31, 2026 2:29 PM

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

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

Subject: Re: [EXTERNAL] Spud Muffin 31 CTB 1 - Extension Request - nAPP2524019423

Good afternoon,

Earth Systems R & R (ESRR) on behalf of Devon Energy (Devon) is requesting a final 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).

As previously mentioned, remediation has been completed as of February 27, 2026, and the site has been restored to its original state. Upon further review, Devon has determined that a liner inspection is required for complete closure of this incident, confirming fluids remediated were indeed due to overspray and not to any rips or tears in the liner. Due to recent incidents (nAPP2602019562 & nAPP2608924959) within the same containment in question, scheduling of the pressure washing and inspection has had delays.

Devon requests a final 30-day extension of the April 1, 2026, deadline for the release associated with Incident Number nAPP2524019423, to allow additional time for ESRR to complete the liner inspection and to finalize the subsequent corrective action closure report.

Thanks,

Gilbert Moreno

Carlsbad Operations Manager- Project Geologist

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

gmoreno@earthsys.net

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

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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 575903

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 575903
	Action Type: [NOTIFY] Notification Of Liner Inspection (C-141L)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2524019423
Incident Name	NAPP2524019423 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	08/25/2025
Surface Owner	Private

Liner Inspection Event Information	
<i>Please answer all the questions in this group.</i>	
What is the liner inspection surface area in square feet	7,492
Have all the impacted materials been removed from the liner	Yes
Liner inspection date pursuant to Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC	04/21/2026
Time liner inspection will commence	08:00 AM
Please provide any information necessary for observers to liner inspection	Gilbert Moreno (832) 541-7719
Please provide any information necessary for navigation to liner inspection site	32.25575506, -104.0262478

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Phone: (505) 476-3441

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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

CONDITIONS

Action 575903

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 575903
	Action Type: [NOTIFY] Notification Of Liner Inspection (C-141L)

CONDITIONS

Created By	Condition	Condition Date
jraley	Failure to notify the OCD of liner inspections including any changes in date/time per the requirements of 19.15.29.11.A(5)(a)(ii) NMAC, may result in the inspection not being accepted.	4/15/2026



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 2:19:01 PM

JOB DESCRIPTION

Spud Muffin 3 CTB 1
 Eddy County

JOB NUMBER

890-8791-1

Eurofins Carlsbad
 1089 N Canal St.
 Carlsbad NM 88220



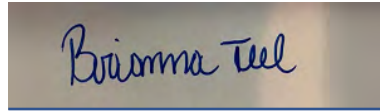
Eurofins Carlsbad

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 2:19:01 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 3 CTB 1

Laboratory Job ID: 890-8791-1
SDG: Eddy County

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Definitions/Glossary

Client: Earth Systems Response and Restoration
 Project/Site: Spud Muffin 3 CTB 1

Job ID: 890-8791-1
 SDG: Eddy County

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Earth Systems Response and Restoration
Project: Spud Muffin 3 CTB 1

Job ID: 890-8791-1

Job ID: 890-8791-1

Eurofins Carlsbad

Job Narrative 890-8791-1

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 0.5 (890-8791-1), HA - 1 1 (890-8791-2), HA - 1 2 (890-8791-3), HA - 2 0.5 (890-8791-4), HA - 2 1 (890-8791-5), HA - 2 2 (890-8791-6), HA - 3 0.5 (890-8791-7), HA - 3 1 (890-8791-8) and HA - 3 2 (890-8791-9).

GC VOA

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

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

Eurofins Carlsbad



Client Sample Results

Client: Earth Systems Response and Restoration
 Project/Site: Spud Muffin 3 CTB 1

Job ID: 890-8791-1
 SDG: Eddy County

Client Sample ID: HA - 1 0.5

Lab Sample ID: 890-8791-1

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	<0.00198	U	0.00198		mg/Kg		09/15/25 10:25	09/15/25 15:21	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/15/25 10:25	09/15/25 15:21	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		09/15/25 10:25	09/15/25 15:21	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		09/15/25 10:25	09/15/25 15:21	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		09/15/25 10:25	09/15/25 15:21	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		09/15/25 10:25	09/15/25 15:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	09/15/25 10:25	09/15/25 15:21	1
1,4-Difluorobenzene (Surr)	104		70 - 130	09/15/25 10:25	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	<0.00397	U	0.00397		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 21:25	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 21:25	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/25 08:13	09/18/25 21:25	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/25 08:13	09/18/25 21:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130	09/15/25 08:13	09/18/25 21:25	1
o-Terphenyl	116		70 - 130	09/15/25 08:13	09/18/25 21:25	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5050		100		mg/Kg			09/15/25 21:40	10

Client Sample ID: HA - 1 1

Lab Sample ID: 890-8791-2

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	0.00269		0.00200		mg/Kg		09/15/25 10:25	09/15/25 15:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 15:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 15:41	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/15/25 10:25	09/15/25 15:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 15:41	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/15/25 10:25	09/15/25 15:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	09/15/25 10:25	09/15/25 15:41	1

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Client Sample Results

Client: Earth Systems Response and Restoration
 Project/Site: Spud Muffin 3 CTB 1

Job ID: 890-8791-1
 SDG: Eddy County

Client Sample ID: HA - 1 1

Lab Sample ID: 890-8791-2

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)	100		70 - 130	09/15/25 10:25	09/15/25 15:41	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 15:41	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 08:13	09/18/25 21:40	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/25 08:13	09/18/25 21:40	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/25 08:13	09/18/25 21:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130	09/15/25 08:13	09/18/25 21:40	1
o-Terphenyl	113		70 - 130	09/15/25 08:13	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	64.0		10.1		mg/Kg			09/15/25 21:46	1

Client Sample ID: HA - 1 2

Lab Sample ID: 890-8791-3

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	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 17:15	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 17:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 17:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/15/25 10:25	09/15/25 17:15	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 17:15	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/15/25 10:25	09/15/25 17:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	09/15/25 10:25	09/15/25 17:15	1
1,4-Difluorobenzene (Surr)	101		70 - 130	09/15/25 10:25	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	<0.00400	U	0.00400		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	<50.0	U	50.0		mg/Kg			09/18/25 22:10	1

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Client Sample Results

Client: Earth Systems Response and Restoration
 Project/Site: Spud Muffin 3 CTB 1

Job ID: 890-8791-1
 SDG: Eddy County

Client Sample ID: HA - 1 2

Lab Sample ID: 890-8791-3

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 08:13	09/18/25 22:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/25 08:13	09/18/25 22:10	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/25 08:13	09/18/25 22:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130				09/15/25 08:13	09/18/25 22:10	1
o-Terphenyl	115		70 - 130				09/15/25 08:13	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	29.5		9.96		mg/Kg			09/15/25 21:52	1

Client Sample ID: HA - 2 0.5

Lab Sample ID: 890-8791-4

Date Collected: 09/12/25 08:20

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 10:25	09/15/25 17:36	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/15/25 10:25	09/15/25 17:36	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		09/15/25 10:25	09/15/25 17:36	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		09/15/25 10:25	09/15/25 17:36	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		09/15/25 10:25	09/15/25 17:36	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		09/15/25 10:25	09/15/25 17:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130				09/15/25 10:25	09/15/25 17:36	1
1,4-Difluorobenzene (Surr)	104		70 - 130				09/15/25 10:25	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	<0.00396	U	0.00396		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	<49.7	U	49.7		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	<49.7	U	49.7		mg/Kg		09/15/25 08:13	09/18/25 22:26	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		09/15/25 08:13	09/18/25 22:26	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		09/15/25 08:13	09/18/25 22:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130				09/15/25 08:13	09/18/25 22:26	1
o-Terphenyl	119		70 - 130				09/15/25 08:13	09/18/25 22:26	1

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Client Sample Results

Client: Earth Systems Response and Restoration
 Project/Site: Spud Muffin 3 CTB 1

Job ID: 890-8791-1
 SDG: Eddy County

Client Sample ID: HA - 2 0.5

Lab Sample ID: 890-8791-4

Date Collected: 09/12/25 08:20

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	11400		198		mg/Kg			09/15/25 22:09	20

Client Sample ID: HA - 2 1

Lab Sample ID: 890-8791-5

Date Collected: 09/12/25 08:25

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 10:25	09/15/25 17:56	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:25	09/15/25 17:56	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:25	09/15/25 17:56	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/15/25 10:25	09/15/25 17:56	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:25	09/15/25 17:56	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/15/25 10:25	09/15/25 17:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130				09/15/25 10:25	09/15/25 17:56	1
1,4-Difluorobenzene (Surr)	100		70 - 130				09/15/25 10:25	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	<0.00402	U	0.00402		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 22:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/15/25 08:13	09/18/25 22:41	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/15/25 08:13	09/18/25 22:41	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/15/25 08:13	09/18/25 22:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130				09/15/25 08:13	09/18/25 22:41	1
o-Terphenyl	110		70 - 130				09/15/25 08:13	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	81.8		9.94		mg/Kg			09/15/25 22:15	1

Client Sample Results

Client: Earth Systems Response and Restoration
 Project/Site: Spud Muffin 3 CTB 1

Job ID: 890-8791-1
 SDG: Eddy County

Client Sample ID: HA - 2 2

Lab Sample ID: 890-8791-6

Date Collected: 09/12/25 08:30

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	0.00256		0.00199		mg/Kg		09/15/25 10:25	09/15/25 18:17	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:25	09/15/25 18:17	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:25	09/15/25 18:17	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/15/25 10:25	09/15/25 18:17	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:25	09/15/25 18:17	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/15/25 10:25	09/15/25 18:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130				09/15/25 10:25	09/15/25 18:17	1
1,4-Difluorobenzene (Surr)	101		70 - 130				09/15/25 10:25	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	<50.0	U	50.0		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	<50.0	U	50.0		mg/Kg		09/15/25 08:13	09/18/25 22:57	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/25 08:13	09/18/25 22:57	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/25 08:13	09/18/25 22:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130				09/15/25 08:13	09/18/25 22:57	1
o-Terphenyl	119		70 - 130				09/15/25 08:13	09/18/25 22:57	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17.7		10.0		mg/Kg			09/15/25 22:32	1

Client Sample ID: HA - 3 0.5

Lab Sample ID: 890-8791-7

Date Collected: 09/12/25 08:40

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	0.00236		0.00199		mg/Kg		09/15/25 10:25	09/15/25 18:37	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:25	09/15/25 18:37	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:25	09/15/25 18:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/15/25 10:25	09/15/25 18:37	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:25	09/15/25 18:37	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/15/25 10:25	09/15/25 18:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130				09/15/25 10:25	09/15/25 18:37	1

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Client Sample Results

Client: Earth Systems Response and Restoration
 Project/Site: Spud Muffin 3 CTB 1

Job ID: 890-8791-1
 SDG: Eddy County

Client Sample ID: HA - 3 0.5

Lab Sample ID: 890-8791-7

Date Collected: 09/12/25 08:40

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)	102		70 - 130	09/15/25 10:25	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	<0.00398	U	0.00398		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	<49.8	U	49.8		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	<49.8	U	49.8		mg/Kg		09/15/25 08:13	09/18/25 23:11	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/15/25 08:13	09/18/25 23:11	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/15/25 08:13	09/18/25 23:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130	09/15/25 08:13	09/18/25 23:11	1
o-Terphenyl	116		70 - 130	09/15/25 08:13	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	6290		100		mg/Kg			09/15/25 22:38	10

Client Sample ID: HA - 3 1

Lab Sample ID: 890-8791-8

Date Collected: 09/12/25 08:45

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 10:25	09/15/25 18:58	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 18:58	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 18:58	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/15/25 10:25	09/15/25 18:58	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 18:58	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/15/25 10:25	09/15/25 18:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130	09/15/25 10:25	09/15/25 18:58	1
1,4-Difluorobenzene (Surr)	101		70 - 130	09/15/25 10:25	09/15/25 18:58	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 18:58	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 23:28	1

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Client Sample Results

Client: Earth Systems Response and Restoration
 Project/Site: Spud Muffin 3 CTB 1

Job ID: 890-8791-1
 SDG: Eddy County

Client Sample ID: HA - 3 1

Lab Sample ID: 890-8791-8

Date Collected: 09/12/25 08:45

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	<49.9	U	49.9		mg/Kg		09/15/25 08:13	09/18/25 23:28	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/25 08:13	09/18/25 23:28	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/25 08:13	09/18/25 23:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130				09/15/25 08:13	09/18/25 23:28	1
o-Terphenyl	123		70 - 130				09/15/25 08:13	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	179		10.0		mg/Kg			09/16/25 09:46	1

Client Sample ID: HA - 3 2

Lab Sample ID: 890-8791-9

Date Collected: 09/12/25 08:50

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	0.00203		0.00201		mg/Kg		09/15/25 10:25	09/15/25 19:18	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:25	09/15/25 19:18	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:25	09/15/25 19:18	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/15/25 10:25	09/15/25 19:18	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:25	09/15/25 19:18	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/15/25 10:25	09/15/25 19:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130				09/15/25 10:25	09/15/25 19:18	1
1,4-Difluorobenzene (Surr)	103		70 - 130				09/15/25 10:25	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	<0.00402	U	0.00402		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	<49.9	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 08:13	09/18/25 23:42	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/25 08:13	09/18/25 23:42	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/25 08:13	09/18/25 23:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	117		70 - 130				09/15/25 08:13	09/18/25 23:42	1
o-Terphenyl	125		70 - 130				09/15/25 08:13	09/18/25 23:42	1

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Client Sample Results

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 3 CTB 1

Job ID: 890-8791-1
SDG: Eddy County

Client Sample ID: HA - 3 2

Lab Sample ID: 890-8791-9

Date Collected: 09/12/25 08:50

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	191		10.1		mg/Kg			09/16/25 09:52	1

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- 13
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Surrogate Summary

Client: Earth Systems Response and Restoration
 Project/Site: Spud Muffin 3 CTB 1

Job ID: 890-8791-1
 SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-8791-1	HA - 1 0.5	96	104
890-8791-2	HA - 1 1	96	100
890-8791-3	HA - 1 2	99	101
890-8791-4	HA - 2 0.5	95	104
890-8791-5	HA - 2 1	99	100
890-8791-6	HA - 2 2	103	101
890-8791-7	HA - 3 0.5	103	102
890-8791-8	HA - 3 1	91	101
890-8791-9	HA - 3 2	98	103
LCS 880-118887/1-A	Lab Control Sample	101	96
LCSD 880-118887/2-A	Lab Control Sample Dup	103	96
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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-8791-1	HA - 1 0.5	107	116
890-8791-2	HA - 1 1	106	113
890-8791-3	HA - 1 2	108	115
890-8791-4	HA - 2 0.5	110	119
890-8791-5	HA - 2 1	103	110
890-8791-6	HA - 2 2	108	119
890-8791-7	HA - 3 0.5	107	116
890-8791-8	HA - 3 1	112	123
890-8791-9	HA - 3 2	117	125
LCS 880-118847/2-A	Lab Control Sample	127	149 S1+
LCSD 880-118847/3-A	Lab Control Sample Dup	128	146 S1+
MB 880-118847/1-A	Method Blank	89	96

Surrogate Legend
 1CO = 1-Chlorooctane
 OTPH = o-Terphenyl

QC Sample Results

Client: Earth Systems Response and Restoration
 Project/Site: Spud Muffin 3 CTB 1

Job ID: 890-8791-1
 SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

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
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	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

QC Sample Results

Client: Earth Systems Response and Restoration
 Project/Site: Spud Muffin 3 CTB 1

Job ID: 890-8791-1
 SDG: Eddy County

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

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	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 08:13	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	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
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
Diesel Range Organics (Over C10-C28)	1000	1006		mg/Kg		101	70 - 130

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
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

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-118870/1-A
 Matrix: Solid
 Analysis Batch: 118945

Client Sample ID: Method Blank
 Prep Type: Soluble

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
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 3 CTB 1

Job ID: 890-8791-1
 SDG: Eddy County

Method: 300.0 - Anions, Ion Chromatography (Continued)

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: 890-8791-3 MS
Matrix: Solid
Analysis Batch: 118945

Client Sample ID: HA - 1 2
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	29.5		249	288.4		mg/Kg		104	90 - 110

Lab Sample ID: 890-8791-3 MSD
Matrix: Solid
Analysis Batch: 118945

Client Sample ID: HA - 1 2
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	29.5		249	286.2		mg/Kg		103	90 - 110	1	20

QC Association Summary

Client: Earth Systems Response and Restoration
 Project/Site: Spud Muffin 3 CTB 1

Job ID: 890-8791-1
 SDG: Eddy County

GC VOA

Analysis Batch: 118850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8791-1	HA - 1 0.5	Total/NA	Solid	8021B	118887
890-8791-2	HA - 1 1	Total/NA	Solid	8021B	118887
890-8791-3	HA - 1 2	Total/NA	Solid	8021B	118887
890-8791-4	HA - 2 0.5	Total/NA	Solid	8021B	118887
890-8791-5	HA - 2 1	Total/NA	Solid	8021B	118887
890-8791-6	HA - 2 2	Total/NA	Solid	8021B	118887
890-8791-7	HA - 3 0.5	Total/NA	Solid	8021B	118887
890-8791-8	HA - 3 1	Total/NA	Solid	8021B	118887
890-8791-9	HA - 3 2	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

Prep Batch: 118887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8791-1	HA - 1 0.5	Total/NA	Solid	5035	
890-8791-2	HA - 1 1	Total/NA	Solid	5035	
890-8791-3	HA - 1 2	Total/NA	Solid	5035	
890-8791-4	HA - 2 0.5	Total/NA	Solid	5035	
890-8791-5	HA - 2 1	Total/NA	Solid	5035	
890-8791-6	HA - 2 2	Total/NA	Solid	5035	
890-8791-7	HA - 3 0.5	Total/NA	Solid	5035	
890-8791-8	HA - 3 1	Total/NA	Solid	5035	
890-8791-9	HA - 3 2	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	

Analysis Batch: 119029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8791-1	HA - 1 0.5	Total/NA	Solid	Total BTEX	
890-8791-2	HA - 1 1	Total/NA	Solid	Total BTEX	
890-8791-3	HA - 1 2	Total/NA	Solid	Total BTEX	
890-8791-4	HA - 2 0.5	Total/NA	Solid	Total BTEX	
890-8791-5	HA - 2 1	Total/NA	Solid	Total BTEX	
890-8791-6	HA - 2 2	Total/NA	Solid	Total BTEX	
890-8791-7	HA - 3 0.5	Total/NA	Solid	Total BTEX	
890-8791-8	HA - 3 1	Total/NA	Solid	Total BTEX	
890-8791-9	HA - 3 2	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 118847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8791-1	HA - 1 0.5	Total/NA	Solid	8015NM Prep	
890-8791-2	HA - 1 1	Total/NA	Solid	8015NM Prep	
890-8791-3	HA - 1 2	Total/NA	Solid	8015NM Prep	
890-8791-4	HA - 2 0.5	Total/NA	Solid	8015NM Prep	
890-8791-5	HA - 2 1	Total/NA	Solid	8015NM Prep	
890-8791-6	HA - 2 2	Total/NA	Solid	8015NM Prep	
890-8791-7	HA - 3 0.5	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Earth Systems Response and Restoration
 Project/Site: Spud Muffin 3 CTB 1

Job ID: 890-8791-1
 SDG: Eddy County

GC Semi VOA (Continued)

