

Longview 1-21

OCD incident nAPP2336140713

12/26/2023

<u>Spill Volume(Bbls) Calculator</u>	
<i>Inputs in blue, Outputs in red</i>	
<i>Contaminated Soil measurement</i>	
Area (square feet)	Depth(inches)
<u>1632.975</u>	<u>0.500</u>
Cubic Feet of Soil Impacted	<u>68.041</u>
Barrels of Soil Impacted	<u>12.13</u>
Soil Type	Clay/Sand
Barrels of Oil Assuming 100% Saturation	<u>1.82</u>
Saturation	Damp no fluid when squeezed
Estimated Barrels of Oil Released	<u>0.18</u>
<i>Free Standing Fluid Only</i>	
Area (square feet)	Depth(inches)
<u>0</u>	<u>0.000</u>
Standing fluid	<u>0.000</u>
<u>Total fluids spilled</u>	<u>1.819</u>



4518 W. Pierce St.

Carlsbad NM, 88220

August 9, 2024
Devon Energy Production Company, LP
333 West Sheridan Ave.
Oklahoma City, OK 73102

Attn: New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico, NM 87505

RE: **Release Investigation, and Closure Report**
Devon Energy Production Company, LP
Longview Deep Federal 1-#21
Unit 4, Section 1, Township 23 South, Range 28 East
32.33867°, -104.04529°
Eddy County, New Mexico
Terracon Project No. KH237057

To Whom It May Concern:

Terracon Consultants, Inc. (Terracon) is submitting our Release Investigation and Closure Report on behalf of Devon Energy Production Company, LP (Devon) for the above-referenced site. Prepared in line with New Mexico Oil Conservation Division (NMOCD) regulations, this report addresses the environmental actions taken in response to the release of crude oil due to a fire. Detailed assessment and remedial actions by Terracon are outlined in the following sections.

Action Items

Completed Actions

- 1) Conducted an initial site assessment and a series of sampling events.
- 2) Maps and associated data for approval are provided.
- 3) Soil samples collected from the excavation were submitted to an approved laboratory for analysis to determine levels of impact vertically and horizontally.
- 4) Excavation of the inferred release area was completed with the intent to remove impacted soil as determined by the Closure Criteria set by the NMOCD.
- 5) Soil stockpiles on site were placed on plastic and bermed around the edges to reduce loss.
- 6) Five-point composite confirmation samples were collected every 200 square feet.
- 7) Remedial activities were terminated when a confirmation sample was collected below the NMOCD RALs for Oil and Gas impacted soils.
- 8) A summary of the information provided in this report is included in Appendix A, as C-141 summary sheet.

Explore with us



Anticipated Actions

- 1) Approval by the NMOCD.
- 2) Following the acceptance of this closure report all areas of the excavation will be backfilled and brought to the surrounding grade and reseeded.

Site Information

The Notice of the Release was provided to the NMOCD District 2 Artesia Office by Dale Woodall on December 26, 2023, with the submission of the initial C-141. NMOCD Reference ID: nAPP2336140713. The site is located within Unit 4, Section 1, Township 23 South, Range 28 East, approximately 4.74 miles northeast of Loving, New Mexico. A Topographic Map and Site Location Map are included in Appendix A, as Exhibit 1 and Exhibit 2, respectively.

Regulatory Criteria

A review of data from the New Mexico Office of the State Engineer (NMOSE) website identified a water well (C-04609) located 0.13 miles north of the site as indicated in the NMOSE Pod Location Map (Appendix A, Exhibit 3). This groundwater well was completed to a depth of 51 feet below ground surface (bgs) in 2022, with a depth to water of greater than 50 feet bgs. A review of the U.S. Fish and Wildlife Service, National Wetlands Inventory website indicates there is a freshwater emergent wetland located to the west and the Pecos River is located approximately 1.04 miles southwest of the site as indicated in the Designated Wetland Area Map (Appendix A, Exhibit 4). A review of geospatial data obtained from the BLM Carlsbad Field Office website indicated that the site is within an area of medium risk for Karst formations, as indicated in the Cave Karst Public UCP Map (Appendix A, Exhibit 5).

Remediation Standards

Per New Mexico Administrative Code (NMAC) 19.15.29.12, the closure criteria for the site are based on the remedial requirements for an on-pad release consisting of the removal of the affected soil from the surface to 4 feet below grade surface (bgs). The closure criteria are for Total Benzene, Toluene, Ethylbenzene and Xylenes (Total BTEX) (50 mg/kg) (EPA Method 8021B), Benzene (10 mg/kg) (EPA Method 8021B), Chlorides (10,000 mg/kg) EPA Method 300), and Total Petroleum Hydrocarbons (TPH) GRO, DRO and MRO (2,500 mg/kg) and the combination of GRO and DRO (1,000 mg/kg) (EPA Method 8015M).

Remedial / Delineation Activities

Terracon conducted remedial activities at the site from June 01, 2024, to July 12, 2024. An area of approximately 1,317 square feet was affected by the release. A total of 26 delineation samples from 13 locations were collected and submitted for analysis of BTEX, Chlorides, and TPH. Delineation sample results for BTEX and Chlorides were below applicable NMOCD closure criteria. Three delineation samples exceeded the closure criteria for TPH ranging from 3,530

Closure Documentation
Longview Deep Fed 1-#21 | Eddy County, New Mexico
July 29, 2024 | Terracon Project No. KH237057



mg/kg in DS-09 (5') to 4,120 mg/kg in DS-11 (0.5'). A Delineation Sample Map depicting the sample locations, analytical results, and the inferred release extent are included in Appendix A, Exhibit 6. Delineation sample results are included in Appendix B, Table 1.

Confirmation/Closure Activities

Areas exhibiting visual impact and the areas that exceeded the closure criteria were excavated to a depth of between 2 feet to 6 feet bgs. A total of 24 confirmation soil samples (twelve floor samples and 12 wall samples) were collected on July 5, 2024, and submitted for analysis of BTEX, Chlorides, and TPH. Confirmation sample results for BTEX, Chlorides, and TPH were below applicable NMOCD closure criteria. The excavations were backfilled with imported fill material.

A total of approximately 416 cubic yards (cu. yds.) of loose soil were excavated during remedial activities from the reclamation zone, ranging from two to 6 feet below grade surface. Excavated material was stockpiled on-site atop a polyethylene liner pending-disposal under an approved Form C-138. The excavated material was disposed of at the Lea Land Facility. Soil disposal waste manifests are available upon request. A Confirmation Sample Map depicting the floor and wall sample locations and analytical results is included in Appendix A, Exhibit 7A and 7B, respectively. Floor and wall confirmation sample analytical results are included in Appendix B, Table 2, and Table 3, respectively. Photographs of the project site are included in Appendix C. The analytical reports and Chain of Custody (COC) are included in Appendix D. Terracon's Standard of Care, Limitation, and Reliance is included in Appendix E.

At the request of Devon, samples were collected from the backfill source pit, GPS location 32.3919066, -104.1444734 approximately 7.0 miles northwest of the site. Two sample locations (BFM-01 and BFM-02) were selected and a composite sample of the backfill material from each location was collected on July 10, 2024, and submitted for analysis for Chloride. The sample results indicated that Chloride was detected in backfill material sample BFM-01 at 1,310 mg/kg and in BFM-02 at 115 mg/kg. Based on the sample results a total of approximately 420 cubic yards of backfill material from the BFM-02 location was utilized to backfill the excavation. A Backfill Material Sample Location Map depicting the backfill sample locations and analytical results for Chlorides is included in Appendix A, Exhibit 8, and the backfill sample analytical results are included in Appendix B, Table 4.

Conclusion

In accordance with NMAC 19.15.29.12, remediation of the impacted material is complete, and Devon Energy Production Company, LP respectfully requests closure of the reportable incident that occurred on December 26, 2023, at the NMOCD Reference # nAPP2336140713 – Longview Deep Federal 1-#21 location.

We are grateful for the opportunity to offer our environmental services to Devon Energy Production Company, LP. We are committed to providing the highest level of service and

Closure Documentation
Longview Deep Fed 1-#21 | Eddy County, New Mexico
July 29, 2024 | Terracon Project No. KH237057



support. Should you need further information or have any queries, we encourage you to reach out to our office at your earliest convenience.

Sincerely,



Prepared by:

Reviewed by:

Charles F. Smith
Senior Consultant
Carlsbad, NM

John Grams, P.G. (TX)
Environmental Department Manager
Lubbock, TX

Attachments:

Appendix A – Exhibits

- Exhibit 1 – Topographic Map
- Exhibit 2 – Site Location Map
- Exhibit 3 – NMOSE POD Location Map
- Exhibit 4 – Designated Wetland Area Map
- Exhibit 5 – Cave Karst Public UCP Map
- Exhibit 6 – Delineation Sample Map
- Exhibit 7A – Confirmation Floor Sample Map
- Exhibit 7B – Confirmation Wall Sample Map
- Exhibit 8 – Backfill Material Sample Map