Prep Batch: 118847 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8791-8	HA - 3 1	Total/NA	Solid	8015NM Prep	
890-8791-9	HA - 3 2	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	

Analysis Batch: 119194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8791-1	HA - 1 0.5	Total/NA	Solid	8015B NM	118847
890-8791-2	HA - 1 1	Total/NA	Solid	8015B NM	118847
890-8791-3	HA - 1 2	Total/NA	Solid	8015B NM	118847
890-8791-4	HA - 2 0.5	Total/NA	Solid	8015B NM	118847
890-8791-5	HA - 2 1	Total/NA	Solid	8015B NM	118847
890-8791-6	HA - 2 2	Total/NA	Solid	8015B NM	118847
890-8791-7	HA - 3 0.5	Total/NA	Solid	8015B NM	118847
890-8791-8	HA - 3 1	Total/NA	Solid	8015B NM	118847
890-8791-9	HA - 3 2	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

Analysis Batch: 119336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8791-1	HA - 1 0.5	Total/NA	Solid	8015 NM	
890-8791-2	HA - 1 1	Total/NA	Solid	8015 NM	
890-8791-3	HA - 1 2	Total/NA	Solid	8015 NM	
890-8791-4	HA - 2 0.5	Total/NA	Solid	8015 NM	
890-8791-5	HA - 2 1	Total/NA	Solid	8015 NM	
890-8791-6	HA - 2 2	Total/NA	Solid	8015 NM	
890-8791-7	HA - 3 0.5	Total/NA	Solid	8015 NM	
890-8791-8	HA - 3 1	Total/NA	Solid	8015 NM	
890-8791-9	HA - 3 2	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 118870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8791-1	HA - 1 0.5	Soluble	Solid	DI Leach	
890-8791-2	HA - 1 1	Soluble	Solid	DI Leach	
890-8791-3	HA - 1 2	Soluble	Solid	DI Leach	
890-8791-4	HA - 2 0.5	Soluble	Solid	DI Leach	
890-8791-5	HA - 2 1	Soluble	Solid	DI Leach	
890-8791-6	HA - 2 2	Soluble	Solid	DI Leach	
890-8791-7	HA - 3 0.5	Soluble	Solid	DI Leach	
890-8791-8	HA - 3 1	Soluble	Solid	DI Leach	
890-8791-9	HA - 3 2	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	
890-8791-3 MS	HA - 1 2	Soluble	Solid	DI Leach	
890-8791-3 MSD	HA - 1 2	Soluble	Solid	DI Leach	

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QC Association Summary

Client: Earth Systems Response and Restoration
 Project/Site: Spud Muffin 3 CTB 1

Job ID: 890-8791-1
 SDG: Eddy County

HPLC/IC

Analysis Batch: 118945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8791-1	HA - 1 0.5	Soluble	Solid	300.0	118870
890-8791-2	HA - 1 1	Soluble	Solid	300.0	118870
890-8791-3	HA - 1 2	Soluble	Solid	300.0	118870
890-8791-4	HA - 2 0.5	Soluble	Solid	300.0	118870
890-8791-5	HA - 2 1	Soluble	Solid	300.0	118870
890-8791-6	HA - 2 2	Soluble	Solid	300.0	118870
890-8791-7	HA - 3 0.5	Soluble	Solid	300.0	118870
890-8791-8	HA - 3 1	Soluble	Solid	300.0	118870
890-8791-9	HA - 3 2	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
890-8791-3 MS	HA - 1 2	Soluble	Solid	300.0	118870
890-8791-3 MSD	HA - 1 2	Soluble	Solid	300.0	118870

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Lab Chronicle

Client: Earth Systems Response and Restoration
 Project/Site: Spud Muffin 3 CTB 1

Job ID: 890-8791-1
 SDG: Eddy County

Client Sample ID: HA - 1 0.5

Lab Sample ID: 890-8791-1

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			5.04 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 15:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119029	09/15/25 15:21	SA	EET MID
Total/NA	Analysis	8015 NM		1			119336	09/18/25 21:25	SA	EET MID
Total/NA	Prep	8015NM Prep			10.03 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 21:25	TKC	EET MID
Soluble	Leach	DI Leach			4.98 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 21:40	CS	EET MID

Client Sample ID: HA - 1 1

Lab Sample ID: 890-8791-2

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			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 15:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119029	09/15/25 15:41	SA	EET MID
Total/NA	Analysis	8015 NM		1			119336	09/18/25 21:40	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 21:40	TKC	EET MID
Soluble	Leach	DI Leach			4.95 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 21:46	CS	EET MID

Client Sample ID: HA - 1 2

Lab Sample ID: 890-8791-3

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			5.00 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 17:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119029	09/15/25 17:15	SA	EET MID
Total/NA	Analysis	8015 NM		1			119336	09/18/25 22:10	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 22:10	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 21:52	CS	EET MID

Client Sample ID: HA - 2 0.5

Lab Sample ID: 890-8791-4

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			5.05 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 17:36	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119029	09/15/25 17:36	SA	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Earth Systems Response and Restoration
 Project/Site: Spud Muffin 3 CTB 1

Job ID: 890-8791-1
 SDG: Eddy County

Client Sample ID: HA - 2 0.5

Lab Sample ID: 890-8791-4

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	Analysis	8015 NM		1			119336	09/18/25 22:26	SA	EET MID
Total/NA	Prep	8015NM Prep			10.06 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 22:26	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		20	10 mL	10 mL	118945	09/15/25 22:09	CS	EET MID

Client Sample ID: HA - 2 1

Lab Sample ID: 890-8791-5

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			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 17:56	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119029	09/15/25 17:56	SA	EET MID
Total/NA	Analysis	8015 NM		1			119336	09/18/25 22:41	SA	EET MID
Total/NA	Prep	8015NM Prep			10.05 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 22:41	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 22:15	CS	EET MID

Client Sample ID: HA - 2 2

Lab Sample ID: 890-8791-6

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			5.02 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 18:17	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119029	09/15/25 18:17	SA	EET MID
Total/NA	Analysis	8015 NM		1			119336	09/18/25 22:57	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 22:57	TKC	EET MID
Soluble	Leach	DI Leach			5.00 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 22:32	CS	EET MID

Client Sample ID: HA - 3 0.5

Lab Sample ID: 890-8791-7

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			5.03 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 18:37	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119029	09/15/25 18:37	SA	EET MID
Total/NA	Analysis	8015 NM		1			119336	09/18/25 23:11	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 23:11	TKC	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Earth Systems Response and Restoration
 Project/Site: Spud Muffin 3 CTB 1

Job ID: 890-8791-1
 SDG: Eddy County

Client Sample ID: HA - 3 0.5

Lab Sample ID: 890-8791-7

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
Soluble	Leach	DI Leach			5.00 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 22:38	CS	EET MID

Client Sample ID: HA - 3 1

Lab Sample ID: 890-8791-8

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	118887	09/15/25 10:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118850	09/15/25 18:58	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119029	09/15/25 18:58	SA	EET MID
Total/NA	Analysis	8015 NM		1			119336	09/18/25 23:28	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 23:28	TKC	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	118870	09/15/25 09:57	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118945	09/16/25 09:46	CS	EET MID

Client Sample ID: HA - 3 2

Lab Sample ID: 890-8791-9

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			4.97 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 19:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119029	09/15/25 19:18	SA	EET MID
Total/NA	Analysis	8015 NM		1			119336	09/18/25 23:42	SA	EET MID
Total/NA	Prep	8015NM Prep			10.03 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 23:42	TKC	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	118870	09/15/25 09:57	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118945	09/16/25 09:52	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 3 CTB 1

Job ID: 890-8791-1
SDG: Eddy County

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

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Method Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 3 CTB 1

Job ID: 890-8791-1
SDG: Eddy County

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 3 CTB 1

Job ID: 890-8791-1
SDG: Eddy County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-8791-1	HA - 1 0.5	Solid	09/12/25 08:00	09/12/25 15:29	0.5
890-8791-2	HA - 1 1	Solid	09/12/25 08:05	09/12/25 15:29	1
890-8791-3	HA - 1 2	Solid	09/12/25 08:10	09/12/25 15:29	2
890-8791-4	HA - 2 0.5	Solid	09/12/25 08:20	09/12/25 15:29	0.5
890-8791-5	HA - 2 1	Solid	09/12/25 08:25	09/12/25 15:29	1
890-8791-6	HA - 2 2	Solid	09/12/25 08:30	09/12/25 15:29	2
890-8791-7	HA - 3 0.5	Solid	09/12/25 08:40	09/12/25 15:29	0.5
890-8791-8	HA - 3 1	Solid	09/12/25 08:45	09/12/25 15:29	1
890-8791-9	HA - 3 2	Solid	09/12/25 08:50	09/12/25 15:29	2

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Chain of Custody

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



Work Order No:

www.xenco.com

Page 1 of 1

Project Manager: **Gilbert Moreno** Bill to: (if different) **JIM RAUEY**
 Company Name: **Earth Systems** 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, es.residualfees.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 ADA/PT Other:

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Turn Around		Pres. Code	ANALYSIS REQUEST	Preservative Codes
							Routine	Rush			
HA-1 0.5	S	9/12	8:00	0.5	G	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		None: NO Cool: Cool HCL: HC H ₂ SO ₄ : H ₂ H ₃ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ O ₃ : NaSO ₃ Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SACP	
HA-1 1			8:05	1							
HA-1 2			8:10	2							
HA-2 0.5			8:20	0.5							
HA-2 1			8:25	1							
HA-2 2			8:30	2							
HA-3 0.5			8:40	0.5							
HA-3 1			8:45	1							
HA-3 2			8:50	2							
HA-4 0.5			9:00	0.5							
Parameters: TH-NM , CHLORIDE-NM , BATER-NM 890-8791 Chain of Custody INCIDENT # IN APP 252-019423											

Total 2007/6010 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: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U Hg: 1631/245.1/7470/7471

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

Relinquished by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	9/12/15 29		
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		6		



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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
Client Contact: Shipping/Receiving	Phone: N/A
Company: Eurofins Environment Testing South Cent	E-Mail: Brianna Teel@et.eurofins.com
Address: 1211 W. Florida Ave.	Lab PM: Teel, Brianna
City: Midland	Carrier Tracking No(s): N/A
State/Zip: TX, 79701	State of Origin: New Mexico
Phone: 432-704-5440(Tel)	Page: Page 1 of 1
Email: N/A	Job #: 890-8791-1
Project Name: SPUUD MUFFIN 31 CTB1	Preservation Codes:
Site: N/A	Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=ggrab)	Matrix (W=Water, S=Soil, O=Organic, A=Asb)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested				Total Number of Containers	Special Instructions/Note:
							Total_BTEX_GCV	8021B/5035FP_CalcBTEX	300_ORGFM_28D/DI_LEACHChloride	8015MOD_Calc		
HA - 1 0.5 (890-8791-1)	9/12/25	08:00	G	Solid	X	X	X	X	X	X	1	
HA - 1 1 (890-8791-2)	9/12/25	08:05	G	Solid	X	X	X	X	X	X	1	
HA - 1 2 (890-8791-3)	9/12/25	08:10	G	Solid	X	X	X	X	X	X	1	
HA - 2 0.5 (890-8791-4)	9/12/25	08:20	G	Solid	X	X	X	X	X	X	1	
HA - 2 1 (890-8791-5)	9/12/25	08:25	G	Solid	X	X	X	X	X	X	1	
HA - 2 2 (890-8791-6)	9/12/25	08:30	G	Solid	X	X	X	X	X	X	1	
HA - 3 0.5 (890-8791-7)	9/12/25	08:40	G	Solid	X	X	X	X	X	X	1	
HA - 3 1 (890-8791-8)	9/12/25	08:45	G	Solid	X	X	X	X	X	X	1	
HA - 3 2 (890-8791-9)	9/12/25	08:50	G	Solid	X	X	X	X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyze & 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/method, 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: <i>Brown</i>	Date/Time: <i>9/18 16:30</i>	Company: _____	Received by: _____
Relinquished by: _____	Date/Time: _____	Company: _____	Received by: _____
Relinquished by: _____	Date/Time: _____	Company: _____	Received by: _____
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.: _____	Cooler Temperature(s) °C and Other Remarks: <i>3.6 3.7 - 1</i>	

Login Sample Receipt Checklist

Client: Earth Systems Response and Restoration

Job Number: 890-8791-1

SDG Number: Eddy County

Login Number: 8791

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	

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Login Sample Receipt Checklist

Client: Earth Systems Response and Restoration

Job Number: 890-8791-1

SDG Number: Eddy County

Login Number: 8791

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	

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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 1:18:29 PM

JOB DESCRIPTION

Spud Muffin 31 CTB 1
 Eddy County

JOB NUMBER

890-8792-1



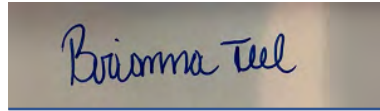
Eurofins Carlsbad

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 1:18:29 PM

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

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

Laboratory Job ID: 890-8792-1
SDG: Eddy County

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Definitions/Glossary

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

Job ID: 890-8792-1
SDG: Eddy County

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
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
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: 890-8792-1

Job ID: 890-8792-1

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Job Narrative 890-8792-1

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 3:25 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.

GC VOA

Method 8021B: The matrix spike (MS) and/or matrix spike duplicate (MSD) recovery for preparation batch 880-118904 and analytical batch 880-118662 was outside control limits for the following analyte(s): Benzene. Results may be biased high because this analyte is a common laboratory solvent and contaminant.

Method 8021B: Surrogate recovery for the following samples were outside control limits: HA - 5 1 (890-8792-4), HA - 5 2 (890-8792-5), HA - 6 0.5 (890-8792-6), HA - 6 1 (890-8792-7), HA - 6 2 (890-8792-8) and HA - 4 0.5 (890-8792-9). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The laboratory control sample duplicate (LCSD) for preparation batch 880-118904 and analytical batch 880-118662 recovered outside control limits for the following analytes: Benzene. Since only an acceptable LCS is required per the method the LCS shows recovery for the batch therefore the data has been qualified and reported.

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

Diesel Range Organics

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-118804/2-A). Evidence of matrix interferences is not obvious.

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

HPLC/IC

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

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Client Sample Results

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

Job ID: 890-8792-1
 SDG: Eddy County

Client Sample ID: HA - 4 1

Lab Sample ID: 890-8792-1

Date Collected: 09/12/25 09:05

Matrix: Solid

Date Received: 09/12/25 15:25

Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00216		0.00200		mg/Kg		09/15/25 10:25	09/15/25 19:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 19:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 19:39	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/15/25 10:25	09/15/25 19:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:25	09/15/25 19:39	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/15/25 10:25	09/15/25 19:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130	09/15/25 10:25	09/15/25 19:39	1
1,4-Difluorobenzene (Surr)	98		70 - 130	09/15/25 10:25	09/15/25 19:39	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 19:39	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			09/15/25 18:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/12/25 12:17	09/15/25 18:00	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/12/25 12:17	09/15/25 18:00	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/12/25 12:17	09/15/25 18:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130	09/12/25 12:17	09/15/25 18:00	1
o-Terphenyl	111		70 - 130	09/12/25 12:17	09/15/25 18:00	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.1	U	10.1		mg/Kg			09/16/25 09:58	1

Client Sample ID: HA - 4 2

Lab Sample ID: 890-8792-2

Date Collected: 09/12/25 09:10

Matrix: Solid

Date Received: 09/12/25 15:25

Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00233		0.00199		mg/Kg		09/15/25 10:25	09/15/25 19:59	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:25	09/15/25 19:59	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:25	09/15/25 19:59	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/15/25 10:25	09/15/25 19:59	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:25	09/15/25 19:59	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/15/25 10:25	09/15/25 19:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	09/15/25 10:25	09/15/25 19:59	1

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Client Sample Results

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

Job ID: 890-8792-1
 SDG: Eddy County

Client Sample ID: HA - 4 2

Lab Sample ID: 890-8792-2

Date Collected: 09/12/25 09:10

Matrix: Solid

Date Received: 09/12/25 15:25

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 10:25	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	<50.0	U	50.0		mg/Kg			09/15/25 18:16	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	<50.0	U	50.0		mg/Kg		09/12/25 12:17	09/15/25 18:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/12/25 12:17	09/15/25 18:16	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/12/25 12:17	09/15/25 18:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 130	09/12/25 12:17	09/15/25 18:16	1
o-Terphenyl	112		70 - 130	09/12/25 12:17	09/15/25 18:16	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<9.92	U	9.92		mg/Kg			09/16/25 10:04	1

Client Sample ID: HA - 5 0.5

Lab Sample ID: 890-8792-3

Date Collected: 09/12/25 09:20

Matrix: Solid

Date Received: 09/12/25 15:25

Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00208		0.00199		mg/Kg		09/15/25 10:25	09/15/25 20:19	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:25	09/15/25 20:19	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:25	09/15/25 20:19	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/15/25 10:25	09/15/25 20:19	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:25	09/15/25 20:19	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/15/25 10:25	09/15/25 20:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130	09/15/25 10:25	09/15/25 20:19	1
1,4-Difluorobenzene (Surr)	98		70 - 130	09/15/25 10:25	09/15/25 20:19	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 20:19	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			09/15/25 18:31	1

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Client Sample Results

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

Job ID: 890-8792-1
 SDG: Eddy County

Client Sample ID: HA - 5 0.5

Lab Sample ID: 890-8792-3

Date Collected: 09/12/25 09:20

Matrix: Solid

Date Received: 09/12/25 15:25

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		09/12/25 12:17	09/15/25 18:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/12/25 12:17	09/15/25 18:31	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/12/25 12:17	09/15/25 18:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130				09/12/25 12:17	09/15/25 18:31	1
o-Terphenyl	115		70 - 130				09/12/25 12:17	09/15/25 18:31	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	38.7		9.90		mg/Kg			09/16/25 10:10	1

Client Sample ID: HA - 5 1

Lab Sample ID: 890-8792-4

Date Collected: 09/12/25 09:25

Matrix: Solid

Date Received: 09/12/25 15:25

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 *+ F1	0.00200		mg/Kg		09/15/25 10:51	09/15/25 12:34	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:51	09/15/25 12:34	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:51	09/15/25 12:34	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/15/25 10:51	09/15/25 12:34	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:51	09/15/25 12:34	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/15/25 10:51	09/15/25 12:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	137	S1+	70 - 130				09/15/25 10:51	09/15/25 12:34	1
1,4-Difluorobenzene (Surr)	94		70 - 130				09/15/25 10:51	09/15/25 12:34	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 12:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			09/15/25 18:46	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		09/12/25 12:17	09/15/25 18:46	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/12/25 12:17	09/15/25 18:46	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/12/25 12:17	09/15/25 18:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	109		70 - 130				09/12/25 12:17	09/15/25 18:46	1
o-Terphenyl	114		70 - 130				09/12/25 12:17	09/15/25 18:46	1

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Client Sample Results

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

Job ID: 890-8792-1
 SDG: Eddy County

Client Sample ID: HA - 5 1

Lab Sample ID: 890-8792-4

Date Collected: 09/12/25 09:25

Matrix: Solid

Date Received: 09/12/25 15:25

Sample Depth: 1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14.9		10.1		mg/Kg			09/15/25 23:33	1

Client Sample ID: HA - 5 2

Lab Sample ID: 890-8792-5

Date Collected: 09/12/25 09:30

Matrix: Solid

Date Received: 09/12/25 15:25

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 10:51	09/15/25 12:54	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:51	09/15/25 12:54	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:51	09/15/25 12:54	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/15/25 10:51	09/15/25 12:54	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/15/25 10:51	09/15/25 12:54	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/15/25 10:51	09/15/25 12:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	136	S1+	70 - 130				09/15/25 10:51	09/15/25 12:54	1
1,4-Difluorobenzene (Surr)	105		70 - 130				09/15/25 10:51	09/15/25 12:54	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 12:54	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			09/15/25 19:02	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		09/12/25 12:17	09/15/25 19:02	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/12/25 12:17	09/15/25 19:02	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/12/25 12:17	09/15/25 19:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130				09/12/25 12:17	09/15/25 19:02	1
o-Terphenyl	113		70 - 130				09/12/25 12:17	09/15/25 19:02	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	25.1		10.0		mg/Kg			09/15/25 23:50	1

Client Sample Results

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

Job ID: 890-8792-1
 SDG: Eddy County

Client Sample ID: HA - 6 0.5

Lab Sample ID: 890-8792-6

Date Collected: 09/12/25 09:40

Matrix: Solid

Date Received: 09/12/25 15:25

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 10:51	09/15/25 13:15	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:51	09/15/25 13:15	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:51	09/15/25 13:15	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/15/25 10:51	09/15/25 13:15	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:51	09/15/25 13:15	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/15/25 10:51	09/15/25 13:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	138	S1+	70 - 130	09/15/25 10:51	09/15/25 13:15	1
1,4-Difluorobenzene (Surr)	105		70 - 130	09/15/25 10:51	09/15/25 13:15	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 13:15	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			09/15/25 19:17	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		09/12/25 12:17	09/15/25 19:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/12/25 12:17	09/15/25 19:17	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/12/25 12:17	09/15/25 19:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130	09/12/25 12:17	09/15/25 19:17	1
o-Terphenyl	115		70 - 130	09/12/25 12:17	09/15/25 19:17	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	97.6		10.1		mg/Kg			09/15/25 23:56	1

Client Sample ID: HA - 6 1

Lab Sample ID: 890-8792-7

Date Collected: 09/12/25 09:45

Matrix: Solid

Date Received: 09/12/25 15:25

Sample Depth: 1

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 10:51	09/15/25 13:35	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:51	09/15/25 13:35	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:51	09/15/25 13:35	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/15/25 10:51	09/15/25 13:35	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:51	09/15/25 13:35	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/15/25 10:51	09/15/25 13:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	139	S1+	70 - 130	09/15/25 10:51	09/15/25 13:35	1

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Client Sample Results

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

Job ID: 890-8792-1
 SDG: Eddy County

Client Sample ID: HA - 6 1

Lab Sample ID: 890-8792-7

Date Collected: 09/12/25 09:45

Matrix: Solid

Date Received: 09/12/25 15:25

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 10:51	09/15/25 13:35	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 13:35	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			09/15/25 19:32	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		09/12/25 12:17	09/15/25 19:32	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/12/25 12:17	09/15/25 19:32	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/12/25 12:17	09/15/25 19:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130	09/12/25 12:17	09/15/25 19:32	1
o-Terphenyl	112		70 - 130	09/12/25 12:17	09/15/25 19:32	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14.0		9.92		mg/Kg			09/16/25 00:02	1

Client Sample ID: HA - 6 2

Lab Sample ID: 890-8792-8

Date Collected: 09/12/25 09:50

Matrix: Solid

Date Received: 09/12/25 15:25

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 10:51	09/15/25 13:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:51	09/15/25 13:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:51	09/15/25 13:55	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/15/25 10:51	09/15/25 13:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:51	09/15/25 13:55	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/15/25 10:51	09/15/25 13:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	135	S1+	70 - 130	09/15/25 10:51	09/15/25 13:55	1
1,4-Difluorobenzene (Surr)	105		70 - 130	09/15/25 10:51	09/15/25 13:55	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 13:55	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			09/19/25 02:28	1

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Client Sample Results

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

Job ID: 890-8792-1
 SDG: Eddy County

Client Sample ID: HA - 6 2

Lab Sample ID: 890-8792-8

Date Collected: 09/12/25 09:50

Matrix: Solid

Date Received: 09/12/25 15:25

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 02:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/25 09:42	09/19/25 02:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/25 09:42	09/19/25 02:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130				09/15/25 09:42	09/19/25 02:28	1
o-Terphenyl	91		70 - 130				09/15/25 09:42	09/19/25 02:28	1

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 00:07	1

Client Sample ID: HA - 4 0.5

Lab Sample ID: 890-8792-9

Date Collected: 09/12/25 09:00

Matrix: Solid

Date Received: 09/12/25 15:25

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 10:51	09/15/25 14:16	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:51	09/15/25 14:16	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:51	09/15/25 14:16	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/15/25 10:51	09/15/25 14:16	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/15/25 10:51	09/15/25 14:16	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/15/25 10:51	09/15/25 14:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	139	S1+	70 - 130				09/15/25 10:51	09/15/25 14:16	1
1,4-Difluorobenzene (Surr)	105		70 - 130				09/15/25 10:51	09/15/25 14:16	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 14:16	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 03:15	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 03:15	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/25 09:42	09/19/25 03:15	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/25 09:42	09/19/25 03:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130				09/15/25 09:42	09/19/25 03:15	1
o-Terphenyl	88		70 - 130				09/15/25 09:42	09/19/25 03:15	1

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Client Sample Results

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

Job ID: 890-8792-1
SDG: Eddy County

Client Sample ID: HA - 4 0.5

Lab Sample ID: 890-8792-9

Date Collected: 09/12/25 09:00

Matrix: Solid

Date Received: 09/12/25 15:25

Sample Depth: 0.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	51.2		9.98		mg/Kg			09/16/25 00:24	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Surrogate Summary

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

Job ID: 890-8792-1
SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-8792-1	HA - 4 1	93	98
890-8792-2	HA - 4 2	100	105
890-8792-3	HA - 5 0.5	93	98
890-8792-4	HA - 5 1	137 S1+	94
890-8792-4 MS	HA - 5 1	124	86
890-8792-4 MSD	HA - 5 1	122	99
890-8792-5	HA - 5 2	136 S1+	105
890-8792-6	HA - 6 0.5	138 S1+	105
890-8792-7	HA - 6 1	139 S1+	105
890-8792-8	HA - 6 2	135 S1+	105
890-8792-9	HA - 4 0.5	139 S1+	105
LCS 880-118887/1-A	Lab Control Sample	101	96
LCS 880-118904/1-A	Lab Control Sample	127	91
LCSD 880-118887/2-A	Lab Control Sample Dup	103	96
LCSD 880-118904/2-A	Lab Control Sample Dup	126	96
MB 880-118887/5-A	Method Blank	82	113
MB 880-118904/5-A	Method Blank	125	88

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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-8792-1	HA - 4 1	105	111
890-8792-2	HA - 4 2	104	112
890-8792-3	HA - 5 0.5	108	115
890-8792-4	HA - 5 1	109	114
890-8792-5	HA - 5 2	105	113
890-8792-6	HA - 6 0.5	106	115
890-8792-7	HA - 6 1	107	112
890-8792-8	HA - 6 2	90	91
890-8792-8 MS	HA - 6 2	97	89
890-8792-8 MSD	HA - 6 2	80	88
890-8792-9	HA - 4 0.5	87	88
LCS 880-118804/2-A	Lab Control Sample	121	135 S1+
LCS 880-118865/2-A	Lab Control Sample	104	95
LCSD 880-118804/3-A	Lab Control Sample Dup	107	116
LCSD 880-118865/3-A	Lab Control Sample Dup	114	105
MB 880-118804/1-A	Method Blank	109	120
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: 890-8792-1
 SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

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
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: MB 880-118904/5-A
 Matrix: Solid
 Analysis Batch: 118662

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 118904

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:51	09/15/25 12:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:51	09/15/25 12:12	1

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QC Sample Results

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

Job ID: 890-8792-1
 SDG: Eddy County

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

Lab Sample ID: MB 880-118904/5-A
Matrix: Solid
Analysis Batch: 118662

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 118904

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:51	09/15/25 12:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/15/25 10:51	09/15/25 12:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/15/25 10:51	09/15/25 12:12	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/15/25 10:51	09/15/25 12:12	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	125		70 - 130	09/15/25 10:51	09/15/25 12:12	1
1,4-Difluorobenzene (Surr)	88		70 - 130	09/15/25 10:51	09/15/25 12:12	1

Lab Sample ID: LCS 880-118904/1-A
Matrix: Solid
Analysis Batch: 118662

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 118904

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1218		mg/Kg		122	70 - 130
Toluene	0.100	0.1036		mg/Kg		104	70 - 130
Ethylbenzene	0.100	0.1099		mg/Kg		110	70 - 130
m-Xylene & p-Xylene	0.200	0.2146		mg/Kg		107	70 - 130
o-Xylene	0.100	0.1086		mg/Kg		109	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	127		70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

Lab Sample ID: LCSD 880-118904/2-A
Matrix: Solid
Analysis Batch: 118662

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 118904

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1337	*+	mg/Kg		134	70 - 130	9	35
Toluene	0.100	0.1047		mg/Kg		105	70 - 130	1	35
Ethylbenzene	0.100	0.1111		mg/Kg		111	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.2166		mg/Kg		108	70 - 130	1	35
o-Xylene	0.100	0.1092		mg/Kg		109	70 - 130	1	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	126		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: 890-8792-4 MS
Matrix: Solid
Analysis Batch: 118662

Client Sample ID: HA - 5 1
Prep Type: Total/NA
Prep Batch: 118904

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U ** F1	0.100	0.1144		mg/Kg		114	70 - 130
Toluene	<0.00200	U	0.100	0.09496		mg/Kg		95	70 - 130
Ethylbenzene	<0.00200	U	0.100	0.1012		mg/Kg		101	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1975		mg/Kg		99	70 - 130

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QC Sample Results

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

Job ID: 890-8792-1
 SDG: Eddy County

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

Lab Sample ID: 890-8792-4 MS
 Matrix: Solid
 Analysis Batch: 118662

Client Sample ID: HA - 5 1
 Prep Type: Total/NA
 Prep Batch: 118904

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits	
	Result	Qualifier		Result	Qualifier						
o-Xylene	<0.00200	U	0.100	0.09988		mg/Kg		100		70 - 130	
Surrogate		MS	MS								
	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	124		70 - 130								
1,4-Difluorobenzene (Surr)	86		70 - 130								

Lab Sample ID: 890-8792-4 MSD
 Matrix: Solid
 Analysis Batch: 118662

Client Sample ID: HA - 5 1
 Prep Type: Total/NA
 Prep Batch: 118904

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier							
Benzene	<0.00200	U ** F1	0.100	0.1376	F1	mg/Kg		138		70 - 130	18	35
Toluene	<0.00200	U	0.100	0.09475		mg/Kg		95		70 - 130	0	35
Ethylbenzene	<0.00200	U	0.100	0.09778		mg/Kg		98		70 - 130	3	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1897		mg/Kg		95		70 - 130	4	35
o-Xylene	<0.00200	U	0.100	0.09538		mg/Kg		95		70 - 130	5	35
Surrogate		MSD	MSD									
	%Recovery	Qualifier	Limits									
4-Bromofluorobenzene (Surr)	122		70 - 130									
1,4-Difluorobenzene (Surr)	99		70 - 130									

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

Lab Sample ID: MB 880-118804/1-A
 Matrix: Solid
 Analysis Batch: 118934

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 118804

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		09/12/25 12:17	09/15/25 10:59	1	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/12/25 12:17	09/15/25 10:59	1	
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/12/25 12:17	09/15/25 10:59	1	
Surrogate		MB	MB							
	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac				
1-Chlorooctane	109		70 - 130	09/12/25 12:17	09/15/25 10:59	1				
o-Terphenyl	120		70 - 130	09/12/25 12:17	09/15/25 10:59	1				

Lab Sample ID: LCS 880-118804/2-A
 Matrix: Solid
 Analysis Batch: 118934

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 118804

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec	Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1082		mg/Kg		108		70 - 130
Diesel Range Organics (Over C10-C28)	1000	957.9		mg/Kg		96		70 - 130

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QC Sample Results

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

Job ID: 890-8792-1
 SDG: Eddy County

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

Lab Sample ID: LCS 880-118804/2-A
Matrix: Solid
Analysis Batch: 118934

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 118804

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	121		70 - 130
o-Terphenyl	135	S1+	70 - 130

Lab Sample ID: LCSD 880-118804/3-A
Matrix: Solid
Analysis Batch: 118934

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 118804

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	1000	981.2		mg/Kg		98	70 - 130	10	20	
Diesel Range Organics (Over C10-C28)	1000	838.2		mg/Kg		84	70 - 130	13	20	

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	107		70 - 130
o-Terphenyl	116		70 - 130

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 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 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 MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
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 LCS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	104		70 - 130
o-Terphenyl	95		70 - 130

QC Sample Results

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

Job ID: 890-8792-1
 SDG: Eddy County

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

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	Limit	
										RPD
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	
		LCSD	LCSD							
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	114		70 - 130							
o-Terphenyl	105		70 - 130							

Lab Sample ID: 890-8792-8 MS
 Matrix: Solid
 Analysis Batch: 119192

Client Sample ID: HA - 6 2
 Prep Type: Total/NA
 Prep Batch: 118865

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	978.7		mg/Kg		96	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	998	908.3		mg/Kg		91	70 - 130		
		MS	MS								
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	97		70 - 130								
o-Terphenyl	89		70 - 130								

Lab Sample ID: 890-8792-8 MSD
 Matrix: Solid
 Analysis Batch: 119192

Client Sample ID: HA - 6 2
 Prep Type: Total/NA
 Prep Batch: 118865

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	991.7		mg/Kg		97	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	958.3		mg/Kg		96	70 - 130	5	20
		MSD	MSD								
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	80		70 - 130								
o-Terphenyl	88		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

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: 890-8792-1
 SDG: Eddy County

Method: 300.0 - Anions, Ion Chromatography (Continued)

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: 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

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: 890-8792-4 MS
 Matrix: Solid
 Analysis Batch: 118951

Client Sample ID: HA - 5 1
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	14.9		252	289.6		mg/Kg		109	90 - 110

Lab Sample ID: 890-8792-4 MSD
 Matrix: Solid
 Analysis Batch: 118951

Client Sample ID: HA - 5 1
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	14.9		252	290.0		mg/Kg		109	90 - 110	0	20

QC Association Summary

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

Job ID: 890-8792-1
 SDG: Eddy County

GC VOA

Analysis Batch: 118662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8792-4	HA - 5 1	Total/NA	Solid	8021B	118904
890-8792-5	HA - 5 2	Total/NA	Solid	8021B	118904
890-8792-6	HA - 6 0.5	Total/NA	Solid	8021B	118904
890-8792-7	HA - 6 1	Total/NA	Solid	8021B	118904
890-8792-8	HA - 6 2	Total/NA	Solid	8021B	118904
890-8792-9	HA - 4 0.5	Total/NA	Solid	8021B	118904
MB 880-118904/5-A	Method Blank	Total/NA	Solid	8021B	118904
LCS 880-118904/1-A	Lab Control Sample	Total/NA	Solid	8021B	118904
LCS 880-118904/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	118904
890-8792-4 MS	HA - 5 1	Total/NA	Solid	8021B	118904
890-8792-4 MSD	HA - 5 1	Total/NA	Solid	8021B	118904

Analysis Batch: 118850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8792-1	HA - 4 1	Total/NA	Solid	8021B	118887
890-8792-2	HA - 4 2	Total/NA	Solid	8021B	118887
890-8792-3	HA - 5 0.5	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
LCS 880-118887/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	118887

Prep Batch: 118887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8792-1	HA - 4 1	Total/NA	Solid	5035	
890-8792-2	HA - 4 2	Total/NA	Solid	5035	
890-8792-3	HA - 5 0.5	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	
LCS 880-118887/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 118904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8792-4	HA - 5 1	Total/NA	Solid	5035	
890-8792-5	HA - 5 2	Total/NA	Solid	5035	
890-8792-6	HA - 6 0.5	Total/NA	Solid	5035	
890-8792-7	HA - 6 1	Total/NA	Solid	5035	
890-8792-8	HA - 6 2	Total/NA	Solid	5035	
890-8792-9	HA - 4 0.5	Total/NA	Solid	5035	
MB 880-118904/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-118904/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 880-118904/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-8792-4 MS	HA - 5 1	Total/NA	Solid	5035	
890-8792-4 MSD	HA - 5 1	Total/NA	Solid	5035	

Analysis Batch: 119030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8792-1	HA - 4 1	Total/NA	Solid	Total BTEX	
890-8792-2	HA - 4 2	Total/NA	Solid	Total BTEX	
890-8792-3	HA - 5 0.5	Total/NA	Solid	Total BTEX	
890-8792-4	HA - 5 1	Total/NA	Solid	Total BTEX	
890-8792-5	HA - 5 2	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: 890-8792-1
 SDG: Eddy County

GC VOA (Continued)

Analysis Batch: 119030 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8792-6	HA - 6 0.5	Total/NA	Solid	Total BTEX	
890-8792-7	HA - 6 1	Total/NA	Solid	Total BTEX	
890-8792-8	HA - 6 2	Total/NA	Solid	Total BTEX	
890-8792-9	HA - 4 0.5	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 118804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8792-1	HA - 4 1	Total/NA	Solid	8015NM Prep	
890-8792-2	HA - 4 2	Total/NA	Solid	8015NM Prep	
890-8792-3	HA - 5 0.5	Total/NA	Solid	8015NM Prep	
890-8792-4	HA - 5 1	Total/NA	Solid	8015NM Prep	
890-8792-5	HA - 5 2	Total/NA	Solid	8015NM Prep	
890-8792-6	HA - 6 0.5	Total/NA	Solid	8015NM Prep	
890-8792-7	HA - 6 1	Total/NA	Solid	8015NM Prep	
MB 880-118804/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-118804/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-118804/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Prep Batch: 118865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8792-8	HA - 6 2	Total/NA	Solid	8015NM Prep	
890-8792-9	HA - 4 0.5	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	
890-8792-8 MS	HA - 6 2	Total/NA	Solid	8015NM Prep	
890-8792-8 MSD	HA - 6 2	Total/NA	Solid	8015NM Prep	

Analysis Batch: 118934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8792-1	HA - 4 1	Total/NA	Solid	8015B NM	118804
890-8792-2	HA - 4 2	Total/NA	Solid	8015B NM	118804
890-8792-3	HA - 5 0.5	Total/NA	Solid	8015B NM	118804
890-8792-4	HA - 5 1	Total/NA	Solid	8015B NM	118804
890-8792-5	HA - 5 2	Total/NA	Solid	8015B NM	118804
890-8792-6	HA - 6 0.5	Total/NA	Solid	8015B NM	118804
890-8792-7	HA - 6 1	Total/NA	Solid	8015B NM	118804
MB 880-118804/1-A	Method Blank	Total/NA	Solid	8015B NM	118804
LCS 880-118804/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	118804
LCSD 880-118804/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	118804