C-141 Summary Sheet

Appendix B – Tables and Well Data

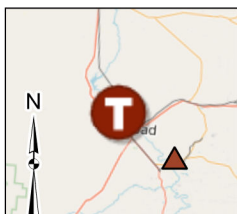
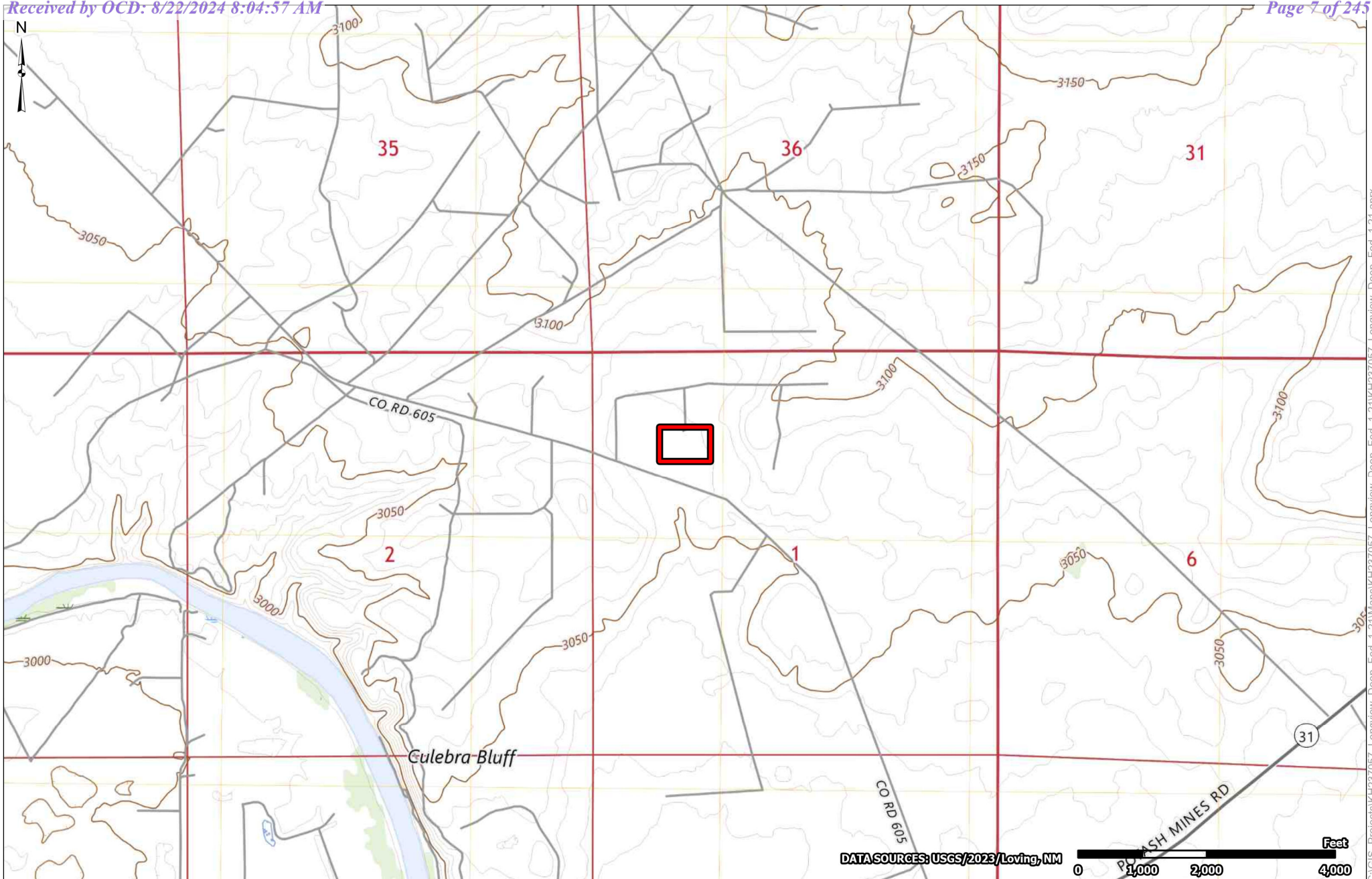
- Table 1 – Delineation Samples
- Table 2 – Confirmation Floor Samples
- Table 3 – Confirmation Wall Samples
- Table 4 – Backfill Material Samples

Appendix C – Photographic Log

Appendix D – Analytical Report and Chain of Custody

Appendix E – Terracon Standard of Care, Limitation, and Reliance

APPENDIX A – EXHIBITS



 Site Boundary

Project No.:
KH237057
Date:
Jul 30 2024
Drawn By:
JWL
Reviewed By:
TLC



4526 W Pierce St
Carlsbad, NM

PH. 806-300-0140

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Topographic Map

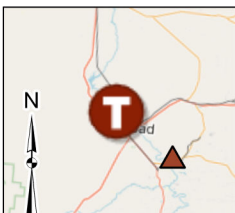
Longview Deep Fed 1-21
Devon Energy
32.33867, -104.04529
Carlsbad, Eddy County, New Mexico

Exhibit

1



Imagery: Bing
0 65 130 260 Feet



 Site Boundary

Project No.:	KH237057
Date:	Jul 30 2024
Drawn By:	JWL
Reviewed By:	TLC

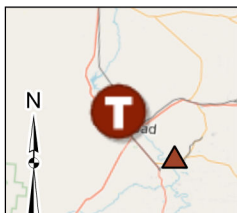
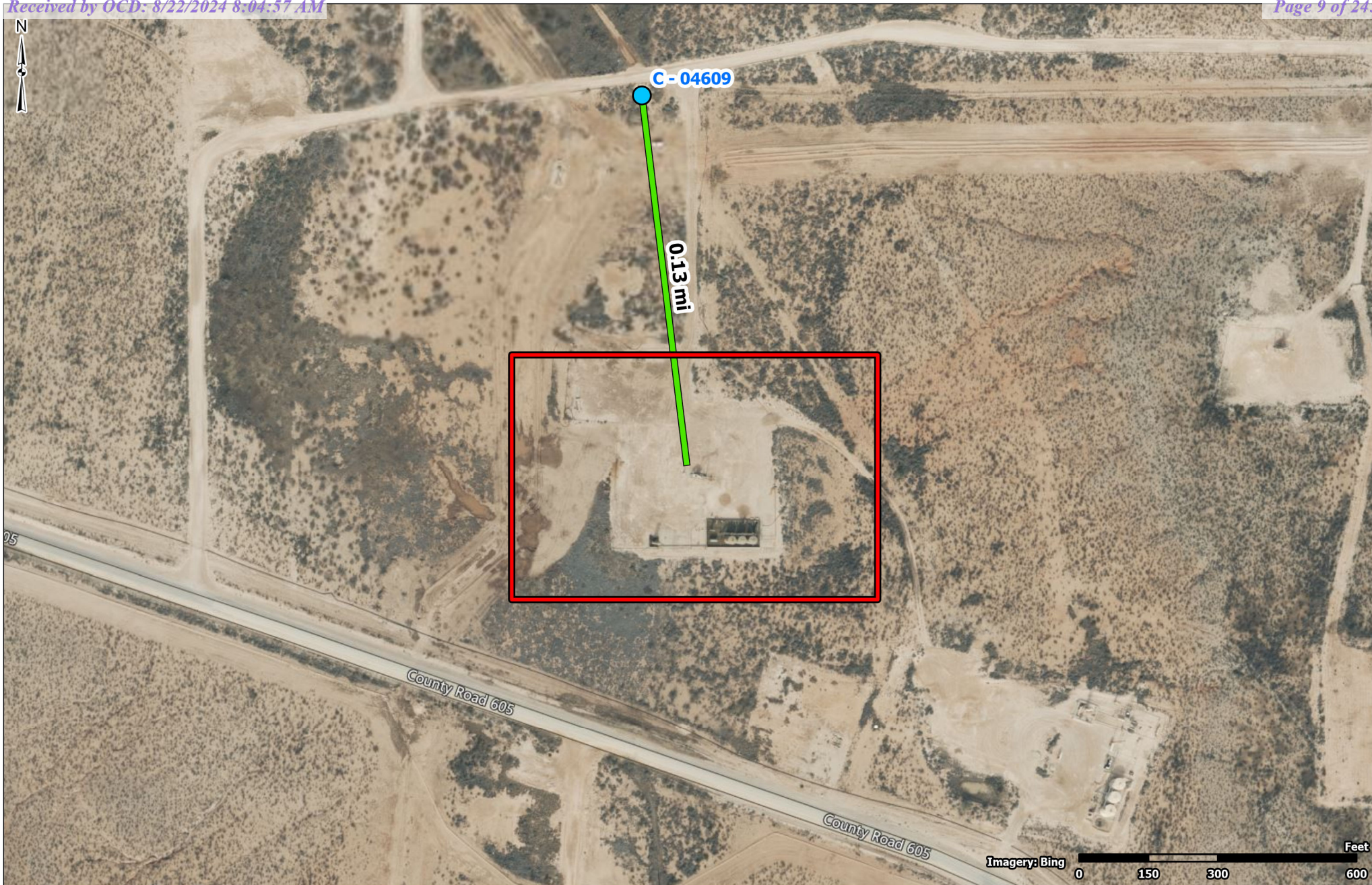

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Site Location Map

Longview Deep Fed 1-21
Devon Energy
32.33867, -104.04529
Carlsbad, Eddy County, New Mexico