Analysis Batch: 119041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8792-1	HA - 4 1	Total/NA	Solid	8015 NM	
890-8792-2	HA - 4 2	Total/NA	Solid	8015 NM	
890-8792-3	HA - 5 0.5	Total/NA	Solid	8015 NM	
890-8792-4	HA - 5 1	Total/NA	Solid	8015 NM	
890-8792-5	HA - 5 2	Total/NA	Solid	8015 NM	
890-8792-6	HA - 6 0.5	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: 890-8792-1
 SDG: Eddy County

GC Semi VOA (Continued)

Analysis Batch: 119041 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8792-7	HA - 6 1	Total/NA	Solid	8015 NM	
890-8792-8	HA - 6 2	Total/NA	Solid	8015 NM	
890-8792-9	HA - 4 0.5	Total/NA	Solid	8015 NM	

Analysis Batch: 119192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8792-8	HA - 6 2	Total/NA	Solid	8015B NM	118865
890-8792-9	HA - 4 0.5	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
890-8792-8 MS	HA - 6 2	Total/NA	Solid	8015B NM	118865
890-8792-8 MSD	HA - 6 2	Total/NA	Solid	8015B NM	118865

HPLC/IC

Leach Batch: 118870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8792-1	HA - 4 1	Soluble	Solid	DI Leach	
890-8792-2	HA - 4 2	Soluble	Solid	DI Leach	
890-8792-3	HA - 5 0.5	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	

Leach Batch: 118871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8792-4	HA - 5 1	Soluble	Solid	DI Leach	
890-8792-5	HA - 5 2	Soluble	Solid	DI Leach	
890-8792-6	HA - 6 0.5	Soluble	Solid	DI Leach	
890-8792-7	HA - 6 1	Soluble	Solid	DI Leach	
890-8792-8	HA - 6 2	Soluble	Solid	DI Leach	
890-8792-9	HA - 4 0.5	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	
890-8792-4 MS	HA - 5 1	Soluble	Solid	DI Leach	
890-8792-4 MSD	HA - 5 1	Soluble	Solid	DI Leach	

Analysis Batch: 118945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8792-1	HA - 4 1	Soluble	Solid	300.0	118870
890-8792-2	HA - 4 2	Soluble	Solid	300.0	118870
890-8792-3	HA - 5 0.5	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

Analysis Batch: 118951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8792-4	HA - 5 1	Soluble	Solid	300.0	118871

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QC Association Summary

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

Job ID: 890-8792-1
SDG: Eddy County

HPLC/IC (Continued)

Analysis Batch: 118951 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8792-5	HA - 5 2	Soluble	Solid	300.0	118871
890-8792-6	HA - 6 0.5	Soluble	Solid	300.0	118871
890-8792-7	HA - 6 1	Soluble	Solid	300.0	118871
890-8792-8	HA - 6 2	Soluble	Solid	300.0	118871
890-8792-9	HA - 4 0.5	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
890-8792-4 MS	HA - 5 1	Soluble	Solid	300.0	118871
890-8792-4 MSD	HA - 5 1	Soluble	Solid	300.0	118871

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Lab Chronicle

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

Job ID: 890-8792-1
 SDG: Eddy County

Client Sample ID: HA - 4 1

Lab Sample ID: 890-8792-1

Date Collected: 09/12/25 09:05

Matrix: Solid

Date Received: 09/12/25 15:25

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 19:39	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119030	09/15/25 19:39	SA	EET MID
Total/NA	Analysis	8015 NM		1			119041	09/15/25 18:00	SA	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	118804	09/12/25 12:17	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	118934	09/15/25 18:00	FC	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	118870	09/15/25 09:57	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118945	09/16/25 09:58	CS	EET MID

Client Sample ID: HA - 4 2

Lab Sample ID: 890-8792-2

Date Collected: 09/12/25 09:10

Matrix: Solid

Date Received: 09/12/25 15:25

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 19:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119030	09/15/25 19:59	SA	EET MID
Total/NA	Analysis	8015 NM		1			119041	09/15/25 18:16	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	118804	09/12/25 12:17	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	118934	09/15/25 18:16	FC	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	118870	09/15/25 09:57	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118945	09/16/25 10:04	CS	EET MID

Client Sample ID: HA - 5 0.5

Lab Sample ID: 890-8792-3

Date Collected: 09/12/25 09:20

Matrix: Solid

Date Received: 09/12/25 15:25

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 20:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119030	09/15/25 20:19	SA	EET MID
Total/NA	Analysis	8015 NM		1			119041	09/15/25 18:31	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	118804	09/12/25 12:17	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	118934	09/15/25 18:31	FC	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	118870	09/15/25 09:57	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118945	09/16/25 10:10	CS	EET MID

Client Sample ID: HA - 5 1

Lab Sample ID: 890-8792-4

Date Collected: 09/12/25 09:25

Matrix: Solid

Date Received: 09/12/25 15:25

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	118904	09/15/25 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118662	09/15/25 12:34	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119030	09/15/25 12:34	SA	EET MID

Eurofins Carlsbad

Lab Chronicle

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

Job ID: 890-8792-1
 SDG: Eddy County

Client Sample ID: HA - 5 1

Lab Sample ID: 890-8792-4

Date Collected: 09/12/25 09:25

Matrix: Solid

Date Received: 09/12/25 15:25

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			119041	09/15/25 18:46	SA	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	118804	09/12/25 12:17	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	118934	09/15/25 18:46	FC	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	118871	09/15/25 10:00	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118951	09/15/25 23:33	CS	EET MID

Client Sample ID: HA - 5 2

Lab Sample ID: 890-8792-5

Date Collected: 09/12/25 09:30

Matrix: Solid

Date Received: 09/12/25 15:25

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	118904	09/15/25 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118662	09/15/25 12:54	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119030	09/15/25 12:54	SA	EET MID
Total/NA	Analysis	8015 NM		1			119041	09/15/25 19:02	SA	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	118804	09/12/25 12:17	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	118934	09/15/25 19:02	FC	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	09/15/25 23:50	CS	EET MID

Client Sample ID: HA - 6 0.5

Lab Sample ID: 890-8792-6

Date Collected: 09/12/25 09:40

Matrix: Solid

Date Received: 09/12/25 15:25

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	118904	09/15/25 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118662	09/15/25 13:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119030	09/15/25 13:15	SA	EET MID
Total/NA	Analysis	8015 NM		1			119041	09/15/25 19:17	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	118804	09/12/25 12:17	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	118934	09/15/25 19:17	FC	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	118871	09/15/25 10:00	SA	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	118951	09/15/25 23:56	CS	EET MID

Client Sample ID: HA - 6 1

Lab Sample ID: 890-8792-7

Date Collected: 09/12/25 09:45

Matrix: Solid

Date Received: 09/12/25 15:25

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	118904	09/15/25 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118662	09/15/25 13:35	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119030	09/15/25 13:35	SA	EET MID
Total/NA	Analysis	8015 NM		1			119041	09/15/25 19:32	SA	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	118804	09/12/25 12:17	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	118934	09/15/25 19:32	FC	EET MID

Eurofins Carlsbad

Lab Chronicle

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

Job ID: 890-8792-1
 SDG: Eddy County

Client Sample ID: HA - 6 1

Lab Sample ID: 890-8792-7

Date Collected: 09/12/25 09:45

Matrix: Solid

Date Received: 09/12/25 15:25

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 00:02	CS	EET MID

Client Sample ID: HA - 6 2

Lab Sample ID: 890-8792-8

Date Collected: 09/12/25 09:50

Matrix: Solid

Date Received: 09/12/25 15:25

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	118904	09/15/25 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118662	09/15/25 13:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119030	09/15/25 13:55	SA	EET MID
Total/NA	Analysis	8015 NM		1			119041	09/19/25 02:28	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 02:28	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 00:07	CS	EET MID

Client Sample ID: HA - 4 0.5

Lab Sample ID: 890-8792-9

Date Collected: 09/12/25 09:00

Matrix: Solid

Date Received: 09/12/25 15:25

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	118904	09/15/25 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	118662	09/15/25 14:16	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119030	09/15/25 14:16	SA	EET MID
Total/NA	Analysis	8015 NM		1			119041	09/19/25 03:15	SA	EET MID
Total/NA	Prep	8015NM Prep			10.00 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 03:15	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 00:24	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: 890-8792-1
SDG: Eddy County

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

- 1
- 2
- 3
- 4
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- 13
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Method Summary

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

Job ID: 890-8792-1
SDG: Eddy County

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: 890-8792-1
SDG: Eddy County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-8792-1	HA - 4 1	Solid	09/12/25 09:05	09/12/25 15:25	0.5
890-8792-2	HA - 4 2	Solid	09/12/25 09:10	09/12/25 15:25	1
890-8792-3	HA - 5 0.5	Solid	09/12/25 09:20	09/12/25 15:25	0.5
890-8792-4	HA - 5 1	Solid	09/12/25 09:25	09/12/25 15:25	1
890-8792-5	HA - 5 2	Solid	09/12/25 09:30	09/12/25 15:25	2
890-8792-6	HA - 6 0.5	Solid	09/12/25 09:40	09/12/25 15:25	0.5
890-8792-7	HA - 6 1	Solid	09/12/25 09:45	09/12/25 15:25	1
890-8792-8	HA - 6 2	Solid	09/12/25 09:50	09/12/25 15:25	2
890-8792-9	HA - 4 0.5	Solid	09/12/25 09:00	09/12/25 15:25	0.5

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- 14



Environment Testing
Xenco

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

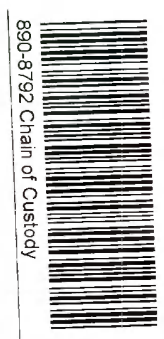
Chain of Custody

Work Order No: _____

www.xenco.com Page 1 of 2

Project Manager:	Gilbert Moreno	Bill to: (if different)	JIM EATY
Company Name:	Earth Systems	Company Name:	BEVON ENERGY
Address:	1910 Resource Ct	Address:	
City, State, ZIP:	Carlsbad, NM 88220	City, State, ZIP:	
Phone:	832-541-7719	Email:	gmoreno@earthsystems.net

Project Name:	Spud Migration 31 CBT 1	Turn Around	<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush
Project Number:	VP 7141	Due Date:	Perkins TAT
Project Location:	Eddy County	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Blair B	Wet-Kit:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sampler's ID:	21680818	Thermometer ID:	(Turnover)
Temp Blank:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Correction Factor:	-0.2
Cooler Custody Seals:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Temperature Reading:	-5.09
Sample Custody Seals:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Corrected Temperature:	-4.9
Total Containers:		Parameters	



890-8792 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grav/Comp	# of Cont	Parameters	Preservative Codes	Sample Comments
HA-4 1	S	9/12	9:05	0.5	6	1	TH-NM	None: NO	INCIDENT #
HA-4 2			9:10	0.5	1	1	CHLORIDE-NM	DI Water: H ₂ O	NAF2524019423
HA-5 0.5			9:20	0.5	1	1	BTX-NM	MeOH: Me	
HA-5 1			9:25	1	1	1		HCL: HC	
HA-5 2			9:30	2	1	1		HNO ₃ : HN	
HA-6 0.5			9:40	0.5	1	1		H ₂ SO ₄ : H ₂	
HA-6 1			9:45	1	1	1		H ₂ PO ₄ : HP	
HA-6 2			9:50	2	1	1		NaHSO ₄ : NABIS	
HA-6 0.5			9:00	0.5	1	1		Na ₂ S ₂ O ₅ : NASO ₃	

Total 2007/6010 2008/6020: 8RCRA 13PPM Texas 11 AI Sb As Ba Be B Cd 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: TCLP / SLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U Hg: 1631 / 245.1 / 7470 / 7471

Note: 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 billable 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 entered unless previously negotiated.

Relinquished by: (Signature)	(Received by: Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		9/12 1529			

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** Sampler: N/A Lab PM: Teel, Brianna
Phone: N/A E-Mail: Brianna.Teel@ret.eurofins.com
Company: Eurofins Environment Testing South Central Accreditations Required (See note): NELAP - Texas
Address: 1211 W. Florida Ave. Due Date Requested: 9/18/2025
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: SPUF MUFFIN 31 CTB1 Project #: 88001228
Site: SSOV#: N/A
Other: N/A

Carrier Tracking No(s): N/A COC No: 890-5886-1
State of Origin: New Mexico Page: Page 1 of 1
Job #: 890-8792-1
Preservation Codes:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (G=comp, G=grab)	Matrix (Wet, Solid, Semisolid, Other)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested				Total Number of containers	Special Instructions/Note:	
HA - 4 1 (890-8792-1)	9/12/25	09:05	G	Solid	X	X	Total_BTEX_GCV	8021B/5035FP_CalcBTEX	300_ORGFM_28D/DI_LEACHChloride	8015MOD_Calc	8015MOD_NM/8015NM_S_Prep8015 NM	X	
HA - 4 2 (890-8792-2)	9/12/25	09:10	G	Solid	X	X						X	
HA - 5 0.5 (890-8792-3)	9/12/25	09:20	G	Solid	X	X						X	
HA - 5 1 (890-8792-4)	9/12/25	09:25	G	Solid	X	X						X	
HA - 5 2 (890-8792-5)	9/12/25	09:30	G	Solid	X	X						X	
HA - 6 0.5 (890-8792-6)	9/12/25	09:40	G	Solid	X	X						X	
HA - 6 1 (890-8792-7)	9/12/25	09:45	G	Solid	X	X						X	
HA - 6 2 (890-8792-8)	9/12/25	09:50	G	Solid	X	X						X	
HA - 4 0.5 (890-8792-9)	9/12/25	09:00	G	Solid	X	X						X	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontracted 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/leakmatrix 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

Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____

Relinquished by: *Brown* Date/Time: 9/18/25 16:30 Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Yes No Custody Seal No.: _____ Cooler Temperature(s) °C and Other Remarks: 3-563-7 TRS

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- 14

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 P.M.: Teel, Brianna	Carrier Tracking No(s): N/A	COCC No: 890-58672
Client Contact: Eurofins Environment Testing South Central		Phone: N/A	E-Mail: Brianna.Teel@eurofins.com	State of Origin: New Mexico	Page: Page 2 of 2
Address: 1211 W. Florida Ave.		Due Date Requested: 9/18/2025	Accreditations Required (See note): NELAP - Texas	Job #: 890-8793-1	Preservation Codes: 890-8793-1
City: Midland		TAT Requested (days): N/A	Analysis Requested		
State, Zip: TX, 79701		PO #: N/A			
Phone: 432-704-5440(Tel)		MO #: N/A			
Email: N/A		Project #: 88001228			
Project Name: SPUD MUFFIN 31 CTB 1		SSOW#: N/A			
Site: N/A					

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Wet, Solid, Composite, Aerial)	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 - 8 (890-8793-10)	9/12/25	11:05	G	Solid	X	X	X	X	X	X	X	1	
HA - 8 (890-8793-11)	9/12/25	11:10	G	Solid	X	X	X	X	X	X	X	1	
HA - 8 (890-8793-12)	9/12/25	11:15	G	Solid	X	X	X	X	X	X	X	1	

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 analytes/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

Empty Kit Relinquished by: <i>Brown &</i>	Date: 9/18/25	Time: 1630	Company: _____	Received by: <i>[Signature]</i>	Date/Time: 9/18/25	Company: _____
Relinquished by: _____	Date/Time: _____	Company: _____	Received by: _____	Date/Time: _____	Company: _____	
Relinquished by: _____	Date/Time: _____	Company: _____	Received by: _____	Date/Time: _____	Company: _____	

Custody Seals Intact: Yes No Custody Seal No.: _____
 Cooler Temperature(s) °C and Other Remarks: _____

Login Sample Receipt Checklist

Client: Earth Systems Response and Restoration

Job Number: 890-8792-1

SDG Number: Eddy County

Login Number: 8792

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	

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Login Sample Receipt Checklist

Client: Earth Systems Response and Restoration

Job Number: 890-8792-1

SDG Number: Eddy County

Login Number: 8792

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	

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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 2/19/2026 3:10:17 PM

JOB DESCRIPTION

Spud Muffin 31 CTB 1
 Eddy County, NM

JOB NUMBER

890-9489-1

Eurofins Carlsbad
 1089 N Canal St.
 Carlsbad NM 88220



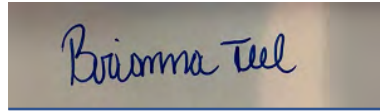
Eurofins Carlsbad

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
2/19/2026 3:10:17 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: 890-9489-1
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: 890-9489-1
SDG: Eddy County, NM

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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: 890-9489-1

Job ID: 890-9489-1

Eurofins Carlsbad

Job Narrative 890-9489-1

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 2/11/2026 2:22 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 -1.6°C.

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: SW - 1 (890-9489-1), SW - 2 (890-9489-2), SW - 3 (890-9489-3) and SW - 4 (890-9489-4).

GC VOA

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-131923 and analytical batch 880-132160 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: SW - 2 (890-9489-2), SW - 3 (890-9489-3) and SW - 4 (890-9489-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCS 880-131923/1-A) and (LCSD 880-131923/2-A). Evidence of matrix interferences is not obvious.

Method 8021B: The surrogate recovery for the blank associated with analytical batch 880-132160 was outside the upper control limits.

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

Diesel Range Organics

Method 8015B NM: The continuing calibration verification (CCV) associated with batch 880-132163 recovered above the upper control limit for Gasoline Range Organics (GRO)-C6-C10 and Diesel Range Organics (Over C10-C28). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is:(CCV 880-132163/173).