Exhibit

2



- NMOSE POD Location
- Site Boundary

Project No.:
KH237057
Date:
Jul 30 2024
Drawn By:
JWL
Reviewed By:
TLC

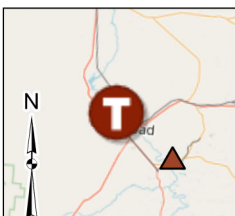
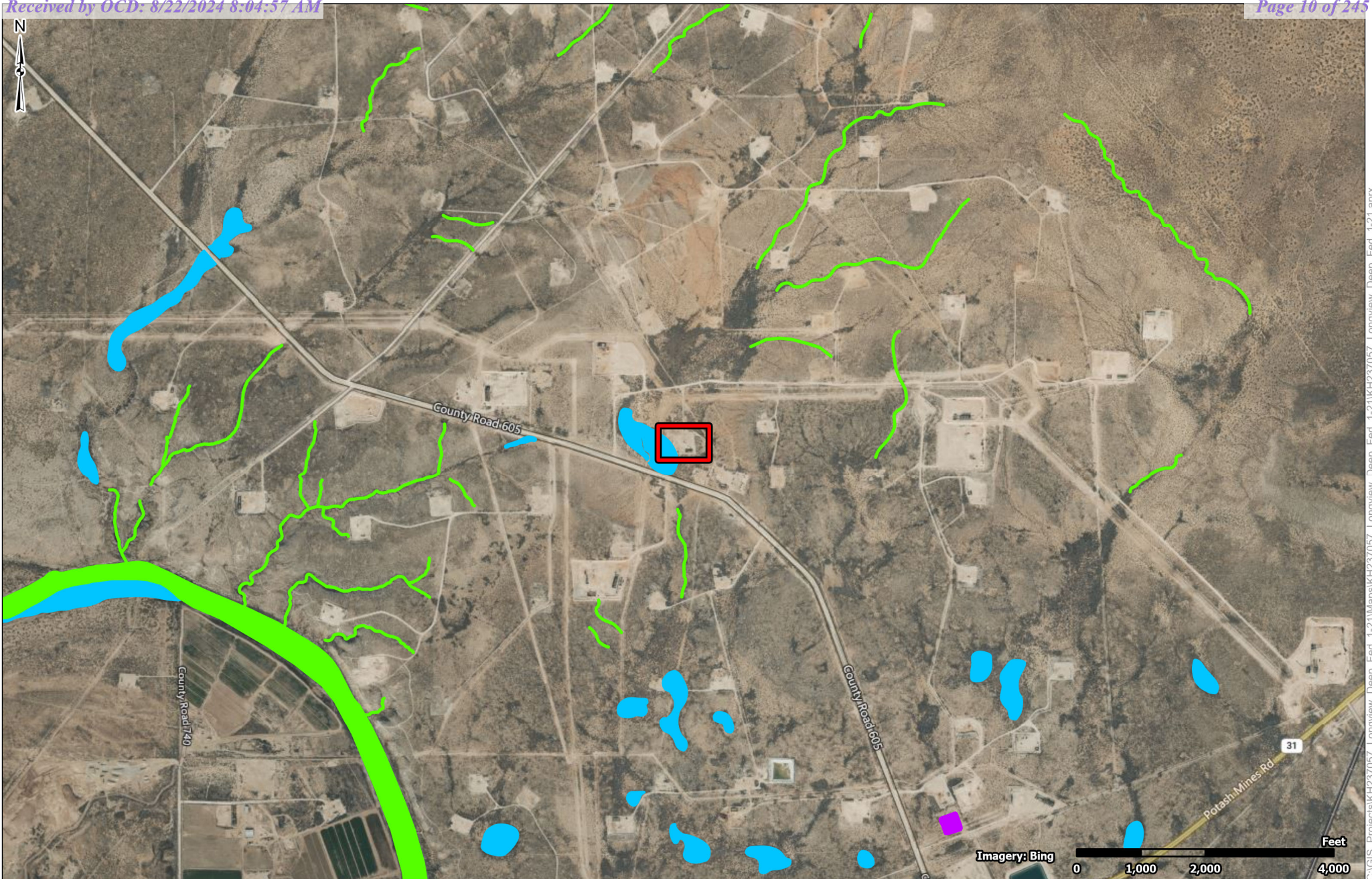
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Carlsbad, NM
PH. 806-300-0140 terracon.com

NMOSE POD Location Map

Longview Deep Fed 1-21
Devon Energy
32.33867, -104.04529
Carlsbad, Eddy County, New Mexico

Exhibit

3



- ▬ Site Boundary
- Freshwater Emergent Wetland
- Freshwater Pond
- Riverine

Project No.:
KH237057

Date:
Jul 30 2024

Drawn By:
JWL

Reviewed By:
TLC

Terracon

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Carlsbad, NM

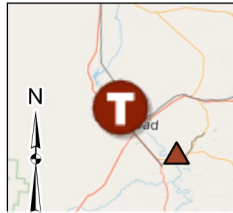
PH. 806-300-0140 terracon.com

Designated Wetland Area Map

Longview Deep Fed 1-21
Devon Energy
32.33867, -104.04529
Carlsbad, Eddy County, New Mexico

Exhibit

4



- Site Boundary
- Karst Potential
 - Low
 - Medium
 - High

Project No.: KH237057
Date: Jul 30 2024
Drawn By: JWL
Reviewed By: TLC



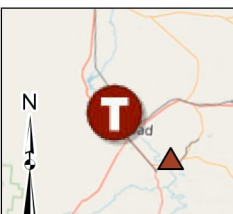
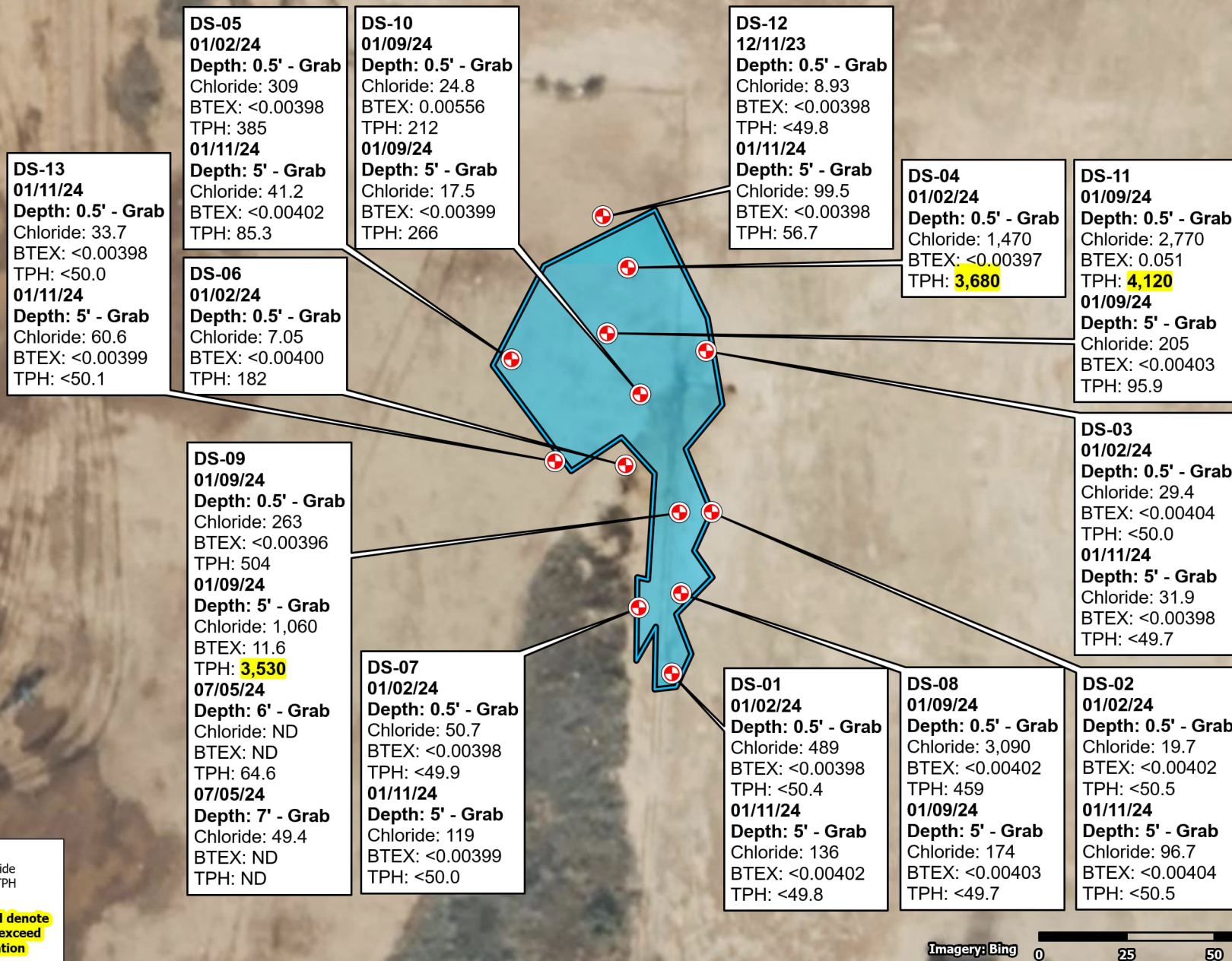
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Cave Karst Public UCP Map

Longview Deep Fed 1-21
Devon Energy
32.33867, -104.04529
Carlsbad, Eddy County, New Mexico

Exhibit

5



● Delineation Sample
 ■ Inferred Release

Project No.:
KH237057

Date:
Jul 30 2024

Drawn By:
JWL

Reviewed By:
TLC

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Carlsbad, NM

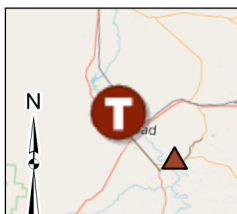
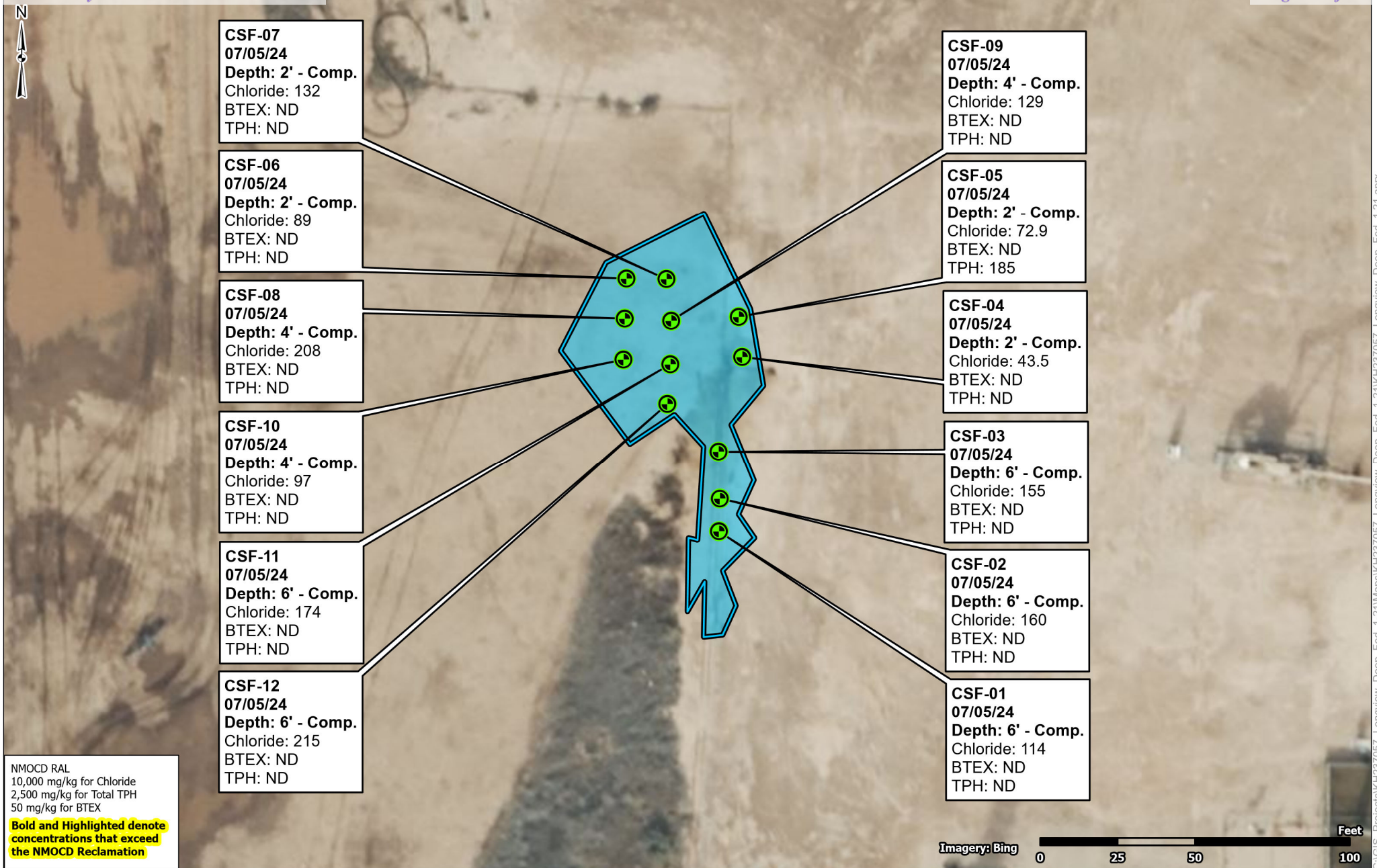
PH. 806-300-0140 terracon.com

Delineation Sample Map

Longview Deep Fed 1-21
Devon Energy
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Carlsbad, Eddy County, New Mexico

Exhibit

6



- Inferred Release
- Confirmation Floor Sample

Project No.:
KH237057

Date:
Jul 30 2024

Drawn By:
JWL

Reviewed By:
TLC



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Carlsbad, NM

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Confirmation Floor Sample Map

Longview Deep Fed 1-21
Devon Energy
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Carlsbad, Eddy County, New Mexico

Exhibit

7A



CSW-06
07/05/24
Depth: 0'-2" - Comp.
Chloride: 210
BTEX: ND
TPH: 540

CSW-05
07/05/24
Depth: 0'-2" - Comp.
Chloride: 53.4
BTEX: ND
TPH: 68.8

CSW-07
07/05/24
Depth: 0'-2" - Comp.
Chloride: 129
BTEX: ND
TPH: ND

CSW-04
07/05/24
Depth: 0'-2" - Comp.
Chloride: 195
BTEX: ND
TPH: 118

CSW-08
07/05/24
Depth: 0'-4" - Comp.
Chloride: 127
BTEX: ND
TPH: ND
07/05/24
Depth: 4'-6" - Comp.
Chloride: 335
BTEX: ND
TPH: ND

CSW-03
07/05/24
Depth: 0'-4" - Comp.
Chloride: 95.3
BTEX: ND
TPH: ND
07/05/24
Depth: 4'-6" - Comp.
Chloride: 130
BTEX: ND
TPH: ND

CSW-01
07/05/24
Depth: 0'-4" - Comp.
Chloride: 158
BTEX: ND
TPH: 72.7
07/05/24
Depth: 4'-6" - Comp.
Chloride: 71
BTEX: ND
TPH: ND

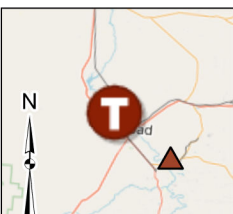
CSW-02
07/05/24
Depth: 0'-4" - Comp.
Chloride: 278
BTEX: ND
TPH: 102
07/05/24
Depth: 4'-6" - Comp.
Chloride: 165
BTEX: ND
TPH: ND

NMOCD RAL
10,000 mg/kg for Chloride
2,500 mg/kg for Total TPH
50 mg/kg for BTEX

Bold and Highlighted denote concentrations that exceed the NMOCD Reclamation

Imagery: Bing

Feet
0 25 50 100



- Inferred Release
- Confirmation Wall Sample

Project No.:
KH237057
Date:
Jul 30 2024
Drawn By:
JWL
Reviewed By:
TLC



4526 W Pierce St
Carlsbad, NM

PH. 806-300-0140

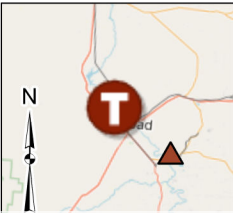
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Confirmation Wall Sample Map

Longview Deep Fed 1-21
Devon Energy
32.33867, -104.04529
Carlsbad, Eddy County, New Mexico

Exhibit

7B



Backfill Material Location

Project No.:
KH237057
Date:
Jul 31 2024
Drawn By:
JWL
Reviewed By:
TLC


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Carlsbad, NM
PH. 806-300-0140 terracon.com

Backfill Material Map

Longview Deep Fed 1-21
Devon Energy
32.3919066, -104.1444734
Carlsbad, Eddy County, New Mexico

Exhibit

8

APPENDIX B – TABLES AND WELL DATA

Table 1 Soil Analytical Results Summary - Release Assessment Project Code: KH237057 NMOCD Reference No. nAPP2336140713											
Sample ID	Sample Date	Sample Depth (ft Bgs)	Sample Type	Sample Status	Chloride (mg/Kg)	Benzene (mg/Kg)	Total BTEX ¹ (mg/Kg)	Total TPH ² (mg/Kg)	Gasoline Range Organics (C6-C10) (mg/Kg)	Diesel Range Organics (Over C10-C28) (mg/Kg)	Oil Range Organics (Over C28-C36) (mg/Kg)
					EPA Method 300	EPA Method 8021B	EPA Method 8021B	EPA Method 8015M	EPA Method 8015M	EPA Method 8015M	EPA Method 8015M
Release Assessment											
DS-01	1/3/2024	0.5	Grab	In-Situ	489	ND	ND	ND	ND	ND	ND
	1/11/2024	5.0	Grab	In-Situ	136	ND	ND	ND	ND	ND	ND
DS-02	1/3/2024	0.5	Grab	In-Situ	19.7	ND	ND	ND	ND	ND	ND
	1/11/2024	5.0	Grab	In-Situ	96.7	ND	ND	ND	ND	ND	ND
DS-03	1/3/2024	0.5	Grab	In-Situ	29.4	ND	ND	ND	ND	ND	ND
	1/11/2024	5.0	Grab	In-Situ	31.9	ND	ND	ND	ND	ND	ND
DS-04	1/3/2024	0.5	Grab	Excavated	1,470	ND	ND	3,680	ND	3,220	460
DS-05	1/3/2024	0.5	Grab	In-Situ	309	ND	ND	385	ND	293	91.5
	1/11/2024	5.0	Grab	In-Situ	41.2	ND	ND	85	ND	85	ND
DS-06	1/3/2024	0.5	Grab	In-Situ	7.05	ND	ND	182	ND	182	ND
DS-07	1/3/2024	0.5	Grab	In-Situ	50.7	ND	ND	ND	ND	ND	ND
	1/11/2024	5.0	Grab	In-Situ	119	ND	ND	ND	ND	ND	ND
DS-08	1/9/2024	0.5	Grab	In-Situ	3090	ND	ND	459	ND	459	ND
	1/9/2024	5.0	Grab	In-Situ	174	ND	ND	ND	ND	ND	ND
DS-09	1/9/2024	0.5	Grab	Excavated	263	ND	ND	504	ND	504	ND
	1/9/2024	5.0	Grab	Excavated	1,060	ND	11.6	3,530	280	3,250	ND
	7/5/2024	6.0	Grab	In-Situ	64.6	ND	ND	ND	ND	ND	ND
	7/5/2024	7.0	Grab	In-Situ	49.4	ND	ND	ND	ND	ND	ND
DS-10	1/9/2024	0.5	Grab	Excavated	24.8	ND	0.00556	212	ND	212	ND
	1/9/2024	5.0	Grab	Excavated	17.5	ND	ND	266	ND	266	ND
DS-11	1/9/2024	0.5	Grab	Excavated	2770	ND	0.051	4,120	ND	4,120	ND
	1/9/2024	5.0	Grab	In-Situ	205	ND	ND	96	ND	96	ND
DS-12	1/11/2024	0.5	Grab	In-Situ	99.5	ND	ND	57	ND	57	ND
	1/11/2024	5.0	Grab	In-Situ	8.93	ND	ND	ND	ND	ND	ND
DS-13	1/11/2024	0.5	Grab	In-Situ	33.7	ND	ND	ND	ND	ND	ND
	1/11/2024	5.0	Grab	In-Situ	60.6	ND	ND	ND	ND	ND	ND
NMOCD Reclamation Standards ³ (Surface to 4 ft Bgs)					10,000	10	50	2,500	1,000		N/A
NMOCD Remediation Standards ⁴ (Greater than Depths of 4 ft Bgs)					10,000	10	50	2,500	1,000		N/A
1. BTEX = Benzene, toluene, ethylbenzene, and total xylenes 2. TPH = Total petroleum hydrocarbons 3. New Mexico Administration Code (NMAC) Restoration, Reclamation and Re-vegetation (19.15.29.13), NMAC-D (Reclamation of Areas No Longer in Use) for Soils Extending to 4 ft. bgs 4. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards (19.15.29.12) NMAC-N, 8/14/2018 ND = Constituent was not detected above the indicated laboratory sample detection limit (SDL). NA = Not Analyzed Bold denotes concentrations above applicable laboratory SDLs. Bold and Highlighted denote concentrations that exceed the NMOCD Reclamation and/or Remediation and Delineation Standards. In-situ = Sample is representative of material which remains in-place at the site. Excavated = Sample is representative of materials which was excavated and disposed of at a permitted disposal facility.											