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: 890-9489-1
 SDG: Eddy County, NM

Client Sample ID: SW - 1
Date Collected: 02/11/26 11:00
Date Received: 02/11/26 14:22
Sample Depth: 0-1

Lab Sample ID: 890-9489-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		02/16/26 11:42	02/19/26 05:15	1
Toluene	<0.00198	U	0.00198		mg/Kg		02/16/26 11:42	02/19/26 05:15	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		02/16/26 11:42	02/19/26 05:15	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		02/16/26 11:42	02/19/26 05:15	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		02/16/26 11:42	02/19/26 05:15	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		02/16/26 11:42	02/19/26 05:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	128		70 - 130	02/16/26 11:42	02/19/26 05:15	1
1,4-Difluorobenzene (Surr)	80		70 - 130	02/16/26 11:42	02/19/26 05:15	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			02/19/26 05:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			02/19/26 03:05	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		02/12/26 12:26	02/19/26 03:05	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		02/12/26 12:26	02/19/26 03:05	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		02/12/26 12:26	02/19/26 03:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130	02/12/26 12:26	02/19/26 03:05	1
o-Terphenyl	107		70 - 130	02/12/26 12:26	02/19/26 03:05	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	53.2		9.90		mg/Kg			02/13/26 17:03	1

Client Sample ID: SW - 2
Date Collected: 02/11/26 11:05
Date Received: 02/11/26 14:22
Sample Depth: 0-1

Lab Sample ID: 890-9489-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/16/26 11:42	02/19/26 05:36	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/16/26 11:42	02/19/26 05:36	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/16/26 11:42	02/19/26 05:36	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/16/26 11:42	02/19/26 05:36	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/16/26 11:42	02/19/26 05:36	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/16/26 11:42	02/19/26 05:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	164	S1+	70 - 130	02/16/26 11:42	02/19/26 05:36	1

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Client Sample Results

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

Job ID: 890-9489-1
 SDG: Eddy County, NM

Client Sample ID: SW - 2
Date Collected: 02/11/26 11:05
Date Received: 02/11/26 14:22
Sample Depth: 0-1

Lab Sample ID: 890-9489-2
Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	106		70 - 130	02/16/26 11:42	02/19/26 05:36	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			02/19/26 05:36	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			02/19/26 03:20	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		02/12/26 12:26	02/19/26 03:20	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/12/26 12:26	02/19/26 03:20	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/12/26 12:26	02/19/26 03:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130	02/12/26 12:26	02/19/26 03:20	1
o-Terphenyl	102		70 - 130	02/12/26 12:26	02/19/26 03:20	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	85.3		10.1		mg/Kg			02/13/26 17:08	1

Client Sample ID: SW - 3
Date Collected: 02/11/26 11:10
Date Received: 02/11/26 14:22
Sample Depth: 0-1

Lab Sample ID: 890-9489-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/16/26 11:42	02/19/26 05:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/16/26 11:42	02/19/26 05:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/16/26 11:42	02/19/26 05:56	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		02/16/26 11:42	02/19/26 05:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/16/26 11:42	02/19/26 05:56	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/16/26 11:42	02/19/26 05:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	136	S1+	70 - 130	02/16/26 11:42	02/19/26 05:56	1
1,4-Difluorobenzene (Surr)	93		70 - 130	02/16/26 11:42	02/19/26 05:56	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			02/19/26 05:56	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			02/19/26 03:35	1

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Client Sample Results

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

Job ID: 890-9489-1
 SDG: Eddy County, NM

Client Sample ID: SW - 3

Lab Sample ID: 890-9489-3

Date Collected: 02/11/26 11:10

Matrix: Solid

Date Received: 02/11/26 14:22

Sample Depth: 0-1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		02/12/26 12:26	02/19/26 03:35	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		02/12/26 12:26	02/19/26 03:35	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		02/12/26 12:26	02/19/26 03:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130				02/12/26 12:26	02/19/26 03:35	1
o-Terphenyl	112		70 - 130				02/12/26 12:26	02/19/26 03:35	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<9.90	U	9.90		mg/Kg			02/13/26 17:14	1

Client Sample ID: SW - 4

Lab Sample ID: 890-9489-4

Date Collected: 02/11/26 11:15

Matrix: Solid

Date Received: 02/11/26 14:22

Sample Depth: 0-1

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		02/16/26 11:42	02/19/26 06:16	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/16/26 11:42	02/19/26 06:16	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/16/26 11:42	02/19/26 06:16	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/16/26 11:42	02/19/26 06:16	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/16/26 11:42	02/19/26 06:16	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/16/26 11:42	02/19/26 06:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	180	S1+	70 - 130				02/16/26 11:42	02/19/26 06:16	1
1,4-Difluorobenzene (Surr)	99		70 - 130				02/16/26 11:42	02/19/26 06:16	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			02/19/26 06:16	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			02/19/26 03:50	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		02/12/26 12:26	02/19/26 03:50	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		02/12/26 12:26	02/19/26 03:50	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		02/12/26 12:26	02/19/26 03:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130				02/12/26 12:26	02/19/26 03:50	1
o-Terphenyl	102		70 - 130				02/12/26 12:26	02/19/26 03:50	1

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Client Sample Results

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

Job ID: 890-9489-1
SDG: Eddy County, NM

Client Sample ID: SW - 4

Lab Sample ID: 890-9489-4

Date Collected: 02/11/26 11:15

Matrix: Solid

Date Received: 02/11/26 14:22

Sample Depth: 0-1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	33.0		10.1		mg/Kg			02/13/26 17:19	1

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Surrogate Summary

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

Job ID: 890-9489-1
 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)
890-9489-1	SW - 1	128	80
890-9489-2	SW - 2	164 S1+	106
890-9489-3	SW - 3	136 S1+	93
890-9489-4	SW - 4	180 S1+	99
LCS 880-131923/1-A	Lab Control Sample	138 S1+	83
LCSD 880-131923/2-A	Lab Control Sample Dup	139 S1+	85
MB 880-131923/5-A	Method Blank	144 S1+	82
MB 880-132160/8	Method Blank	136 S1+	80

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)
890-9489-1	SW - 1	102	107
890-9489-2	SW - 2	96	102
890-9489-3	SW - 3	107	112
890-9489-4	SW - 4	96	102
LCS 880-131616/2-A	Lab Control Sample	116	120
LCSD 880-131616/3-A	Lab Control Sample Dup	122	126
MB 880-131616/1-A	Method Blank	117	122

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: 890-9489-1
 SDG: Eddy County, NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-131923/5-A
 Matrix: Solid
 Analysis Batch: 132160

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 131923

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/16/26 11:42	02/18/26 22:33	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/16/26 11:42	02/18/26 22:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/16/26 11:42	02/18/26 22:33	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/16/26 11:42	02/18/26 22:33	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/16/26 11:42	02/18/26 22:33	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/16/26 11:42	02/18/26 22:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	144	S1+	70 - 130	02/16/26 11:42	02/18/26 22:33	1
1,4-Difluorobenzene (Surr)	82		70 - 130	02/16/26 11:42	02/18/26 22:33	1

Lab Sample ID: LCS 880-131923/1-A
 Matrix: Solid
 Analysis Batch: 132160

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 131923

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1059		mg/Kg		106	70 - 130
Toluene	0.100	0.1000		mg/Kg		100	70 - 130
Ethylbenzene	0.100	0.09608		mg/Kg		96	70 - 130
m-Xylene & p-Xylene	0.200	0.2028		mg/Kg		101	70 - 130
o-Xylene	0.100	0.1117		mg/Kg		112	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	138	S1+	70 - 130
1,4-Difluorobenzene (Surr)	83		70 - 130

Lab Sample ID: LCSD 880-131923/2-A
 Matrix: Solid
 Analysis Batch: 132160

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 131923

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1084		mg/Kg		108	70 - 130	2	35
Toluene	0.100	0.1020		mg/Kg		102	70 - 130	2	35
Ethylbenzene	0.100	0.09542		mg/Kg		95	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.2020		mg/Kg		101	70 - 130	0	35
o-Xylene	0.100	0.1113		mg/Kg		111	70 - 130	0	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	139	S1+	70 - 130
1,4-Difluorobenzene (Surr)	85		70 - 130

Lab Sample ID: MB 880-132160/8
 Matrix: Solid
 Analysis Batch: 132160

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg			02/18/26 11:07	1
Toluene	<0.00200	U	0.00200		mg/Kg			02/18/26 11:07	1

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QC Sample Results

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

Job ID: 890-9489-1
 SDG: Eddy County, NM

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

Lab Sample ID: MB 880-132160/8
 Matrix: Solid
 Analysis Batch: 132160

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Ethylbenzene	<0.00200	U	0.00200		mg/Kg			02/18/26 11:07	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg			02/18/26 11:07	1
o-Xylene	<0.00200	U	0.00200		mg/Kg			02/18/26 11:07	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg			02/18/26 11:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	136	S1+	70 - 130					02/18/26 11:07	1
1,4-Difluorobenzene (Surr)	80		70 - 130					02/18/26 11:07	1

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

Lab Sample ID: MB 880-131616/1-A
 Matrix: Solid
 Analysis Batch: 132163

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 131616

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		02/12/26 12:26	02/18/26 23:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/12/26 12:26	02/18/26 23:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/12/26 12:26	02/18/26 23:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	117		70 - 130				02/12/26 12:26	02/18/26 23:03	1
o-Terphenyl	122		70 - 130				02/12/26 12:26	02/18/26 23:03	1

Lab Sample ID: LCS 880-131616/2-A
 Matrix: Solid
 Analysis Batch: 132163

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 131616

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Gasoline Range Organics (GRO)-C6-C10	1000	1241		mg/Kg		124	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1171		mg/Kg		117	70 - 130
Surrogate		LCS	LCS			%Recovery	Limits
1-Chlorooctane		116					70 - 130
o-Terphenyl		120					70 - 130

Lab Sample ID: LCSD 880-131616/3-A
 Matrix: Solid
 Analysis Batch: 132163

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 131616

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
		Result	Qualifier						
Gasoline Range Organics (GRO)-C6-C10	1000	1280		mg/Kg		128	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	1000	1202		mg/Kg		120	70 - 130	3	20

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QC Sample Results

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

Job ID: 890-9489-1
 SDG: Eddy County, NM

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

Lab Sample ID: LCSD 880-131616/3-A
 Matrix: Solid
 Analysis Batch: 132163

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 131616

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	122		70 - 130
o-Terphenyl	126		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-131674/1-A
 Matrix: Solid
 Analysis Batch: 131741

Client Sample ID: Method Blank
 Prep Type: Soluble

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	<10.0	U	10.0		mg/Kg			02/13/26 16:00	1

Lab Sample ID: LCS 880-131674/2-A
 Matrix: Solid
 Analysis Batch: 131741

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Lab Sample ID: LCSD 880-131674/3-A
 Matrix: Solid
 Analysis Batch: 131741

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

QC Association Summary

Client: Earth Systems Response and Restoration
Project/Site: Spud Muffin 31 CTB 1Job ID: 890-9489-1
SDG: Eddy County, NM

GC VOA

Prep Batch: 131923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9489-1	SW - 1	Total/NA	Solid	5035	
890-9489-2	SW - 2	Total/NA	Solid	5035	
890-9489-3	SW - 3	Total/NA	Solid	5035	
890-9489-4	SW - 4	Total/NA	Solid	5035	
MB 880-131923/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-131923/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-131923/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 132160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9489-1	SW - 1	Total/NA	Solid	8021B	131923
890-9489-2	SW - 2	Total/NA	Solid	8021B	131923
890-9489-3	SW - 3	Total/NA	Solid	8021B	131923
890-9489-4	SW - 4	Total/NA	Solid	8021B	131923
MB 880-131923/5-A	Method Blank	Total/NA	Solid	8021B	131923
MB 880-132160/8	Method Blank	Total/NA	Solid	8021B	
LCS 880-131923/1-A	Lab Control Sample	Total/NA	Solid	8021B	131923
LCSD 880-131923/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	131923

Analysis Batch: 132406

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9489-1	SW - 1	Total/NA	Solid	Total BTEX	
890-9489-2	SW - 2	Total/NA	Solid	Total BTEX	
890-9489-3	SW - 3	Total/NA	Solid	Total BTEX	
890-9489-4	SW - 4	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 131616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9489-1	SW - 1	Total/NA	Solid	8015NM Prep	
890-9489-2	SW - 2	Total/NA	Solid	8015NM Prep	
890-9489-3	SW - 3	Total/NA	Solid	8015NM Prep	
890-9489-4	SW - 4	Total/NA	Solid	8015NM Prep	
MB 880-131616/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-131616/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-131616/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 132163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9489-1	SW - 1	Total/NA	Solid	8015B NM	131616
890-9489-2	SW - 2	Total/NA	Solid	8015B NM	131616
890-9489-3	SW - 3	Total/NA	Solid	8015B NM	131616
890-9489-4	SW - 4	Total/NA	Solid	8015B NM	131616
MB 880-131616/1-A	Method Blank	Total/NA	Solid	8015B NM	131616
LCS 880-131616/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	131616
LCSD 880-131616/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	131616

Analysis Batch: 132382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9489-1	SW - 1	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: 890-9489-1
 SDG: Eddy County, NM

GC Semi VOA (Continued)

Analysis Batch: 132382 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9489-2	SW - 2	Total/NA	Solid	8015 NM	
890-9489-3	SW - 3	Total/NA	Solid	8015 NM	
890-9489-4	SW - 4	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 131674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9489-1	SW - 1	Soluble	Solid	DI Leach	
890-9489-2	SW - 2	Soluble	Solid	DI Leach	
890-9489-3	SW - 3	Soluble	Solid	DI Leach	
890-9489-4	SW - 4	Soluble	Solid	DI Leach	
MB 880-131674/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-131674/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-131674/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 131741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9489-1	SW - 1	Soluble	Solid	300.0	131674
890-9489-2	SW - 2	Soluble	Solid	300.0	131674
890-9489-3	SW - 3	Soluble	Solid	300.0	131674
890-9489-4	SW - 4	Soluble	Solid	300.0	131674
MB 880-131674/1-A	Method Blank	Soluble	Solid	300.0	131674
LCS 880-131674/2-A	Lab Control Sample	Soluble	Solid	300.0	131674
LCSD 880-131674/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	131674

Lab Chronicle

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

Job ID: 890-9489-1
 SDG: Eddy County, NM

Client Sample ID: SW - 1

Lab Sample ID: 890-9489-1

Date Collected: 02/11/26 11:00

Matrix: Solid

Date Received: 02/11/26 14:22

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	131923	02/16/26 11:42	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	132160	02/19/26 05:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			132406	02/19/26 05:15	SA	EET MID
Total/NA	Analysis	8015 NM		1			132382	02/19/26 03:05	SA	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10.00 mL	131616	02/12/26 12:26	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	132163	02/19/26 03:05	FC	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	131674	02/12/26 16:32	SI	EET MID
Soluble	Analysis	300.0		1			131741	02/13/26 17:03	CS	EET MID

Client Sample ID: SW - 2

Lab Sample ID: 890-9489-2

Date Collected: 02/11/26 11:05

Matrix: Solid

Date Received: 02/11/26 14:22

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	131923	02/16/26 11:42	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	132160	02/19/26 05:36	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			132406	02/19/26 05:36	SA	EET MID
Total/NA	Analysis	8015 NM		1			132382	02/19/26 03:20	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10.00 mL	131616	02/12/26 12:26	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	132163	02/19/26 03:20	FC	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	131674	02/12/26 16:32	SI	EET MID
Soluble	Analysis	300.0		1			131741	02/13/26 17:08	CS	EET MID

Client Sample ID: SW - 3

Lab Sample ID: 890-9489-3

Date Collected: 02/11/26 11:10

Matrix: Solid

Date Received: 02/11/26 14:22

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	131923	02/16/26 11:42	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	132160	02/19/26 05:56	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			132406	02/19/26 05:56	SA	EET MID
Total/NA	Analysis	8015 NM		1			132382	02/19/26 03:35	SA	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10.00 mL	131616	02/12/26 12:26	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	132163	02/19/26 03:35	FC	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	131674	02/12/26 16:32	SI	EET MID
Soluble	Analysis	300.0		1			131741	02/13/26 17:14	CS	EET MID

Client Sample ID: SW - 4

Lab Sample ID: 890-9489-4

Date Collected: 02/11/26 11:15

Matrix: Solid

Date Received: 02/11/26 14:22

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	131923	02/16/26 11:42	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	132160	02/19/26 06:16	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			132406	02/19/26 06:16	SA	EET MID

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Lab Chronicle

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

Job ID: 890-9489-1
SDG: Eddy County, NM

Client Sample ID: SW - 4
Date Collected: 02/11/26 11:15
Date Received: 02/11/26 14:22

Lab Sample ID: 890-9489-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			132382	02/19/26 03:50	SA	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10.00 mL	131616	02/12/26 12:26	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	132163	02/19/26 03:50	FC	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	131674	02/12/26 16:32	SI	EET MID
Soluble	Analysis	300.0		1			131741	02/13/26 17:19	CS	EET MID

Laboratory References:

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

- 1
- 2
- 3
- 4
- 5
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- 13
- 14

Accreditation/Certification Summary

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

Job ID: 890-9489-1
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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

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

Job ID: 890-9489-1
 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: 890-9489-1
SDG: Eddy County, NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-9489-1	SW - 1	Solid	02/11/26 11:00	02/11/26 14:22	0-1
890-9489-2	SW - 2	Solid	02/11/26 11:05	02/11/26 14:22	0-1
890-9489-3	SW - 3	Solid	02/11/26 11:10	02/11/26 14:22	0-1
890-9489-4	SW - 4	Solid	02/11/26 11:15	02/11/26 14:22	0-1

- 1
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- 7
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- 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



Work Order No:

www.xenco.com Page 1 of 1

Work Order Comments

Program: 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
 Company Name: Earth Systems R&R
 Address: 1910 Resource Ct
 City, State ZIP: Carlsbad, NM, 88220
 Phone: (832) 541-7719

Bill to: (if different) Jim Raley
 Company Name: Devon Energy
 Address:
 City, State ZIP:

Email: gmoreno@earthsys.net, sjiron@earthsys.net

Turn Around Routine Rush
 Due Date: **Routine TAT**
 TAT starts the day received by the lab, if received by 4:30pm

Temp Blank: Yes No Yes No
 Thermometer ID: **1.0002**
 Correction Factor: **-0.2**
 Temperature Reading: **-1.8**
 Corrected Temperature: **-1.6**

SAMPLE RECEIPT
 Samples Received Intact: Yes No
 Cooler Custody Seals: Yes No Yes No
 Sample Custody Seals: Yes No Yes No
 Total Containers:

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	Parameters						Sample Comments	
						TPH - NM	Chloride - NM	BTEX - NM	TDS	Cation/Anion	TCLP - Metals		TCLP - BTEX
SW - 1	S	2.11.26	11:00	0-1	Comp 1	X	X	X					
SW - 2	S	2.11.26	11:05	0-1	Comp 1	X	X	X					
SW - 3	S	2.11.26	11:10	0-1	Comp 1	X	X	X					
SW - 4	S	2.11.26	11:15	0-1	Comp 1	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 SiO₂ Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U Hg: 1631 / 245.1 / 7470 / 7471

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

Relinquished by: (Signature) *[Signature]* Date/Time 2/11/14:00
 Received by: (Signature) *[Signature]* Date/Time

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 1

Work Order Comments

Program: 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, sjiron@earthsys.net

Project Name:	Turn Around		Pres. Code	ANALYSIS														
	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Rush		TCLP - RI	TCLP - BTEX	TCLP - Metals	Cation/ Anion	TDS	BTEX - NM	Chloride - NM	TPH - NM	# of Cont	Grab/ Comp	Depth	Time Sampled	Date Sampled	Matrix	Sample Identification
Project Number: Spud Muffin 31 CTB 1	7141																	
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/ WO #: 21880818																		
SAMPLE RECEIPT																		
Samples Received Intact: Yes No	Temp Blank: Yes No	Wet Ice: Yes No																
Cooler Custody Seals: Yes No	Thermometer ID: <i>Trimmer</i>	Correction Factor: <i>-0.2</i>																
Sample Custody Seals: Yes No	Temperature Reading: <i>-1.8</i>	Corrected Temperature: <i>-1.6</i>																
Total Containers:																		
SW - 1	S	2.11.26	0-1	Comp 1	X	X	X	X	X	X								
SW - 2	S	2.11.26	0-1	Comp 1	X	X	X	X	X	X								
SW - 3	S	2.11.26	0-1	Comp 1	X	X	X	X	X	X								
SW - 4	S	2.11.26	0-1	Comp 1	X	X	X	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 SiO₂ Na Sr Ti Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U Hg: 1631 / 245.1 / 7470 / 7471

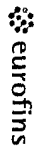
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	2/11/14			

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**
 Eurofins Environment Testing South Cent
 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

Lab Pw: Teel, Brianna
 E-Mail: Brianna.Teel@eurofins.com
 Accreditations Required (See note): NEIAP - Texas