Table 2 Soil Analytical Results Summary - Confirmation Floors Project Code: KH237057 NMOCD Reference No. nAPP2336140713											
Sample ID	Sample Date	Sample Depth (ft bgs)	Sample Type	Sample Status	Chloride (mg/Kg)	Benzene (mg/Kg)	Total BTEX ¹ (mg/Kg)	Total TPH ² (mg/Kg)	Gasoline Range Organics (C6-C10) (mg/Kg)	Diesel Range Organics (Over C10-C28) (mg/Kg)	Oil Range Organics (Over C28-C36) (mg/Kg)
					EPA Method 300	EPA Method 8021B	EPA Method 8021B	EPA Method 8015M	EPA Method 8015M	EPA Method 8015M	EPA Method 8015M
Confirmation Table											
CSF-01	7/5/2024	6.0	Composite	In-Situ	114	ND	ND	ND	ND	ND	ND
CSF-02	7/5/2024	6.0	Composite	In-Situ	160	ND	ND	ND	ND	ND	ND
CSF-03	7/5/2024	6.0	Composite	In-Situ	155	ND	ND	ND	ND	ND	ND
CSF-04	7/5/2024	2.0	Composite	In-Situ	43.5	ND	ND	ND	ND	ND	ND
CSF-05	7/5/2024	2.0	Composite	In-Situ	72.9	ND	ND	185	ND	185	ND
CSF-06	7/5/2024	2.0	Composite	In-Situ	89	ND	ND	ND	ND	ND	ND
CSF-07	7/5/2024	2.0	Composite	In-Situ	132	ND	ND	ND	ND	ND	ND
CSF-08	7/5/2024	4.0	Composite	In-Situ	208	ND	ND	ND	ND	ND	ND
CSF-09	7/5/2024	4.0	Composite	In-Situ	129	ND	ND	ND	ND	ND	ND
CSF-10	7/5/2024	4.0	Composite	In-Situ	97	ND	ND	ND	ND	ND	ND
CSF-11	7/5/2024	6.0	Composite	In-Situ	174	ND	ND	ND	ND	ND	ND
CSF-12	7/5/2024	6.0	Composite	In-Situ	215	ND	ND	ND	ND	ND	ND
NMOCD Reclamation Standards ³ (Surface to 4 ft bgs)					10,000	10	50	2,500	1,000		N/A
NMOCD Remediation Standards ⁴ (Greater than Depths of 4 ft bgs)					10,000	10	50	2,500	1,000		N/A
1. BTEX = Benzene, toluene, ethylbenzene, and total xylenes 2. TPH = Total petroleum hydrocarbons 3. New Mexico Administration Code (NMAC) Restoration, Reclamation and Re-vegetation (19.15.29.13), NMAC-D (Reclamation of Areas No Longer in Use) for Soils Extending to 4 ft. bgs 4. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards (19.15.29.12) NMAC-N, 8/14/2018 ND = Constituent was not detected above the indicated laboratory sample detection limit (SDL). NA = Not Analyzed Bold denotes concentrations above applicable laboratory SDLs. Bold and Highlighted denote concentrations that exceed the NMOCD Reclamation and/or Remediation and Delineation Standards. In-situ = Sample is representative of material which remains in-place at the site. Excavated = Sample is representative of materials which was excavated and disposed of at a permitted disposal facility.											

Table 3 Soil Analytical Results Summary - Confirmation Walls Project Code: KH237057 NMOCD Reference No. nAPP2336140713												
Sample ID	Sample Date	Sample Start Depth (ft bgs)	Sample End Depth (ft bgs)	Sample Type	Sample Status	Chloride (mg/Kg)	Benzene (mg/Kg)	Total BTEX ¹ (mg/Kg)	Total TPH ² (mg/Kg)	Gasoline Range Organics (C6-C10) (mg/Kg)	Diesel Range Organics (Over C10-C28) (mg/Kg)	Oil Range Organics (Over C28-C36) (mg/Kg)
						EPA Method 300	EPA Method 8021B	EPA Method 8021B	EPA Method 8015M	EPA Method 8015M	EPA Method 8015M	EPA Method 8015M
Confirmation Wall Samples												
CSW-01	7/5/2024	0	4	Composite	In-Situ	158	ND	ND	72.7	ND	72.7	ND
CSW-01	7/5/2024	4	6	Composite	In-Situ	71	ND	ND	ND	ND	ND	ND
CSW-02	7/5/2024	0	4	Composite	In-Situ	278	ND	ND	102	ND	102	ND
CSW-02	7/5/2024	4	6	Composite	In-Situ	165	ND	ND	ND	ND	ND	ND
CSW-03	7/5/2024	0	4	Composite	In-Situ	95.3	ND	ND	ND	ND	ND	ND
CSW-03	7/5/2024	4	6	Composite	In-Situ	130	ND	ND	ND	ND	ND	ND
CSW-04	7/5/2024	0	2	Composite	In-Situ	195	ND	ND	118	ND	118	ND
CSW-05	7/5/2024	0	2	Composite	In-Situ	53.4	ND	ND	68.8	ND	68.8	ND
CSW-06	7/5/2024	0	2	Composite	In-Situ	210	ND	ND	540	ND	540	ND
CSW-07	7/5/2024	0	2	Composite	In-Situ	129	ND	ND	ND	ND	ND	ND
CSW-08	7/5/2024	0	4	Composite	In-Situ	127	ND	ND	ND	ND	ND	ND
CSW-08	7/5/2024	4	6	Composite	In-Situ	335	ND	ND	ND	ND	ND	ND
NMOCD Reclamation Standards ³ (Surface to 4 ft bgs)						10,000	10	50	2,500	1,000		N/A
NMOCD Remediation Standards ⁴ (Greater than Depths of 4 ft bgs)						10,000	10	50	2,500	1,000		N/A
1. BTEX = Benzene, toluene, ethylbenzene, and total xylenes 2. TPH = Total petroleum hydrocarbons 3. New Mexico Administration Code (NMAC) Restoration, Reclamation and Re-vegetation (19.15.29.13), NMAC-D (Reclamation of Areas No Longer in Use) for Soils Extending to 4 ft. bgs 4. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards (19.15.29.12) NMAC-N, 8/14/2018 ND = Constituent was not detected above the indicated laboratory sample detection limit (SDL). NA = Not Analyzed Bold denotes concentrations above applicable laboratory SDLs. Bold and Highlighted denote concentrations that exceed the NMOCD Reclamation and/or Remediation and Delineation Standards. In-situ = Sample is representative of material which remains in-place at the site. Excavated = Sample is representative of materials which was excavated and disposed of at a permitted disposal facility.												

Table 4 Soil Analytical Results Summary - Backfill Soil Assessment Project Code: KH237057 NMOCD Reference No. nAPP2336140713											
Sample ID	Sample Date	Sample Depth (ft bgs)	Sample Type	Sample Status	Chloride (mg/Kg)	Benzene (mg/Kg)	Total BTEX ¹ (mg/Kg)	Total TPH ² (mg/Kg)	Gasoline Range Organics (C6-C10) (mg/Kg)	Diesel Range Organics (Over C10-C28) (mg/Kg)	Oil Range Organics (Over C28-C36) (mg/Kg)
					EPA Method 300	EPA Method 8021B	EPA Method 8021B	EPA Method 8015M	EPA Method 8015M	EPA Method 8015M	EPA Method 8015M
Backfill Soil Assessment											
BFM-01	7/10/2024	0.5-1	Composite	In-Situ	1310	NA	NA	NA	NA	NA	NA
BFM-02	7/10/2024	0.5-1	Composite	In-Situ	115	NA	NA	NA	NA	NA	NA
ND = Constituent was not detected above the indicated laboratory sample detection limit (SDL). NA = Not Analyzed											

APPENDIX C – PHOTOGRAPHIC LOG



Photo 1

Site Information



Photo 2

Point of Release



Photo 3

Hand Dug Excavation around Flare



Photo 4

Excavation in progress around northwestern extent 2-6' bgs



Photo 5 Completed excavation around northeastern extent 2' bgs



Photo 6 Completed excavation around southern extent 6' bgs



Photo 7 Excavation in progress around northwestern extent 2-6' bgs

APPENDIX D – ANALYTICAL REPORT AND CHAIN OF CUSTODY



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Joseph Guesnier
Terracon Consulting Eng & Scientists
5847 50th St
Lubbock, Texas 79424
Generated 1/19/2024 2:13:17 PM

JOB DESCRIPTION

LONGVIEW DEEP FED 1-21
KH 237057

JOB NUMBER

890-5967-1

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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1/19/2024 2:13:17 PM

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

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Laboratory Job ID: 890-5967-1
SDG: KH 237057

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Definitions/Glossary

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

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
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: Terracon Consulting Eng & Scientists
Project: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1

Job ID: 890-5967-1

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Job Narrative 890-5967-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 1/11/2024 2:08 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 3.2°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: DS 01 (890-5967-1), DS 02 (890-5967-2), DS 03 (890-5967-3), DS 05 (890-5967-4), DS 07 (890-5967-5), DS 12 (890-5967-6), DS 12 (890-5967-7), DS 13 (890-5967-8) and DS 13 (890-5967-9).

GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: DS 02 (890-5967-2), DS 12 (890-5967-7) and (LCS 880-71026/1-A). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-71092 and analytical batch 880-71087 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: DS 12 (890-5967-6). 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.

GC Semi VOA

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: DS 12 (890-5967-7) and (890-5967-A-1-F MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-70849/2-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

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-70834 and analytical batch 880-70976 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

Client Sample ID: DS 01

Lab Sample ID: 890-5967-1

Date Collected: 01/11/24 10:23

Matrix: Solid

Date Received: 01/11/24 14:08

Sample Depth: 5'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		01/16/24 15:37	01/18/24 05:49	1
Toluene	<0.00201	U	0.00201		mg/Kg		01/16/24 15:37	01/18/24 05:49	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		01/16/24 15:37	01/18/24 05:49	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		01/16/24 15:37	01/18/24 05:49	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		01/16/24 15:37	01/18/24 05:49	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		01/16/24 15:37	01/18/24 05:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	130		70 - 130	01/16/24 15:37	01/18/24 05:49	1
1,4-Difluorobenzene (Surr)	125		70 - 130	01/16/24 15:37	01/18/24 05:49	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			01/18/24 05:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			01/15/24 21:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		01/15/24 11:27	01/15/24 21:38	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		01/15/24 11:27	01/15/24 21:38	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		01/15/24 11:27	01/15/24 21:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	77		70 - 130	01/15/24 11:27	01/15/24 21:38	1
o-Terphenyl	83		70 - 130	01/15/24 11:27	01/15/24 21:38	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	136	F1	4.98		mg/Kg			01/16/24 17:52	1

Client Sample ID: DS 02

Lab Sample ID: 890-5967-2

Date Collected: 01/11/24 09:52

Matrix: Solid

Date Received: 01/11/24 14:08

Sample Depth: 5'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		01/16/24 15:37	01/18/24 07:33	1
Toluene	<0.00202	U	0.00202		mg/Kg		01/16/24 15:37	01/18/24 07:33	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		01/16/24 15:37	01/18/24 07:33	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		01/16/24 15:37	01/18/24 07:33	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		01/16/24 15:37	01/18/24 07:33	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		01/16/24 15:37	01/18/24 07:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	128		70 - 130	01/16/24 15:37	01/18/24 07:33	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

Client Sample ID: DS 02
Date Collected: 01/11/24 09:52
Date Received: 01/11/24 14:08
Sample Depth: 5'

Lab Sample ID: 890-5967-2
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	146	S1+	70 - 130				01/16/24 15:37	01/18/24 07:33	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			01/18/24 07:33	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			01/15/24 22:45	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		01/15/24 11:27	01/15/24 22:45	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		01/15/24 11:27	01/15/24 22:45	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		01/15/24 11:27	01/15/24 22:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	75		70 - 130				01/15/24 11:27	01/15/24 22:45	1
o-Terphenyl	78		70 - 130				01/15/24 11:27	01/15/24 22:45	1
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	96.7		5.00		mg/Kg			01/16/24 18:13	1

Client Sample ID: DS 03
Date Collected: 01/11/24 10:31
Date Received: 01/11/24 14:08
Sample Depth: 5'

Lab Sample ID: 890-5967-3
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		01/16/24 15:37	01/18/24 07:59	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/16/24 15:37	01/18/24 07:59	1
Ethylbenzene	0.00201		0.00199		mg/Kg		01/16/24 15:37	01/18/24 07:59	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/16/24 15:37	01/18/24 07:59	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/16/24 15:37	01/18/24 07:59	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/16/24 15:37	01/18/24 07:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 130				01/16/24 15:37	01/18/24 07:59	1
1,4-Difluorobenzene (Surr)	119		70 - 130				01/16/24 15:37	01/18/24 07:59	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			01/18/24 07:59	1
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			01/15/24 23:08	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

Client Sample ID: DS 03
Date Collected: 01/11/24 10:31
Date Received: 01/11/24 14:08
Sample Depth: 5'

Lab Sample ID: 890-5967-3
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	<49.7	U	49.7		mg/Kg		01/15/24 11:27	01/15/24 23:08	1	
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		01/15/24 11:27	01/15/24 23:08	1	
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		01/15/24 11:27	01/15/24 23:08	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
1-Chlorooctane	80		70 - 130				01/15/24 11:27	01/15/24 23:08	1	
o-Terphenyl	88		70 - 130				01/15/24 11:27	01/15/24 23:08	1	

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	31.9		4.95		mg/Kg			01/16/24 18:20	1	

Client Sample ID: DS 05
Date Collected: 01/11/24 12:53
Date Received: 01/11/24 14:08
Sample Depth: 5'

Lab Sample ID: 890-5967-4
Matrix: Solid

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		01/18/24 14:21	01/18/24 17:30	1	
Toluene	<0.00201	U	0.00201		mg/Kg		01/18/24 14:21	01/18/24 17:30	1	
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		01/18/24 14:21	01/18/24 17:30	1	
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		01/18/24 14:21	01/18/24 17:30	1	
o-Xylene	<0.00201	U	0.00201		mg/Kg		01/18/24 14:21	01/18/24 17:30	1	
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		01/18/24 14:21	01/18/24 17:30	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	92		70 - 130				01/18/24 14:21	01/18/24 17:30	1	
1,4-Difluorobenzene (Surr)	104		70 - 130				01/18/24 14:21	01/18/24 17:30	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			01/18/24 17:30	1	

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	85.3		49.9		mg/Kg			01/15/24 23:31	1	

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	85.3		49.9		mg/Kg		01/15/24 11:27	01/15/24 23:31	1	
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/15/24 11:27	01/15/24 23:31	1	
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/15/24 11:27	01/15/24 23:31	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
1-Chlorooctane	84		70 - 130				01/15/24 11:27	01/15/24 23:31	1	
o-Terphenyl	89		70 - 130				01/15/24 11:27	01/15/24 23:31	1	

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

Client Sample ID: DS 05

Lab Sample ID: 890-5967-4

Date Collected: 01/11/24 12:53

Matrix: Solid

Date Received: 01/11/24 14:08

Sample Depth: 5'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	41.2		4.99		mg/Kg			01/16/24 18:27	1

Client Sample ID: DS 07

Lab Sample ID: 890-5967-5

Date Collected: 01/11/24 12:32

Matrix: Solid

Date Received: 01/11/24 14:08

Sample Depth: 5'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/16/24 15:37	01/18/24 08:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/16/24 15:37	01/18/24 08:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/16/24 15:37	01/18/24 08:51	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		01/16/24 15:37	01/18/24 08:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/16/24 15:37	01/18/24 08:51	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		01/16/24 15:37	01/18/24 08:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	72		70 - 130				01/16/24 15:37	01/18/24 08:51	1
1,4-Difluorobenzene (Surr)	76		70 - 130				01/16/24 15:37	01/18/24 08:51	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			01/18/24 08:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/15/24 23:50	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	<50.0	U	50.0		mg/Kg		01/15/24 11:27	01/15/24 23:50	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/15/24 11:27	01/15/24 23:50	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/15/24 11:27	01/15/24 23:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	73		70 - 130				01/15/24 11:27	01/15/24 23:50	1
o-Terphenyl	79		70 - 130				01/15/24 11:27	01/15/24 23:50	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	119		5.04		mg/Kg			01/16/24 18:34	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

Client Sample ID: DS 12
Date Collected: 01/11/24 10:36
Date Received: 01/11/24 14:08
Sample Depth: 0.5'

Lab Sample ID: 890-5967-6
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		01/18/24 14:21	01/18/24 17:50	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/18/24 14:21	01/18/24 17:50	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/18/24 14:21	01/18/24 17:50	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/18/24 14:21	01/18/24 17:50	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/18/24 14:21	01/18/24 17:50	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/18/24 14:21	01/18/24 17:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	126		70 - 130				01/18/24 14:21	01/18/24 17:50	1
1,4-Difluorobenzene (Surr)	145	S1+	70 - 130				01/18/24 14:21	01/18/24 17:50	1

Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			01/18/24 17:50	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	56.7		49.9		mg/Kg			01/16/24 00:12	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		01/15/24 11:27	01/16/24 00:12	1
Diesel Range Organics (Over C10-C28)	56.7		49.9		mg/Kg		01/15/24 11:27	01/16/24 00:12	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/15/24 11:27	01/16/24 00:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	78		70 - 130				01/15/24 11:27	01/16/24 00:12	1
o-Terphenyl	80		70 - 130				01/15/24 11:27	01/16/24 00:12	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	99.5		4.97		mg/Kg			01/16/24 18:54	1

Client Sample ID: DS 12
Date Collected: 01/11/24 12:32
Date Received: 01/11/24 14:08
Sample Depth: 0.5'

Lab Sample ID: 890-5967-7
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		01/16/24 15:37	01/18/24 09:43	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/16/24 15:37	01/18/24 09:43	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/16/24 15:37	01/18/24 09:43	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/16/24 15:37	01/18/24 09:43	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/16/24 15:37	01/18/24 09:43	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/16/24 15:37	01/18/24 09:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	127		70 - 130				01/16/24 15:37	01/18/24 09:43	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

Client Sample ID: DS 12
Date Collected: 01/11/24 12:32
Date Received: 01/11/24 14:08
Sample Depth: 0.5'

Lab Sample ID: 890-5967-7
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	134	S1+	70 - 130				01/16/24 15:37	01/18/24 09:43	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			01/18/24 09:43	1
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			01/16/24 00:33	1
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		01/15/24 11:27	01/16/24 00:33	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		01/15/24 11:27	01/16/24 00:33	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		01/15/24 11:27	01/16/24 00:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	65	S1-	70 - 130				01/15/24 11:27	01/16/24 00:33	1
o-Terphenyl	74		70 - 130				01/15/24 11:27	01/16/24 00:33	1
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.93		4.96		mg/Kg			01/16/24 19:01	1

Client Sample ID: DS 13
Date Collected: 01/11/24 13:07
Date Received: 01/11/24 14:08
Sample Depth: 0.5'

Lab Sample ID: 890-5967-8
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		01/18/24 09:37	01/18/24 18:10	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/18/24 09:37	01/18/24 18:10	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/18/24 09:37	01/18/24 18:10	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/18/24 09:37	01/18/24 18:10	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/18/24 09:37	01/18/24 18:10	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/18/24 09:37	01/18/24 18:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130				01/18/24 09:37	01/18/24 18:10	1
1,4-Difluorobenzene (Surr)	108		70 - 130				01/18/24 09:37	01/18/24 18:10	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			01/18/24 18:10	1
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/16/24 00:53	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

Client Sample ID: DS 13

Lab Sample ID: 890-5967-8

Date Collected: 01/11/24 13:07

Matrix: Solid

Date Received: 01/11/24 14:08

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		01/15/24 11:27	01/16/24 00:53	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/15/24 11:27	01/16/24 00:53	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/15/24 11:27	01/16/24 00:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	70		70 - 130				01/15/24 11:27	01/16/24 00:53	1
o-Terphenyl	78		70 - 130				01/15/24 11:27	01/16/24 00:53	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	33.7		4.97		mg/Kg			01/16/24 19:08	1

Client Sample ID: DS 13

Lab Sample ID: 890-5967-9

Date Collected: 01/11/24 13:12

Matrix: Solid

Date Received: 01/11/24 14:08

Sample Depth: 5'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/16/24 15:37	01/18/24 10:36	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/16/24 15:37	01/18/24 10:36	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/16/24 15:37	01/18/24 10:36	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		01/16/24 15:37	01/18/24 10:36	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/16/24 15:37	01/18/24 10:36	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		01/16/24 15:37	01/18/24 10:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	125		70 - 130				01/16/24 15:37	01/18/24 10:36	1
1,4-Difluorobenzene (Surr)	93		70 - 130				01/16/24 15:37	01/18/24 10:36	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			01/18/24 10:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			01/16/24 01:15	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	<50.1	U	50.1		mg/Kg		01/15/24 11:27	01/16/24 01:15	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		01/15/24 11:27	01/16/24 01:15	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		01/15/24 11:27	01/16/24 01:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	75		70 - 130				01/15/24 11:27	01/16/24 01:15	1
o-Terphenyl	79		70 - 130				01/15/24 11:27	01/16/24 01:15	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