COC No: 890-6499-1
 Page: Page 1 of 1
 Job #: 890-9489-1

Due Date Requested: 2/17/2026
 TAT Requested (days): N/A

Analysis Requested

Preservation Codes:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=solid, O=Overstolf, Br=Brine, Ash)	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:
SW - 1 (890-9489-1)	2/1/26	11 00	G	Solid	X	X	X	X	X	X	X	X	
SW - 2 (890-9489-2)	2/1/26	11 05	G	Solid	X	X	X	X	X	X	X	X	
SW - 3 (890-9489-3)	2/1/26	11 10	G	Solid	X	X	X	X	X	X	X	X	
SW - 4 (890-9489-4)	2/1/26	11 15	G	Solid	X	X	X	X	X	X	X	X	

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested I, II, III, IV, Other (Specify) _____ Primary Deliverable Rank: 2
 Empty Kit Relinquished by _____ Date _____
 Relinquished by _____ Date/Time: 2-11 1630 Company _____
 Relinquished by _____ Date/Time: _____ Company _____
 Relinquished by _____ Date/Time: _____ Company _____
 Custody Seals Intact: Custody Seal No
 A Yes A No
 Cooler Temperature(s) °C and Other Remarks: _____

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/OC Requirements: _____

Received by: _____ Date/Time: 2-19-26 930 Company _____
 Received by: _____ Date/Time: _____ Company _____

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 Cent

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

Due Date Requested: 2/17/2026
 TAT Requested (days): N/A

PO #: N/A
 W/O #: N/A
 Project #: 88001228
 SSOV#: N/A

Lab PW: Teel, Brianna
 E-Mail: Brianna.Teel@eurofins.com
 Accreditations Required (See note): NEIAP - Texas

Carrier Tracking No(s): N/A
 State of Origin: New Mexico
 Page: Page 1 of 1
 Job #: 890-9489-1
 Preservation Codes:

COC No: 890-6499-1
 Page: Page 1 of 1
 Job #: 890-9489-1
 Preservation Codes:

Analysis Requested

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:
X	X	X	X	X	X	X	X	
X	X	X	X	X	X	X	X	
X	X	X	X	X	X	X	X	
X	X	X	X	X	X	X	X	
X	X	X	X	X	X	X	X	

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=Soil, O=Overstoll, Br=Brine, Ash)	Preservation Code
SW - 1 (890-9489-1)	2/1/26	11 00	G	Solid	
SW - 2 (890-9489-2)	2/1/26	11 05	G	Solid	
SW - 3 (890-9489-3)	2/1/26	11 10	G	Solid	
SW - 4 (890-9489-4)	2/1/26	11 15	G	Solid	

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/est/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 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 Dispose By Lab Archive For _____ Months

Empty Kit Relinquished by	Date/Time	Date	Time	Method of Shipment
Relinquished by: <i>BS</i>	Date/Time: 2-11 16:30	Date: 2-11	Time: 16:30	Method of Shipment:
Relinquished by:	Date/Time:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time:	Date:	Time:	Method of Shipment:

Custody Seals Intact: Yes No
 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: 890-9489-1
SDG Number: Eddy County, NM

Login Number: 9489
List Number: 1
Creator: Bruns, Shannon

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: Earth Systems Response and Restoration

Job Number: 890-9489-1
SDG Number: Eddy County, NM

Login Number: 9489
List Number: 2
Creator: Laing, Edmundo

List Source: Eurofins Midland
List Creation: 02/12/26 10:39 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	

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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 2/20/2026 1:08:13 PM

JOB DESCRIPTION

Spud Muffin 31 CTB 1
 Eddy County, NM

JOB NUMBER

890-9490-1

Eurofins Carlsbad
 1089 N Canal St.
 Carlsbad NM 88220



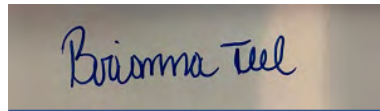
Eurofins Carlsbad

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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2/20/2026 1:08:13 PM

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

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

Laboratory Job ID: 890-9490-1
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: 890-9490-1
 SDG: Eddy County, NM

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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.

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: 890-9490-1

Job ID: 890-9490-1

Eurofins Carlsbad

Job Narrative 890-9490-1

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 2/11/2026 2:22 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 -1.6°C.

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: CS - 1 (890-9490-1), CS - 2 (890-9490-2), CS - 3 (890-9490-3), CS - 4 (890-9490-4), CS - 5 (890-9490-5), CS - 6 (890-9490-6), CS - 7 (890-9490-7), CS - 8 (890-9490-8), CS - 9 (890-9490-9), CS - 10 (890-9490-10) and CS - 11 (890-9490-11).

GC VOA

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-132336 and analytical batch 880-132317 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCS 880-132336/1-A), (LCSD 880-132336/2-A), (880-68386-A-3-H), (880-68386-A-3-F MS) and (880-68386-A-3-G MSD). Evidence of matrix interferences is not obvious.

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

Diesel Range Organics

Method 8015B NM: The continuing calibration verification (CCV) associated with batch 880-132165 recovered above the upper control limit for Gasoline Range Organics (GRO)-C6-C10. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is:(CCV 880-132165/174).

Method 8015B NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-131617/2-A), (LCSD 880-131617/3-A) and (890-9490-A-7-C MSD). Evidence of matrix interferences is not obvious.

Method 8015B NM: The surrogate recovery for the blank associated with preparation batch 880-131617 and analytical batch 880-132165 was outside the upper control limits.

Method 8015B NM: The continuing calibration verification (CCV) associated with batch 880-132163 recovered above the upper control limit for Gasoline Range Organics (GRO)-C6-C10 and Diesel Range Organics (Over C10-C28). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is:(CCV 880-132163/173).

Method 8015B NM: An incorrect volume of surrogate spiking solution was inadvertently added the following samples: CS - 5 (890-9490-5). Percent recoveries are based on the amount spiked.

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.

Eurofins Carlsbad

Client Sample Results

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

Job ID: 890-9490-1
 SDG: Eddy County, NM

Client Sample ID: CS - 1

Lab Sample ID: 890-9490-1

Date Collected: 02/11/26 11:20

Matrix: Solid

Date Received: 02/11/26 14:22

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		02/16/26 13:40	02/18/26 23:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/16/26 13:40	02/18/26 23:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/16/26 13:40	02/18/26 23:04	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		02/16/26 13:40	02/18/26 23:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/16/26 13:40	02/18/26 23:04	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/16/26 13:40	02/18/26 23:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	02/16/26 13:40	02/18/26 23:04	1
1,4-Difluorobenzene (Surr)	114		70 - 130	02/16/26 13:40	02/18/26 23:04	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			02/18/26 23:04	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			02/19/26 04:05	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		02/12/26 12:26	02/19/26 04:05	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/12/26 12:26	02/19/26 04:05	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/12/26 12:26	02/19/26 04:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130	02/12/26 12:26	02/19/26 04:05	1
o-Terphenyl	103		70 - 130	02/12/26 12:26	02/19/26 04:05	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	319		9.88		mg/Kg			02/13/26 17:24	1

Client Sample ID: CS - 2

Lab Sample ID: 890-9490-2

Date Collected: 02/11/26 11:25

Matrix: Solid

Date Received: 02/11/26 14:22

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		02/16/26 13:40	02/18/26 23:25	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/16/26 13:40	02/18/26 23:25	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/16/26 13:40	02/18/26 23:25	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/16/26 13:40	02/18/26 23:25	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/16/26 13:40	02/18/26 23:25	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/16/26 13:40	02/18/26 23:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130	02/16/26 13:40	02/18/26 23:25	1

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Client Sample Results

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

Job ID: 890-9490-1
 SDG: Eddy County, NM

Client Sample ID: CS - 2

Lab Sample ID: 890-9490-2

Date Collected: 02/11/26 11:25

Matrix: Solid

Date Received: 02/11/26 14:22

Sample Depth: 1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	110		70 - 130	02/16/26 13:40	02/18/26 23:25	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			02/18/26 23:25	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			02/19/26 04:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/12/26 12:26	02/19/26 04:21	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/12/26 12:26	02/19/26 04:21	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/12/26 12:26	02/19/26 04:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130	02/12/26 12:26	02/19/26 04:21	1
o-Terphenyl	95		70 - 130	02/12/26 12:26	02/19/26 04:21	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			02/13/26 17:29	1

Client Sample ID: CS - 3

Lab Sample ID: 890-9490-3

Date Collected: 02/11/26 11:30

Matrix: Solid

Date Received: 02/11/26 14:22

Sample Depth: 1

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		02/16/26 13:40	02/18/26 23:45	1
Toluene	<0.00202	U	0.00202		mg/Kg		02/16/26 13:40	02/18/26 23:45	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		02/16/26 13:40	02/18/26 23:45	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		02/16/26 13:40	02/18/26 23:45	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		02/16/26 13:40	02/18/26 23:45	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		02/16/26 13:40	02/18/26 23:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	02/16/26 13:40	02/18/26 23:45	1
1,4-Difluorobenzene (Surr)	109		70 - 130	02/16/26 13:40	02/18/26 23:45	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			02/18/26 23:45	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			02/19/26 04:36	1

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Client Sample Results

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

Job ID: 890-9490-1
 SDG: Eddy County, NM

Client Sample ID: CS - 3
Date Collected: 02/11/26 11:30
Date Received: 02/11/26 14:22
Sample Depth: 1

Lab Sample ID: 890-9490-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/12/26 12:26	02/19/26 04:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/12/26 12:26	02/19/26 04:36	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/12/26 12:26	02/19/26 04:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130				02/12/26 12:26	02/19/26 04:36	1
o-Terphenyl	100		70 - 130				02/12/26 12:26	02/19/26 04:36	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17.0		10.1		mg/Kg			02/13/26 17:45	1

Client Sample ID: CS - 4
Date Collected: 02/11/26 11:35
Date Received: 02/11/26 14:22
Sample Depth: 1

Lab Sample ID: 890-9490-4
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/16/26 13:40	02/19/26 00:06	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/16/26 13:40	02/19/26 00:06	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/16/26 13:40	02/19/26 00:06	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/16/26 13:40	02/19/26 00:06	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/16/26 13:40	02/19/26 00:06	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/16/26 13:40	02/19/26 00:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130				02/16/26 13:40	02/19/26 00:06	1
1,4-Difluorobenzene (Surr)	104		70 - 130				02/16/26 13:40	02/19/26 00:06	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/19/26 00:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			02/19/26 04:52	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		02/12/26 12:26	02/19/26 04:52	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		02/12/26 12:26	02/19/26 04:52	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		02/12/26 12:26	02/19/26 04:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130				02/12/26 12:26	02/19/26 04:52	1
o-Terphenyl	110		70 - 130				02/12/26 12:26	02/19/26 04:52	1

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Client Sample Results

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

Job ID: 890-9490-1
 SDG: Eddy County, NM

Client Sample ID: CS - 4

Lab Sample ID: 890-9490-4

Date Collected: 02/11/26 11:35

Matrix: Solid

Date Received: 02/11/26 14:22

Sample Depth: 1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21.2		9.94		mg/Kg			02/13/26 17:50	1

Client Sample ID: CS - 5

Lab Sample ID: 890-9490-5

Date Collected: 02/11/26 11:40

Matrix: Solid

Date Received: 02/11/26 14:22

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		02/16/26 13:40	02/19/26 00:27	1
Toluene	<0.00198	U	0.00198		mg/Kg		02/16/26 13:40	02/19/26 00:27	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		02/16/26 13:40	02/19/26 00:27	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		02/16/26 13:40	02/19/26 00:27	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		02/16/26 13:40	02/19/26 00:27	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		02/16/26 13:40	02/19/26 00:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130				02/16/26 13:40	02/19/26 00:27	1
1,4-Difluorobenzene (Surr)	121		70 - 130				02/16/26 13:40	02/19/26 00:27	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			02/19/26 00:27	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			02/19/26 05:07	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		02/12/26 12:26	02/19/26 05:07	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/12/26 12:26	02/19/26 05:07	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/12/26 12:26	02/19/26 05:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	67	S1-	70 - 130				02/12/26 12:26	02/19/26 05:07	1
o-Terphenyl	74		70 - 130				02/12/26 12:26	02/19/26 05:07	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	404		9.98		mg/Kg			02/13/26 18:06	1

Client Sample Results

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

Job ID: 890-9490-1
 SDG: Eddy County, NM

Client Sample ID: CS - 6

Lab Sample ID: 890-9490-6

Date Collected: 02/11/26 11:45

Matrix: Solid

Date Received: 02/11/26 14:22

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		02/16/26 13:40	02/19/26 00:47	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/16/26 13:40	02/19/26 00:47	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/16/26 13:40	02/19/26 00:47	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		02/16/26 13:40	02/19/26 00:47	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/16/26 13:40	02/19/26 00:47	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/16/26 13:40	02/19/26 00:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	02/16/26 13:40	02/19/26 00:47	1
1,4-Difluorobenzene (Surr)	116		70 - 130	02/16/26 13:40	02/19/26 00:47	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			02/19/26 00:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			02/19/26 05:23	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		02/12/26 12:26	02/19/26 05:23	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		02/12/26 12:26	02/19/26 05:23	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		02/12/26 12:26	02/19/26 05:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	81		70 - 130	02/12/26 12:26	02/19/26 05:23	1
o-Terphenyl	83		70 - 130	02/12/26 12:26	02/19/26 05:23	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	387		9.90		mg/Kg			02/13/26 18:11	1

Client Sample ID: CS - 7

Lab Sample ID: 890-9490-7

Date Collected: 02/11/26 11:50

Matrix: Solid

Date Received: 02/11/26 14:22

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		02/16/26 13:40	02/19/26 01:08	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/16/26 13:40	02/19/26 01:08	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/16/26 13:40	02/19/26 01:08	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/16/26 13:40	02/19/26 01:08	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/16/26 13:40	02/19/26 01:08	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/16/26 13:40	02/19/26 01:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	02/16/26 13:40	02/19/26 01:08	1

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Client Sample Results

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

Job ID: 890-9490-1
 SDG: Eddy County, NM

Client Sample ID: CS - 7
 Date Collected: 02/11/26 11:50
 Date Received: 02/11/26 14:22
 Sample Depth: 1

Lab Sample ID: 890-9490-7
 Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	118		70 - 130	02/16/26 13:40	02/19/26 01:08	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			02/19/26 01:08	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			02/18/26 23:48	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/12/26 12:29	02/18/26 23:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/12/26 12:29	02/18/26 23:48	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/12/26 12:29	02/18/26 23:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130	02/12/26 12:29	02/18/26 23:48	1
o-Terphenyl	111		70 - 130	02/12/26 12:29	02/18/26 23:48	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14.9		10.1		mg/Kg			02/13/26 18:16	1

Client Sample ID: CS - 8

Lab Sample ID: 890-9490-8

Date Collected: 02/11/26 11:55
 Date Received: 02/11/26 14:22
 Sample Depth: 1

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		02/16/26 13:40	02/19/26 01:28	1
Toluene	<0.00202	U	0.00202		mg/Kg		02/16/26 13:40	02/19/26 01:28	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		02/16/26 13:40	02/19/26 01:28	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		02/16/26 13:40	02/19/26 01:28	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		02/16/26 13:40	02/19/26 01:28	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		02/16/26 13:40	02/19/26 01:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	02/16/26 13:40	02/19/26 01:28	1
1,4-Difluorobenzene (Surr)	112		70 - 130	02/16/26 13:40	02/19/26 01:28	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			02/19/26 01:28	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			02/19/26 00:34	1

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Client Sample Results

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

Job ID: 890-9490-1
 SDG: Eddy County, NM

Client Sample ID: CS - 8

Lab Sample ID: 890-9490-8

Date Collected: 02/11/26 11:55

Matrix: Solid

Date Received: 02/11/26 14:22

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		02/12/26 12:29	02/19/26 00:34	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/12/26 12:29	02/19/26 00:34	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/12/26 12:29	02/19/26 00:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130				02/12/26 12:29	02/19/26 00:34	1
o-Terphenyl	90		70 - 130				02/12/26 12:29	02/19/26 00:34	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	69.4		10.1		mg/Kg			02/13/26 18:22	1

Client Sample ID: CS - 9

Lab Sample ID: 890-9490-9

Date Collected: 02/11/26 12:00

Matrix: Solid

Date Received: 02/11/26 14:22

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		02/16/26 13:40	02/19/26 01:49	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/16/26 13:40	02/19/26 01:49	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/16/26 13:40	02/19/26 01:49	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		02/16/26 13:40	02/19/26 01:49	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/16/26 13:40	02/19/26 01:49	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		02/16/26 13:40	02/19/26 01:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130				02/16/26 13:40	02/19/26 01:49	1
1,4-Difluorobenzene (Surr)	110		70 - 130				02/16/26 13:40	02/19/26 01:49	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			02/19/26 01:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			02/19/26 00:48	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		02/12/26 12:29	02/19/26 00:48	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		02/12/26 12:29	02/19/26 00:48	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		02/12/26 12:29	02/19/26 00:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	116		70 - 130				02/12/26 12:29	02/19/26 00:48	1
o-Terphenyl	112		70 - 130				02/12/26 12:29	02/19/26 00:48	1

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Client Sample Results

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

Job ID: 890-9490-1
 SDG: Eddy County, NM

Client Sample ID: CS - 9

Lab Sample ID: 890-9490-9

Date Collected: 02/11/26 12:00

Matrix: Solid

Date Received: 02/11/26 14:22

Sample Depth: 1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	67.0		9.90		mg/Kg			02/13/26 18:27	1

Client Sample ID: CS - 10

Lab Sample ID: 890-9490-10

Date Collected: 02/11/26 12:05

Matrix: Solid

Date Received: 02/11/26 14:22

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		02/19/26 09:12	02/19/26 17:03	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/19/26 09:12	02/19/26 17:03	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/19/26 09:12	02/19/26 17:03	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/19/26 09:12	02/19/26 17:03	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/19/26 09:12	02/19/26 17:03	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/19/26 09:12	02/19/26 17:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130				02/19/26 09:12	02/19/26 17:03	1
1,4-Difluorobenzene (Surr)	82		70 - 130				02/19/26 09:12	02/19/26 17:03	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			02/19/26 17:03	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			02/19/26 01:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		02/12/26 12:29	02/19/26 01:04	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		02/12/26 12:29	02/19/26 01:04	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		02/12/26 12:29	02/19/26 01:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	120		70 - 130				02/12/26 12:29	02/19/26 01:04	1
o-Terphenyl	118		70 - 130				02/12/26 12:29	02/19/26 01:04	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	52.1		10.1		mg/Kg			02/13/26 18:32	1

Client Sample Results

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

Job ID: 890-9490-1
 SDG: Eddy County, NM

Client Sample ID: CS - 11

Lab Sample ID: 890-9490-11

Date Collected: 02/11/26 12:10

Matrix: Solid

Date Received: 02/11/26 14:22

Sample Depth: 1

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		02/16/26 13:40	02/19/26 02:10	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/16/26 13:40	02/19/26 02:10	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/16/26 13:40	02/19/26 02:10	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/16/26 13:40	02/19/26 02:10	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/16/26 13:40	02/19/26 02:10	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/16/26 13:40	02/19/26 02:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	02/16/26 13:40	02/19/26 02:10	1
1,4-Difluorobenzene (Surr)	106		70 - 130	02/16/26 13:40	02/19/26 02:10	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			02/19/26 02:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			02/19/26 01:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		02/12/26 12:29	02/19/26 01:19	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		02/12/26 12:29	02/19/26 01:19	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		02/12/26 12:29	02/19/26 01:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	129		70 - 130	02/12/26 12:29	02/19/26 01:19	1
o-Terphenyl	125		70 - 130	02/12/26 12:29	02/19/26 01:19	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.7		10.0		mg/Kg			02/13/26 18:37	1