Client Sample ID: DS 13
Date Collected: 01/11/24 13:12
Date Received: 01/11/24 14:08
Sample Depth: 5'

Lab Sample ID: 890-5967-9
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	60.6		5.05		mg/Kg			01/16/24 19:15	1

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

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-5967-1	DS 01	130	125
890-5967-2	DS 02	128	146 S1+
890-5967-3	DS 03	89	119
890-5967-4	DS 05	92	104
890-5967-5	DS 07	72	76
890-5967-6	DS 12	126	145 S1+
890-5967-7	DS 12	127	134 S1+
890-5967-8	DS 13	99	108
890-5967-9	DS 13	125	93
LCS 880-71026/1-A	Lab Control Sample	147 S1+	119
LCS 880-71092/1-A	Lab Control Sample	93	104
LCSD 880-71026/2-A	Lab Control Sample Dup	117	109
LCSD 880-71092/2-A	Lab Control Sample Dup	103	98
MB 880-71000/5-A	Method Blank	84	106
MB 880-71026/5-A	Method Blank	84	128
MB 880-71092/5-A	Method Blank	125	146 S1+
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-5967-1	DS 01	77	83
890-5967-1 MS	DS 01	77	70
890-5967-1 MSD	DS 01	74	69 S1-
890-5967-2	DS 02	75	78
890-5967-3	DS 03	80	88
890-5967-4	DS 05	84	89
890-5967-5	DS 07	73	79
890-5967-6	DS 12	78	80
890-5967-7	DS 12	65 S1-	74
890-5967-8	DS 13	70	78
890-5967-9	DS 13	75	79
LCS 880-70849/2-A	Lab Control Sample	123	142 S1+
LCSD 880-70849/3-A	Lab Control Sample Dup	102	119
MB 880-70849/1-A	Method Blank	85	93
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-71000/5-A							Client Sample ID: Method Blank		
Matrix: Solid							Prep Type: Total/NA		
Analysis Batch: 71036							Prep Batch: 71000		
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/16/24 13:25	01/17/24 11:58	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/16/24 13:25	01/17/24 11:58	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/16/24 13:25	01/17/24 11:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/16/24 13:25	01/17/24 11:58	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/16/24 13:25	01/17/24 11:58	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/16/24 13:25	01/17/24 11:58	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		70 - 130				01/16/24 13:25	01/17/24 11:58	1
1,4-Difluorobenzene (Surr)	106		70 - 130				01/16/24 13:25	01/17/24 11:58	1

Lab Sample ID: MB 880-71026/5-A							Client Sample ID: Method Blank		
Matrix: Solid							Prep Type: Total/NA		
Analysis Batch: 71036							Prep Batch: 71026		
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/16/24 15:37	01/18/24 01:26	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/16/24 15:37	01/18/24 01:26	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/16/24 15:37	01/18/24 01:26	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/16/24 15:37	01/18/24 01:26	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/16/24 15:37	01/18/24 01:26	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/16/24 15:37	01/18/24 01:26	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		70 - 130				01/16/24 15:37	01/18/24 01:26	1
1,4-Difluorobenzene (Surr)	128		70 - 130				01/16/24 15:37	01/18/24 01:26	1

Lab Sample ID: LCS 880-71026/1-A							Client Sample ID: Lab Control Sample		
Matrix: Solid							Prep Type: Total/NA		
Analysis Batch: 71036							Prep Batch: 71026		
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	0.100	0.1126		mg/Kg		113	70 - 130		
Toluene	0.100	0.1169		mg/Kg		117	70 - 130		
Ethylbenzene	0.100	0.1002		mg/Kg		100	70 - 130		
m-Xylene & p-Xylene	0.200	0.2317		mg/Kg		116	70 - 130		
o-Xylene	0.100	0.1211		mg/Kg		121	70 - 130		
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	147	S1+	70 - 130						
1,4-Difluorobenzene (Surr)	119		70 - 130						

Lab Sample ID: LCSD 880-71026/2-A							Client Sample ID: Lab Control Sample Dup		
Matrix: Solid							Prep Type: Total/NA		
Analysis Batch: 71036							Prep Batch: 71026		
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	0.100	0.09881		mg/Kg		99	70 - 130	13	35

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

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

Lab Sample ID: LCSD 880-71026/2-A
Matrix: Solid
Analysis Batch: 71036

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 71026

Analyte	Spike		LCSD	LCSD	Unit	D	%Rec	%Rec	RPD	RPD
	Added	Result	Qualifier	Limits			RPD	Limit		
Toluene	0.100	0.08570			mg/Kg		86	70 - 130	31	35
Ethylbenzene	0.100	0.09082			mg/Kg		91	70 - 130	10	35
m-Xylene & p-Xylene	0.200	0.2025			mg/Kg		101	70 - 130	13	35
o-Xylene	0.100	0.09776			mg/Kg		98	70 - 130	21	35

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	117		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

Lab Sample ID: MB 880-71092/5-A
Matrix: Solid
Analysis Batch: 71087

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 71092

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	<0.00200	U	0.00200		mg/Kg		01/18/24 09:37	01/18/24 11:28	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/18/24 09:37	01/18/24 11:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/18/24 09:37	01/18/24 11:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/18/24 09:37	01/18/24 11:28	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/18/24 09:37	01/18/24 11:28	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/18/24 09:37	01/18/24 11:28	1

Surrogate	MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	125		70 - 130	01/18/24 09:37	01/18/24 11:28	1
1,4-Difluorobenzene (Surr)	146	S1+	70 - 130	01/18/24 09:37	01/18/24 11:28	1

Lab Sample ID: LCS 880-71092/1-A
Matrix: Solid
Analysis Batch: 71087

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 71092

Analyte	Spike		LCS		Unit	D	%Rec	%Rec	
	Added	Result	Qualifier				Limits		
Benzene	0.100	0.1076			mg/Kg		108	70 - 130	
Toluene	0.100	0.1029			mg/Kg		103	70 - 130	
Ethylbenzene	0.100	0.09780			mg/Kg		98	70 - 130	
m-Xylene & p-Xylene	0.200	0.2105			mg/Kg		105	70 - 130	
o-Xylene	0.100	0.1046			mg/Kg		105	70 - 130	

Surrogate	LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	93		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: LCSD 880-71092/2-A
Matrix: Solid
Analysis Batch: 71087

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 71092

Analyte	Spike		LCSD		Unit	D	%Rec	%Rec		RPD
	Added	Result	Qualifier				Limits	RPD	Limit	
Benzene	0.100	0.1026			mg/Kg		103	70 - 130	5	35
Toluene	0.100	0.09557			mg/Kg		96	70 - 130	7	35
Ethylbenzene	0.100	0.09616			mg/Kg		96	70 - 130	2	35

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

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

Lab Sample ID: LCSD 880-71092/2-A

Matrix: Solid

Analysis Batch: 71087

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 71092

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
m-Xylene & p-Xylene	0.200	0.2111		mg/Kg		106	70 - 130	0		35
o-Xylene	0.100	0.1054		mg/Kg		105	70 - 130	1		35
Surrogate										
LCSD		LCSD								
Surrogate	%Recovery	Qualifier	Limits							
4-Bromofluorobenzene (Surr)	103		70 - 130							
1,4-Difluorobenzene (Surr)	98		70 - 130							

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

Lab Sample ID: MB 880-70849/1-A

Matrix: Solid

Analysis Batch: 70824

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 70849

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/15/24 11:27	01/15/24 20:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/15/24 11:27	01/15/24 20:31	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/15/24 11:27	01/15/24 20:31	1
Surrogate									
MB		MB							
Surrogate	%Recovery	Qualifier	Limits	Prepared		Analyzed		Dil Fac	
1-Chlorooctane	85		70 - 130	01/15/24 11:27		01/15/24 20:31		1	
o-Terphenyl	93		70 - 130	01/15/24 11:27		01/15/24 20:31		1	

Lab Sample ID: LCS 880-70849/2-A

Matrix: Solid

Analysis Batch: 70824

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 70849

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	1000	985.8		mg/Kg		99	70 - 130			
Diesel Range Organics (Over C10-C28)	1000	1225		mg/Kg		123	70 - 130			
Surrogate										
LCS		LCS								
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	123		70 - 130							
o-Terphenyl	142	S1+	70 - 130							

Lab Sample ID: LCSD 880-70849/3-A

Matrix: Solid

Analysis Batch: 70824

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 70849

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	1000	1103		mg/Kg		110	70 - 130	11		20
Diesel Range Organics (Over C10-C28)	1000	1027		mg/Kg		103	70 - 130	18		20

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

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

Lab Sample ID: LCSD 880-70849/3-A

Matrix: Solid

Analysis Batch: 70824

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 70849

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	102		70 - 130
o-Terphenyl	119		70 - 130

Lab Sample ID: 890-5967-1 MS

Matrix: Solid

Analysis Batch: 70824

Client Sample ID: DS 01

Prep Type: Total/NA

Prep Batch: 70849

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	1000	771.2		mg/Kg		72	70 - 130	
Diesel Range Organics (Over C10-C28)	<49.8	U	1000	794.2		mg/Kg		77	70 - 130	
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	77		70 - 130							
o-Terphenyl	70		70 - 130							

Lab Sample ID: 890-5967-1 MSD

Matrix: Solid

Analysis Batch: 70824

Client Sample ID: DS 01

Prep Type: Total/NA

Prep Batch: 70849

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	1000	755.2		mg/Kg		71	70 - 130	2	20	
Diesel Range Organics (Over C10-C28)	<49.8	U	1000	771.0		mg/Kg		75	70 - 130	3	20	
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane	74		70 - 130									
o-Terphenyl	69	S1-	70 - 130									

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-70834/1-A

Matrix: Solid

Analysis Batch: 70976

Client Sample ID: Method Blank

Prep Type: Soluble

	MB	MB								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	<5.00	U	5.00		mg/Kg			01/16/24 16:57	1	