Surrogate Summary

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

Job ID: 890-9490-1
 SDG: Eddy County, NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-9490-1	CS - 1	104	114
890-9490-1 MS	CS - 1	100	111
890-9490-1 MSD	CS - 1	107	110
890-9490-2	CS - 2	105	110
890-9490-3	CS - 3	109	109
890-9490-4	CS - 4	105	104
890-9490-5	CS - 5	112	121
890-9490-6	CS - 6	107	116
890-9490-7	CS - 7	112	118
890-9490-8	CS - 8	103	112
890-9490-9	CS - 9	107	110
890-9490-10	CS - 10	115	82
890-9490-11	CS - 11	111	106
LCS 880-131960/1-A	Lab Control Sample	106	111
LCS 880-132336/1-A	Lab Control Sample	155 S1+	97
LCSD 880-131960/2-A	Lab Control Sample Dup	104	113
LCSD 880-132336/2-A	Lab Control Sample Dup	148 S1+	91
MB 880-131960/5-A	Method Blank	100	111
MB 880-132217/5-A	Method Blank	97	107
MB 880-132336/5-A	Method Blank	161 S1+	75

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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-9490-1	CS - 1	100	103
890-9490-2	CS - 2	93	95
890-9490-3	CS - 3	98	100
890-9490-4	CS - 4	112	110
890-9490-5	CS - 5	67 S1-	74
890-9490-6	CS - 6	81	83
890-9490-7	CS - 7	112	111
890-9490-7 MS	CS - 7	117	112
890-9490-7 MSD	CS - 7	146 S1+	113
890-9490-8	CS - 8	93	90
890-9490-9	CS - 9	116	112
890-9490-10	CS - 10	120	118
890-9490-11	CS - 11	129	125
LCS 880-131616/2-A	Lab Control Sample	116	120
LCS 880-131617/2-A	Lab Control Sample	129	134 S1+
LCSD 880-131616/3-A	Lab Control Sample Dup	122	126
LCSD 880-131617/3-A	Lab Control Sample Dup	138 S1+	137 S1+
MB 880-131616/1-A	Method Blank	117	122
MB 880-131617/1-A	Method Blank	148 S1+	155 S1+

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Surrogate Summary

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

Job ID: 890-9490-1
SDG: Eddy County, NM

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

1

2

3

4

5

6

7

8

9

10

11

12

13

14

QC Sample Results

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

Job ID: 890-9490-1
 SDG: Eddy County, NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-131960/5-A
 Matrix: Solid
 Analysis Batch: 132168

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 131960

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/16/26 13:40	02/18/26 22:42	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/16/26 13:40	02/18/26 22:42	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/16/26 13:40	02/18/26 22:42	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/16/26 13:40	02/18/26 22:42	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/16/26 13:40	02/18/26 22:42	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/16/26 13:40	02/18/26 22:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	02/16/26 13:40	02/18/26 22:42	1
1,4-Difluorobenzene (Surr)	111		70 - 130	02/16/26 13:40	02/18/26 22:42	1

Lab Sample ID: LCS 880-131960/1-A
 Matrix: Solid
 Analysis Batch: 132168

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 131960

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1014		mg/Kg		101	70 - 130
Toluene	0.100	0.09526		mg/Kg		95	70 - 130
Ethylbenzene	0.100	0.1023		mg/Kg		102	70 - 130
m-Xylene & p-Xylene	0.200	0.1927		mg/Kg		96	70 - 130
o-Xylene	0.100	0.09370		mg/Kg		94	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	111		70 - 130

Lab Sample ID: LCSD 880-131960/2-A
 Matrix: Solid
 Analysis Batch: 132168

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 131960

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08732		mg/Kg		87	70 - 130	15	35
Toluene	0.100	0.08119		mg/Kg		81	70 - 130	16	35
Ethylbenzene	0.100	0.08645		mg/Kg		86	70 - 130	17	35
m-Xylene & p-Xylene	0.200	0.1678		mg/Kg		84	70 - 130	14	35
o-Xylene	0.100	0.08020		mg/Kg		80	70 - 130	16	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	113		70 - 130

Lab Sample ID: 890-9490-1 MS
 Matrix: Solid
 Analysis Batch: 132168

Client Sample ID: CS - 1
 Prep Type: Total/NA
 Prep Batch: 131960

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.100	0.09563		mg/Kg		96	70 - 130
Toluene	<0.00200	U	0.100	0.08808		mg/Kg		88	70 - 130

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QC Sample Results

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

Job ID: 890-9490-1
 SDG: Eddy County, NM

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

Lab Sample ID: 890-9490-1 MS

Client Sample ID: CS - 1

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 132168

Prep Batch: 131960

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.100	0.09142		mg/Kg		91	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1779		mg/Kg		89	70 - 130
o-Xylene	<0.00200	U	0.100	0.08250		mg/Kg		82	70 - 130

Surrogate	MS %Recovery	MS Qualifier	MS Limits
4-Bromofluorobenzene (Surr)	100		70 - 130
1,4-Difluorobenzene (Surr)	111		70 - 130

Lab Sample ID: 890-9490-1 MSD

Client Sample ID: CS - 1

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 132168

Prep Batch: 131960

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	0.09059		mg/Kg		91	70 - 130	5	35
Toluene	<0.00200	U	0.100	0.08200		mg/Kg		82	70 - 130	7	35
Ethylbenzene	<0.00200	U	0.100	0.08776		mg/Kg		88	70 - 130	4	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1694		mg/Kg		85	70 - 130	5	35
o-Xylene	<0.00200	U	0.100	0.08087		mg/Kg		81	70 - 130	2	35

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

Lab Sample ID: MB 880-132217/5-A

Client Sample ID: Method Blank

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 132168

Prep Batch: 132217

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/18/26 07:00	02/18/26 12:03	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/18/26 07:00	02/18/26 12:03	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/18/26 07:00	02/18/26 12:03	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/18/26 07:00	02/18/26 12:03	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/18/26 07:00	02/18/26 12:03	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/18/26 07:00	02/18/26 12:03	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	02/18/26 07:00	02/18/26 12:03	1
1,4-Difluorobenzene (Surr)	107		70 - 130	02/18/26 07:00	02/18/26 12:03	1

Lab Sample ID: MB 880-132336/5-A

Client Sample ID: Method Blank

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 132317

Prep Batch: 132336

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/19/26 06:08	02/19/26 11:13	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/19/26 06:08	02/19/26 11:13	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/19/26 06:08	02/19/26 11:13	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/19/26 06:08	02/19/26 11:13	1

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QC Sample Results

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

Job ID: 890-9490-1
 SDG: Eddy County, NM

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

Lab Sample ID: MB 880-132336/5-A
 Matrix: Solid
 Analysis Batch: 132317

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 132336

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/19/26 06:08	02/19/26 11:13	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/19/26 06:08	02/19/26 11:13	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	161	S1+	70 - 130	02/19/26 06:08	02/19/26 11:13	1
1,4-Difluorobenzene (Surr)	75		70 - 130	02/19/26 06:08	02/19/26 11:13	1

Lab Sample ID: LCS 880-132336/1-A
 Matrix: Solid
 Analysis Batch: 132317

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 132336

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Benzene	0.100	0.1002		mg/Kg		100	70 - 130
Toluene	0.100	0.09962		mg/Kg		100	70 - 130
Ethylbenzene	0.100	0.09480		mg/Kg		95	70 - 130
m-Xylene & p-Xylene	0.200	0.2039		mg/Kg		102	70 - 130
o-Xylene	0.100	0.09701		mg/Kg		97	70 - 130

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	155	S1+	70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: LCSD 880-132336/2-A
 Matrix: Solid
 Analysis Batch: 132317

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 132336

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
		Result	Qualifier						
Benzene	0.100	0.1021		mg/Kg		102	70 - 130	2	35
Toluene	0.100	0.09630		mg/Kg		96	70 - 130	3	35
Ethylbenzene	0.100	0.09156		mg/Kg		92	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.1936		mg/Kg		97	70 - 130	5	35
o-Xylene	0.100	0.1046		mg/Kg		105	70 - 130	8	35

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	148	S1+	70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

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

Lab Sample ID: MB 880-131616/1-A
 Matrix: Solid
 Analysis Batch: 132163

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 131616

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		02/12/26 12:26	02/18/26 23:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/12/26 12:26	02/18/26 23:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/12/26 12:26	02/18/26 23:03	1

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QC Sample Results

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

Job ID: 890-9490-1
 SDG: Eddy County, NM

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

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1-Chlorooctane	117		70 - 130	02/12/26 12:26	02/18/26 23:03	1
o-Terphenyl	122		70 - 130	02/12/26 12:26	02/18/26 23:03	1

Lab Sample ID: LCS 880-131616/2-A
 Matrix: Solid
 Analysis Batch: 132163

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 131616

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics (Over C10-C28)	1000	1171		mg/Kg		117	70 - 130

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	116		70 - 130
o-Terphenyl	120		70 - 130

Lab Sample ID: LCSD 880-131616/3-A
 Matrix: Solid
 Analysis Batch: 132163

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 131616

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	
								RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1280		mg/Kg		128	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	1000	1202		mg/Kg		120	70 - 130	3	20

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	122		70 - 130
o-Terphenyl	126		70 - 130

Lab Sample ID: MB 880-131617/1-A
 Matrix: Solid
 Analysis Batch: 132165

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 131617

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		02/12/26 12:28	02/18/26 23:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/12/26 12:28	02/18/26 23:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/12/26 12:28	02/18/26 23:03	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1-Chlorooctane	148	S1+	70 - 130	02/12/26 12:28	02/18/26 23:03	1
o-Terphenyl	155	S1+	70 - 130	02/12/26 12:28	02/18/26 23:03	1

QC Sample Results

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

Job ID: 890-9490-1
 SDG: Eddy County, NM

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

Lab Sample ID: LCS 880-131617/2-A
Matrix: Solid
Analysis Batch: 132165

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 131617

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Gasoline Range Organics (GRO)-C6-C10	1000	1238		mg/Kg		124	70 - 130	
Diesel Range Organics (Over C10-C28)	1000	1108		mg/Kg		111	70 - 130	
		LCS	LCS					
Surrogate		%Recovery	Qualifier			Limits		
1-Chlorooctane		129				70 - 130		
o-Terphenyl		134	S1+			70 - 130		

Lab Sample ID: LCSD 880-131617/3-A
Matrix: Solid
Analysis Batch: 132165

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 131617

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits		RPD Limit	
									RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1252		mg/Kg		125	70 - 130	1	20	
Diesel Range Organics (Over C10-C28)	1000	1136		mg/Kg		114	70 - 130	3	20	
		LCSD	LCSD							
Surrogate		%Recovery	Qualifier			Limits				
1-Chlorooctane		138	S1+			70 - 130				
o-Terphenyl		137	S1+			70 - 130				

Lab Sample ID: 890-9490-7 MS
Matrix: Solid
Analysis Batch: 132165

Client Sample ID: CS - 7
Prep Type: Total/NA
Prep Batch: 131617

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	998	1268		mg/Kg		127	70 - 130	
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1018		mg/Kg		102	70 - 130	
		MS	MS							
Surrogate		%Recovery	Qualifier			Limits				
1-Chlorooctane		117				70 - 130				
o-Terphenyl		112				70 - 130				

Lab Sample ID: 890-9490-7 MSD
Matrix: Solid
Analysis Batch: 132165

Client Sample ID: CS - 7
Prep Type: Total/NA
Prep Batch: 131617

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits		RPD Limit	
											RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1195		mg/Kg		120	70 - 130	6	20	
Diesel Range Organics (Over C10-C28)	<50.0	U	998	928.8		mg/Kg		93	70 - 130	9	20	
		MSD	MSD									
Surrogate		%Recovery	Qualifier			Limits						
1-Chlorooctane		146	S1+			70 - 130						

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QC Sample Results

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

Job ID: 890-9490-1
 SDG: Eddy County, NM

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

Lab Sample ID: 890-9490-7 MSD
 Matrix: Solid
 Analysis Batch: 132165

Client Sample ID: CS - 7
 Prep Type: Total/NA
 Prep Batch: 131617

Surrogate	%Recovery	MSD Qualifier	MSD Limits
<i>o</i> -Terphenyl	113		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-131674/1-A
 Matrix: Solid
 Analysis Batch: 131741

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			02/13/26 16:00	1

Lab Sample ID: LCS 880-131674/2-A
 Matrix: Solid
 Analysis Batch: 131741

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	238.3		mg/Kg		95	90 - 110

Lab Sample ID: LCSD 880-131674/3-A
 Matrix: Solid
 Analysis Batch: 131741

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	238.0		mg/Kg		95	90 - 110	0	20

Lab Sample ID: 890-9490-2 MS
 Matrix: Solid
 Analysis Batch: 131741

Client Sample ID: CS - 2
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	<10.0	U	250	246.3		mg/Kg		96	90 - 110

Lab Sample ID: 890-9490-2 MSD
 Matrix: Solid
 Analysis Batch: 131741

Client Sample ID: CS - 2
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	<10.0	U	250	246.4		mg/Kg		96	90 - 110	0	20

QC Association Summary

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

Job ID: 890-9490-1
 SDG: Eddy County, NM

GC VOA

Prep Batch: 131960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9490-1	CS - 1	Total/NA	Solid	5035	
890-9490-2	CS - 2	Total/NA	Solid	5035	
890-9490-3	CS - 3	Total/NA	Solid	5035	
890-9490-4	CS - 4	Total/NA	Solid	5035	
890-9490-5	CS - 5	Total/NA	Solid	5035	
890-9490-6	CS - 6	Total/NA	Solid	5035	
890-9490-7	CS - 7	Total/NA	Solid	5035	
890-9490-8	CS - 8	Total/NA	Solid	5035	
890-9490-9	CS - 9	Total/NA	Solid	5035	
890-9490-11	CS - 11	Total/NA	Solid	5035	
MB 880-131960/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-131960/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-131960/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-9490-1 MS	CS - 1	Total/NA	Solid	5035	
890-9490-1 MSD	CS - 1	Total/NA	Solid	5035	

Analysis Batch: 132168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9490-1	CS - 1	Total/NA	Solid	8021B	131960
890-9490-2	CS - 2	Total/NA	Solid	8021B	131960
890-9490-3	CS - 3	Total/NA	Solid	8021B	131960
890-9490-4	CS - 4	Total/NA	Solid	8021B	131960
890-9490-5	CS - 5	Total/NA	Solid	8021B	131960
890-9490-6	CS - 6	Total/NA	Solid	8021B	131960
890-9490-7	CS - 7	Total/NA	Solid	8021B	131960
890-9490-8	CS - 8	Total/NA	Solid	8021B	131960
890-9490-9	CS - 9	Total/NA	Solid	8021B	131960
890-9490-11	CS - 11	Total/NA	Solid	8021B	131960
MB 880-131960/5-A	Method Blank	Total/NA	Solid	8021B	131960
MB 880-132217/5-A	Method Blank	Total/NA	Solid	8021B	132217
LCS 880-131960/1-A	Lab Control Sample	Total/NA	Solid	8021B	131960
LCSD 880-131960/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	131960
890-9490-1 MS	CS - 1	Total/NA	Solid	8021B	131960
890-9490-1 MSD	CS - 1	Total/NA	Solid	8021B	131960

Prep Batch: 132217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-132217/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 132317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9490-10	CS - 10	Total/NA	Solid	8021B	132336
MB 880-132336/5-A	Method Blank	Total/NA	Solid	8021B	132336
LCS 880-132336/1-A	Lab Control Sample	Total/NA	Solid	8021B	132336
LCSD 880-132336/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	132336

Prep Batch: 132336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9490-10	CS - 10	Total/NA	Solid	5035	
MB 880-132336/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-132336/1-A	Lab Control Sample	Total/NA	Solid	5035	

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QC Association Summary

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

Job ID: 890-9490-1
 SDG: Eddy County, NM

GC VOA (Continued)

Prep Batch: 132336 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-132336/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 132400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9490-1	CS - 1	Total/NA	Solid	Total BTEX	
890-9490-2	CS - 2	Total/NA	Solid	Total BTEX	
890-9490-3	CS - 3	Total/NA	Solid	Total BTEX	
890-9490-4	CS - 4	Total/NA	Solid	Total BTEX	
890-9490-5	CS - 5	Total/NA	Solid	Total BTEX	
890-9490-6	CS - 6	Total/NA	Solid	Total BTEX	
890-9490-7	CS - 7	Total/NA	Solid	Total BTEX	
890-9490-8	CS - 8	Total/NA	Solid	Total BTEX	
890-9490-9	CS - 9	Total/NA	Solid	Total BTEX	
890-9490-10	CS - 10	Total/NA	Solid	Total BTEX	
890-9490-11	CS - 11	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 131616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9490-1	CS - 1	Total/NA	Solid	8015NM Prep	
890-9490-2	CS - 2	Total/NA	Solid	8015NM Prep	
890-9490-3	CS - 3	Total/NA	Solid	8015NM Prep	
890-9490-4	CS - 4	Total/NA	Solid	8015NM Prep	
890-9490-5	CS - 5	Total/NA	Solid	8015NM Prep	
890-9490-6	CS - 6	Total/NA	Solid	8015NM Prep	
MB 880-131616/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-131616/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-131616/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Prep Batch: 131617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9490-7	CS - 7	Total/NA	Solid	8015NM Prep	
890-9490-8	CS - 8	Total/NA	Solid	8015NM Prep	
890-9490-9	CS - 9	Total/NA	Solid	8015NM Prep	
890-9490-10	CS - 10	Total/NA	Solid	8015NM Prep	
890-9490-11	CS - 11	Total/NA	Solid	8015NM Prep	
MB 880-131617/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-131617/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-131617/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-9490-7 MS	CS - 7	Total/NA	Solid	8015NM Prep	
890-9490-7 MSD	CS - 7	Total/NA	Solid	8015NM Prep	

Analysis Batch: 132163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9490-1	CS - 1	Total/NA	Solid	8015B NM	131616
890-9490-2	CS - 2	Total/NA	Solid	8015B NM	131616
890-9490-3	CS - 3	Total/NA	Solid	8015B NM	131616
890-9490-4	CS - 4	Total/NA	Solid	8015B NM	131616
890-9490-5	CS - 5	Total/NA	Solid	8015B NM	131616
890-9490-6	CS - 6	Total/NA	Solid	8015B NM	131616

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QC Association Summary

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

Job ID: 890-9490-1
 SDG: Eddy County, NM

GC Semi VOA (Continued)

Analysis Batch: 132163 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-131616/1-A	Method Blank	Total/NA	Solid	8015B NM	131616
LCS 880-131616/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	131616
LCSD 880-131616/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	131616

Analysis Batch: 132165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9490-7	CS - 7	Total/NA	Solid	8015B NM	131617
890-9490-8	CS - 8	Total/NA	Solid	8015B NM	131617
890-9490-9	CS - 9	Total/NA	Solid	8015B NM	131617
890-9490-10	CS - 10	Total/NA	Solid	8015B NM	131617
890-9490-11	CS - 11	Total/NA	Solid	8015B NM	131617
MB 880-131617/1-A	Method Blank	Total/NA	Solid	8015B NM	131617
LCS 880-131617/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	131617
LCSD 880-131617/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	131617
890-9490-7 MS	CS - 7	Total/NA	Solid	8015B NM	131617
890-9490-7 MSD	CS - 7	Total/NA	Solid	8015B NM	131617

Analysis Batch: 132377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9490-1	CS - 1	Total/NA	Solid	8015 NM	
890-9490-2	CS - 2	Total/NA	Solid	8015 NM	
890-9490-3	CS - 3	Total/NA	Solid	8015 NM	
890-9490-4	CS - 4	Total/NA	Solid	8015 NM	
890-9490-5	CS - 5	Total/NA	Solid	8015 NM	
890-9490-6	CS - 6	Total/NA	Solid	8015 NM	
890-9490-7	CS - 7	Total/NA	Solid	8015 NM	
890-9490-8	CS - 8	Total/NA	Solid	8015 NM	
890-9490-9	CS - 9	Total/NA	Solid	8015 NM	
890-9490-10	CS - 10	Total/NA	Solid	8015 NM	
890-9490-11	CS - 11	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 131674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9490-1	CS - 1	Soluble	Solid	DI Leach	
890-9490-2	CS - 2	Soluble	Solid	DI Leach	
890-9490-3	CS - 3	Soluble	Solid	DI Leach	
890-9490-4	CS - 4	Soluble	Solid	DI Leach	
890-9490-5	CS - 5	Soluble	Solid	DI Leach	
890-9490-6	CS - 6	Soluble	Solid	DI Leach	
890-9490-7	CS - 7	Soluble	Solid	DI Leach	
890-9490-8	CS - 8	Soluble	Solid	DI Leach	
890-9490-9	CS - 9	Soluble	Solid	DI Leach	
890-9490-10	CS - 10	Soluble	Solid	DI Leach	
890-9490-11	CS - 11	Soluble	Solid	DI Leach	
MB 880-131674/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-131674/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-131674/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-9490-2 MS	CS - 2	Soluble	Solid	DI Leach	
890-9490-2 MSD	CS - 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: 890-9490-1
 SDG: Eddy County, NM

HPLC/IC

Analysis Batch: 131741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-9490-1	CS - 1	Soluble	Solid	300.0	131674
890-9490-2	CS - 2	Soluble	Solid	300.0	131674
890-9490-3	CS - 3	Soluble	Solid	300.0	131674
890-9490-4	CS - 4	Soluble	Solid	300.0	131674
890-9490-5	CS - 5	Soluble	Solid	300.0	131674
890-9490-6	CS - 6	Soluble	Solid	300.0	131674
890-9490-7	CS - 7	Soluble	Solid	300.0	131674
890-9490-8	CS - 8	Soluble	Solid	300.0	131674
890-9490-9	CS - 9	Soluble	Solid	300.0	131674
890-9490-10	CS - 10	Soluble	Solid	300.0	131674
890-9490-11	CS - 11	Soluble	Solid	300.0	131674
MB 880-131674/1-A	Method Blank	Soluble	Solid	300.0	131674
LCS 880-131674/2-A	Lab Control Sample	Soluble	Solid	300.0	131674
LCSD 880-131674/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	131674
890-9490-2 MS	CS - 2	Soluble	Solid	300.0	131674
890-9490-2 MSD	CS - 2	Soluble	Solid	300.0	131674

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- 14

Lab Chronicle

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

Job ID: 890-9490-1
 SDG: Eddy County, NM

Client Sample ID: CS - 1
 Date Collected: 02/11/26 11:20
 Date Received: 02/11/26 14:22

Lab Sample ID: 890-9490-1
 Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	131960	02/16/26 13:40	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	132168	02/18/26 23:04	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			132400	02/18/26 23:04	SA	EET MID
Total/NA	Analysis	8015 NM		1			132377	02/19/26 04:05	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10.00 mL	131616	02/12/26 12:26	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	132163	02/19/26 04:05	FC	EET MID
Soluble	Leach	DI Leach			5.06 g	50 mL	131674	02/12/26 16:32	SI	EET MID
Soluble	Analysis	300.0		1			131741	02/13/26 17:24	CS	EET MID

Client Sample ID: CS - 2
 Date Collected: 02/11/26 11:25
 Date Received: 02/11/26 14:22

Lab Sample ID: 890-9490-2
 Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	131960	02/16/26 13:40	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	132168	02/18/26 23:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			132400	02/18/26 23:25	SA	EET MID
Total/NA	Analysis	8015 NM		1			132377	02/19/26 04:21	SA	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10.00 mL	131616	02/12/26 12:26	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	132163	02/19/26 04:21	FC	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	131674	02/12/26 16:32	SI	EET MID
Soluble	Analysis	300.0		1			131741	02/13/26 17:29	CS	EET MID

Client Sample ID: CS - 3
 Date Collected: 02/11/26 11:30
 Date Received: 02/11/26 14:22

Lab Sample ID: 890-9490-3
 Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	131960	02/16/26 13:40	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	132168	02/18/26 23:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			132400	02/18/26 23:45	SA	EET MID
Total/NA	Analysis	8015 NM		1			132377	02/19/26 04:36	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10.00 mL	131616	02/12/26 12:26	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	132163	02/19/26 04:36	FC	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	131674	02/12/26 16:32	SI	EET MID
Soluble	Analysis	300.0		1			131741	02/13/26 17:45	CS	EET MID

Client Sample ID: CS - 4
 Date Collected: 02/11/26 11:35
 Date Received: 02/11/26 14:22

Lab Sample ID: 890-9490-4
 Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	131960	02/16/26 13:40	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	132168	02/19/26 00:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			132400	02/19/26 00:06	SA	EET MID

Eurofins Carlsbad

Lab Chronicle

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

Job ID: 890-9490-1
 SDG: Eddy County, NM

Client Sample ID: CS - 4

Lab Sample ID: 890-9490-4

Date Collected: 02/11/26 11:35

Matrix: Solid

Date Received: 02/11/26 14:22

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			132377	02/19/26 04:52	SA	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10.00 mL	131616	02/12/26 12:26	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	132163	02/19/26 04:52	FC	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	131674	02/12/26 16:32	SI	EET MID
Soluble	Analysis	300.0		1			131741	02/13/26 17:50	CS	EET MID

Client Sample ID: CS - 5

Lab Sample ID: 890-9490-5

Date Collected: 02/11/26 11:40

Matrix: Solid

Date Received: 02/11/26 14:22

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	131960	02/16/26 13:40	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	132168	02/19/26 00:27	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			132400	02/19/26 00:27	SA	EET MID
Total/NA	Analysis	8015 NM		1			132377	02/19/26 05:07	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10.00 mL	131616	02/12/26 12:26	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	132163	02/19/26 05:07	FC	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	131674	02/12/26 16:32	SI	EET MID
Soluble	Analysis	300.0		1			131741	02/13/26 18:06	CS	EET MID

Client Sample ID: CS - 6

Lab Sample ID: 890-9490-6

Date Collected: 02/11/26 11:45

Matrix: Solid

Date Received: 02/11/26 14:22

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	131960	02/16/26 13:40	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	132168	02/19/26 00:47	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			132400	02/19/26 00:47	SA	EET MID
Total/NA	Analysis	8015 NM		1			132377	02/19/26 05:23	SA	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10.00 mL	131616	02/12/26 12:26	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	132163	02/19/26 05:23	FC	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	131674	02/12/26 16:32	SI	EET MID
Soluble	Analysis	300.0		1			131741	02/13/26 18:11	CS	EET MID

Client Sample ID: CS - 7

Lab Sample ID: 890-9490-7

Date Collected: 02/11/26 11:50

Matrix: Solid

Date Received: 02/11/26 14:22

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	131960	02/16/26 13:40	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	132168	02/19/26 01:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			132400	02/19/26 01:08	SA	EET MID
Total/NA	Analysis	8015 NM		1			132377	02/18/26 23:48	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10.00 mL	131617	02/12/26 12:29	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	132165	02/18/26 23:48	FC	EET MID

Eurofins Carlsbad

Lab Chronicle

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

Job ID: 890-9490-1
 SDG: Eddy County, NM

Client Sample ID: CS - 7

Lab Sample ID: 890-9490-7

Date Collected: 02/11/26 11:50

Matrix: Solid

Date Received: 02/11/26 14:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.96 g	50 mL	131674	02/12/26 16:32	SI	EET MID
Soluble	Analysis	300.0		1			131741	02/13/26 18:16	CS	EET MID

Client Sample ID: CS - 8

Lab Sample ID: 890-9490-8

Date Collected: 02/11/26 11:55

Matrix: Solid

Date Received: 02/11/26 14:22

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	131960	02/16/26 13:40	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	132168	02/19/26 01:28	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			132400	02/19/26 01:28	SA	EET MID
Total/NA	Analysis	8015 NM		1			132377	02/19/26 00:34	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10.00 mL	131617	02/12/26 12:29	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	132165	02/19/26 00:34	FC	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	131674	02/12/26 16:32	SI	EET MID
Soluble	Analysis	300.0		1			131741	02/13/26 18:22	CS	EET MID

Client Sample ID: CS - 9

Lab Sample ID: 890-9490-9

Date Collected: 02/11/26 12:00

Matrix: Solid

Date Received: 02/11/26 14:22

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	131960	02/16/26 13:40	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	132168	02/19/26 01:49	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			132400	02/19/26 01:49	SA	EET MID
Total/NA	Analysis	8015 NM		1			132377	02/19/26 00:48	SA	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10.00 mL	131617	02/12/26 12:29	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	132165	02/19/26 00:48	FC	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	131674	02/12/26 16:32	SI	EET MID
Soluble	Analysis	300.0		1			131741	02/13/26 18:27	CS	EET MID

Client Sample ID: CS - 10

Lab Sample ID: 890-9490-10

Date Collected: 02/11/26 12:05

Matrix: Solid

Date Received: 02/11/26 14:22

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	132336	02/19/26 09:12	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	132317	02/19/26 17:03	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			132400	02/19/26 17:03	SA	EET MID
Total/NA	Analysis	8015 NM		1			132377	02/19/26 01:04	SA	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10.00 mL	131617	02/12/26 12:29	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	132165	02/19/26 01:04	FC	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	131674	02/12/26 16:32	SI	EET MID
Soluble	Analysis	300.0		1			131741	02/13/26 18:32	CS	EET MID

Eurofins Carlsbad

Lab Chronicle

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

Job ID: 890-9490-1
 SDG: Eddy County, NM

Client Sample ID: CS - 11
Date Collected: 02/11/26 12:10
Date Received: 02/11/26 14:22

Lab Sample ID: 890-9490-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	131960	02/16/26 13:40	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	132168	02/19/26 02:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			132400	02/19/26 02:10	SA	EET MID
Total/NA	Analysis	8015 NM		1			132377	02/19/26 01:19	SA	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10.00 mL	131617	02/12/26 12:29	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	132165	02/19/26 01:19	FC	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	131674	02/12/26 16:32	SI	EET MID
Soluble	Analysis	300.0		1			131741	02/13/26 18:37	CS	EET MID

Laboratory References:

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

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Accreditation/Certification Summary

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

Job ID: 890-9490-1
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

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Method Summary

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

Job ID: 890-9490-1
 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: 890-9490-1
SDG: Eddy County, NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-9490-1	CS - 1	Solid	02/11/26 11:20	02/11/26 14:22	1
890-9490-2	CS - 2	Solid	02/11/26 11:25	02/11/26 14:22	1
890-9490-3	CS - 3	Solid	02/11/26 11:30	02/11/26 14:22	1
890-9490-4	CS - 4	Solid	02/11/26 11:35	02/11/26 14:22	1
890-9490-5	CS - 5	Solid	02/11/26 11:40	02/11/26 14:22	1
890-9490-6	CS - 6	Solid	02/11/26 11:45	02/11/26 14:22	1
890-9490-7	CS - 7	Solid	02/11/26 11:50	02/11/26 14:22	1
890-9490-8	CS - 8	Solid	02/11/26 11:55	02/11/26 14:22	1
890-9490-9	CS - 9	Solid	02/11/26 12:00	02/11/26 14:22	1
890-9490-10	CS - 10	Solid	02/11/26 12:05	02/11/26 14:22	1
890-9490-11	CS - 11	Solid	02/11/26 12:10	02/11/26 14:22	1

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Eurofins Carlsbad

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

Chain of Custody Record



eurofins | Environment Testing

Client Information (Sub Contract Lab)

Client Contact: **Teel, Brianna** Lab PM
 Shipping/Receiving: **Brianna Teel@et.eurofins.com** E-Mail
 Company: **Eurofins Environment Testing South Center** Accreditation(s) Required (See note)
 Address: **1211 W. Florida Ave.** NECLAP - Texas
 City: **Midland** State: **TX** Zip: **79701**
 Phone: **432-704-5440(Tel)** PO #: **N/A**
 Email: **N/A** W/O #: **N/A**
 Project Name: **SPUD MUFFIN 31 CTB 1** Project #: **88001228**
 Siles: **N/A** SSGW#: **N/A** Other: **N/A**

Due Date Requested: **2/17/2026** TAT Requested (days): **N/A**

Analysis Requested

Carrier Tracking No(s): **N/A** COC No: **890-6500 1**
 State of Origin: **New Mexico** Page: **1 of 2**
 Job #: **890-9490-1** Preservation Codes:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (W=Water, S=Soil, O=Organic, BT=Base, AA=Al)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total_BTEX_GCV	8021B/5035FFP_CalcBTEX	300_ORGFM_28D/DI_LEACHChloride	8015MOD_Calc	8015MOD_NM/8015NM_S_Prep8015 NM	Total Number of containers	Special Instructions/Note:
CS - 1 (890-9490-1)	2/1/26	11:20	G	Solid	X	X	X	X	X	X	X	1	
CS - 2 (890-9490-2)	2/1/26	11:25	G	Solid	X	X	X	X	X	X	X	1	
CS - 3 (890-9490-3)	2/1/26	11:30	G	Solid	X	X	X	X	X	X	X	1	
CS - 4 (890-9490-4)	2/1/26	11:35	G	Solid	X	X	X	X	X	X	X	1	
CS - 5 (890-9490-5)	2/1/26	11:40	G	Solid	X	X	X	X	X	X	X	1	
CS - 6 (890-9490-6)	2/1/26	11:45	G	Solid	X	X	X	X	X	X	X	1	
CS - 7 (890-9490-7)	2/1/26	11:50	G	Solid	X	X	X	X	X	X	X	1	
CS - 8 (890-9490-8)	2/1/26	11:55	G	Solid	X	X	X	X	X	X	X	1	
CS - 9 (890-9490-9)	2/1/26	12:00	G	Solid	X	X	X	X	X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Center, 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/shipment, being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Center, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Center, 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 Center, LLC.

Possible Hazard Identification

Deliverable Requested: **I, II, III, IV, Other (Specify)** Primary Deliverable Rank: **2**

Special Instructions/QC Requirements

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client Disposal By Lab Archive For _____ Months

Empty Kit Relinquished by: _____ Date: _____

Relinquished by: **Burns** Date/Time: **2-11-16 3:50** Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: **Δ Yes Δ No** Custody Seal No _____

Cooler Temperature(s) °C and Other Remarks: _____

Method of Shipment: _____

Date/Time: **2-12-20 9:30** Company: _____

Date/Time: _____ Company: _____

Date/Time: _____ Company: _____

Ver: 10/10/2024

Login Sample Receipt Checklist

Client: Earth Systems Response and Restoration

Job Number: 890-9490-1
SDG Number: Eddy County, NM

Login Number: 9490
List Number: 1
Creator: Bruns, Shannon

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: Earth Systems Response and Restoration

Job Number: 890-9490-1
SDG Number: Eddy County, NM

Login Number: 9490
List Number: 2
Creator: Laing, Edmundo

List Source: Eurofins Midland
List Creation: 02/12/26 10:39 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	

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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/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 581772

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 581772
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2524019423
Incident Name	NAPP2524019423 SPUD MUFFIN 31 CTB 1 @ FAPP2130629627
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Received
Incident Facility	[fAPP2130629627] SPUD MUFFIN 31 CTB 1

Location of Release Source	
<i>Please answer all the questions in this group.</i>	
Site Name	SPUD MUFFIN 31 CTB 1
Date Release Discovered	08/25/2025
Surface Owner	Private

Incident Details	
<i>Please answer all the questions in this group.</i>	
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	
<i>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.</i>	
Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Corrosion Pump 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)	Transfer pump developed pinhole leak, allowing fluids to be released to lined secondary containment. Small area of overspray outside containment.

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, Page 2

Action 581772

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 581772
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

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>

With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.

Initial Response

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

The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	<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.ralej@dvn.com Date: 05/05/2026
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Sante Fe Main Office
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General Information
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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS, Page 3

Action 581772

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 581772
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 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 1000 (ft.) and ½ (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between 1000 (ft.) and ½ (mi.)
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

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

Requesting a remediation plan approval with this submission	Yes
<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)	11400
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

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

On what estimated date will the remediation commence	02/10/2026
On what date will (or did) the final sampling or liner inspection occur	02/11/2026
On what date will (or was) the remediation complete(d)	02/27/2026
What is the estimated surface area (in square feet) that will be reclaimed	2200
What is the estimated volume (in cubic yards) that will be reclaimed	95
What is the estimated surface area (in square feet) that will be remediated	2200
What is the estimated volume (in cubic yards) that will be remediated	95

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

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

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QUESTIONS, Page 4

Action 581772

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 581772
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)

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

This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:

(Select all answers below that apply.)

(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for off-site disposal	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.

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

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

I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 05/05/2026
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The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 5

Action 581772

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 581772
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only	
<i>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.</i>	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS, Page 6

Action 581772

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 581772
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	551798
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	02/12/2026
What was the (estimated) number of samples that were to be gathered	15
What was the sampling surface area in square feet	2117

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	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	2200
What was the total volume (cubic yards) remediated	95
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	2200
What was the total volume (in cubic yards) reclaimed	95
Summarize any additional remediation activities not included by answers (above)	The Site was restored to as close to its original state according to the Site Closure Criteria and Reclamation Standard.

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

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

I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 05/05/2026
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QUESTIONS, Page 7

Action 581772

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 581772
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
<i>Only answer the questions in this group if all reclamation steps have been completed.</i>	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Action 581772

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 581772
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Remediation closure is approved. Ensure going forward that the scale is included with site maps and figures.	5/12/2026
michael.buchanan	A reclamation report will not be accepted until reclamation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	5/12/2026
michael.buchanan	The reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. The OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	5/12/2026
michael.buchanan	All revegetation activities will need to be documented and included in the revegetation report. The revegetation report will need to include: An executive summary of the revegetation activities including: Seed mix, Method of seeding, dates of when the release area was reseeded, information pertinent to inspections, information about any amendments added to the soil, information on how the vegetative cover established meets the life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds per 19.15.29.13 D.(3) NMAC, and any additional information; a scaled Site Map including area that was revegetated in square feet; and pictures of the revegetated areas during reseeding activities, inspections, and final pictures when revegetation is achieved.	5/12/2026
michael.buchanan	A revegetation report will not be accepted until revegetation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	5/12/2026
michael.buchanan	Per 19.15.29.13 E. NMAC, if a reclamation and revegetation report has been submitted to the surface owner, it may be used if the requirements of the surface owner provide equal or better protection of freshwater, human health, and the environment. A copy of the approval of the reclamation and revegetation report from the surface owner and a copy of the approved reclamation and revegetation report will need to be submitted to the OCD via the Permitting website.	5/12/2026