Lab Sample ID: LCS 880-70834/2-A

Matrix: Solid

Analysis Batch: 70976

Client Sample ID: Lab Control Sample

Prep Type: Soluble

	Spike	LCS	LCS					%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	250	226.0		mg/Kg		90	90 - 110		

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-70834/3-A				Client Sample ID: Lab Control Sample Dup							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 70976											
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	226.5		mg/Kg		91	90 - 110	0	20

Lab Sample ID: 890-5967-1 MS				Client Sample ID: DS 01							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 70976											
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	136	F1	249	354.7	F1	mg/Kg		88	90 - 110		

Lab Sample ID: 890-5967-1 MSD				Client Sample ID: DS 01							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 70976											
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	136	F1	249	356.0	F1	mg/Kg		88	90 - 110	0	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

GC VOA

Prep Batch: 71000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-71000/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 71026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5967-1	DS 01	Total/NA	Solid	5035	
890-5967-2	DS 02	Total/NA	Solid	5035	
890-5967-3	DS 03	Total/NA	Solid	5035	
890-5967-5	DS 07	Total/NA	Solid	5035	
890-5967-7	DS 12	Total/NA	Solid	5035	
890-5967-9	DS 13	Total/NA	Solid	5035	
MB 880-71026/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-71026/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-71026/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 71036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5967-1	DS 01	Total/NA	Solid	8021B	71026
890-5967-2	DS 02	Total/NA	Solid	8021B	71026
890-5967-3	DS 03	Total/NA	Solid	8021B	71026
890-5967-5	DS 07	Total/NA	Solid	8021B	71026
890-5967-7	DS 12	Total/NA	Solid	8021B	71026
890-5967-9	DS 13	Total/NA	Solid	8021B	71026
MB 880-71000/5-A	Method Blank	Total/NA	Solid	8021B	71000
MB 880-71026/5-A	Method Blank	Total/NA	Solid	8021B	71026
LCS 880-71026/1-A	Lab Control Sample	Total/NA	Solid	8021B	71026
LCSD 880-71026/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	71026

Analysis Batch: 71087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5967-4	DS 05	Total/NA	Solid	8021B	71092
890-5967-6	DS 12	Total/NA	Solid	8021B	71092
890-5967-8	DS 13	Total/NA	Solid	8021B	71092
MB 880-71092/5-A	Method Blank	Total/NA	Solid	8021B	71092
LCS 880-71092/1-A	Lab Control Sample	Total/NA	Solid	8021B	71092
LCSD 880-71092/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	71092

Prep Batch: 71092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5967-4	DS 05	Total/NA	Solid	5035	
890-5967-6	DS 12	Total/NA	Solid	5035	
890-5967-8	DS 13	Total/NA	Solid	5035	
MB 880-71092/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-71092/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-71092/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 71107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5967-1	DS 01	Total/NA	Solid	Total BTEX	
890-5967-2	DS 02	Total/NA	Solid	Total BTEX	
890-5967-3	DS 03	Total/NA	Solid	Total BTEX	
890-5967-4	DS 05	Total/NA	Solid	Total BTEX	

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QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

GC VOA (Continued)

Analysis Batch: 71107 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5967-5	DS 07	Total/NA	Solid	Total BTEX	
890-5967-6	DS 12	Total/NA	Solid	Total BTEX	
890-5967-7	DS 12	Total/NA	Solid	Total BTEX	
890-5967-8	DS 13	Total/NA	Solid	Total BTEX	
890-5967-9	DS 13	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 70824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5967-1	DS 01	Total/NA	Solid	8015B NM	70849
890-5967-2	DS 02	Total/NA	Solid	8015B NM	70849
890-5967-3	DS 03	Total/NA	Solid	8015B NM	70849
890-5967-4	DS 05	Total/NA	Solid	8015B NM	70849
890-5967-5	DS 07	Total/NA	Solid	8015B NM	70849
890-5967-6	DS 12	Total/NA	Solid	8015B NM	70849
890-5967-7	DS 12	Total/NA	Solid	8015B NM	70849
890-5967-8	DS 13	Total/NA	Solid	8015B NM	70849
890-5967-9	DS 13	Total/NA	Solid	8015B NM	70849
MB 880-70849/1-A	Method Blank	Total/NA	Solid	8015B NM	70849
LCS 880-70849/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	70849
LCSD 880-70849/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	70849
890-5967-1 MS	DS 01	Total/NA	Solid	8015B NM	70849
890-5967-1 MSD	DS 01	Total/NA	Solid	8015B NM	70849

Prep Batch: 70849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5967-1	DS 01	Total/NA	Solid	8015NM Prep	
890-5967-2	DS 02	Total/NA	Solid	8015NM Prep	
890-5967-3	DS 03	Total/NA	Solid	8015NM Prep	
890-5967-4	DS 05	Total/NA	Solid	8015NM Prep	
890-5967-5	DS 07	Total/NA	Solid	8015NM Prep	
890-5967-6	DS 12	Total/NA	Solid	8015NM Prep	
890-5967-7	DS 12	Total/NA	Solid	8015NM Prep	
890-5967-8	DS 13	Total/NA	Solid	8015NM Prep	
890-5967-9	DS 13	Total/NA	Solid	8015NM Prep	
MB 880-70849/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-70849/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-70849/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5967-1 MS	DS 01	Total/NA	Solid	8015NM Prep	
890-5967-1 MSD	DS 01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 71014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5967-1	DS 01	Total/NA	Solid	8015 NM	
890-5967-2	DS 02	Total/NA	Solid	8015 NM	
890-5967-3	DS 03	Total/NA	Solid	8015 NM	
890-5967-4	DS 05	Total/NA	Solid	8015 NM	
890-5967-5	DS 07	Total/NA	Solid	8015 NM	
890-5967-6	DS 12	Total/NA	Solid	8015 NM	
890-5967-7	DS 12	Total/NA	Solid	8015 NM	

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QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

GC Semi VOA (Continued)

Analysis Batch: 71014 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5967-8	DS 13	Total/NA	Solid	8015 NM	
890-5967-9	DS 13	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 70834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5967-1	DS 01	Soluble	Solid	DI Leach	
890-5967-2	DS 02	Soluble	Solid	DI Leach	
890-5967-3	DS 03	Soluble	Solid	DI Leach	
890-5967-4	DS 05	Soluble	Solid	DI Leach	
890-5967-5	DS 07	Soluble	Solid	DI Leach	
890-5967-6	DS 12	Soluble	Solid	DI Leach	
890-5967-7	DS 12	Soluble	Solid	DI Leach	
890-5967-8	DS 13	Soluble	Solid	DI Leach	
890-5967-9	DS 13	Soluble	Solid	DI Leach	
MB 880-70834/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-70834/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-70834/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5967-1 MS	DS 01	Soluble	Solid	DI Leach	
890-5967-1 MSD	DS 01	Soluble	Solid	DI Leach	

Analysis Batch: 70976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5967-1	DS 01	Soluble	Solid	300.0	70834
890-5967-2	DS 02	Soluble	Solid	300.0	70834
890-5967-3	DS 03	Soluble	Solid	300.0	70834
890-5967-4	DS 05	Soluble	Solid	300.0	70834
890-5967-5	DS 07	Soluble	Solid	300.0	70834
890-5967-6	DS 12	Soluble	Solid	300.0	70834
890-5967-7	DS 12	Soluble	Solid	300.0	70834
890-5967-8	DS 13	Soluble	Solid	300.0	70834
890-5967-9	DS 13	Soluble	Solid	300.0	70834
MB 880-70834/1-A	Method Blank	Soluble	Solid	300.0	70834
LCS 880-70834/2-A	Lab Control Sample	Soluble	Solid	300.0	70834
LCSD 880-70834/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	70834
890-5967-1 MS	DS 01	Soluble	Solid	300.0	70834
890-5967-1 MSD	DS 01	Soluble	Solid	300.0	70834

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

Client Sample ID: DS 01
Date Collected: 01/11/24 10:23
Date Received: 01/11/24 14:08

Lab Sample ID: 890-5967-1
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			4.97 g	5 mL	71026	01/16/24 15:37	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71036	01/18/24 05:49	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71107	01/18/24 05:49	SM	EET MID
Total/NA	Analysis	8015 NM		1			71014	01/15/24 21:38	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	70849	01/15/24 11:27	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70824	01/15/24 21:38	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	70834	01/15/24 08:12	CH	EET MID
Soluble	Analysis	300.0		1			70976	01/16/24 17:52	CH	EET MID

Client Sample ID: DS 02
Date Collected: 01/11/24 09:52
Date Received: 01/11/24 14:08

Lab Sample ID: 890-5967-2
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			4.95 g	5 mL	71026	01/16/24 15:37	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71036	01/18/24 07:33	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71107	01/18/24 07:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			71014	01/15/24 22:45	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	70849	01/15/24 11:27	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70824	01/15/24 22:45	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	70834	01/15/24 08:12	CH	EET MID
Soluble	Analysis	300.0		1			70976	01/16/24 18:13	CH	EET MID

Client Sample ID: DS 03
Date Collected: 01/11/24 10:31
Date Received: 01/11/24 14:08

Lab Sample ID: 890-5967-3
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			5.02 g	5 mL	71026	01/16/24 15:37	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71036	01/18/24 07:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71107	01/18/24 07:59	SM	EET MID
Total/NA	Analysis	8015 NM		1			71014	01/15/24 23:08	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	70849	01/15/24 11:27	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70824	01/15/24 23:08	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	70834	01/15/24 08:12	CH	EET MID
Soluble	Analysis	300.0		1			70976	01/16/24 18:20	CH	EET MID

Client Sample ID: DS 05
Date Collected: 01/11/24 12:53
Date Received: 01/11/24 14:08

Lab Sample ID: 890-5967-4
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			4.98 g	5 mL	71092	01/18/24 14:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71087	01/18/24 17:30	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71107	01/18/24 17:30	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

Client Sample ID: DS 05
Date Collected: 01/11/24 12:53
Date Received: 01/11/24 14:08

Lab Sample ID: 890-5967-4
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			71014	01/15/24 23:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	70849	01/15/24 11:27	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70824	01/15/24 23:31	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	70834	01/15/24 08:12	CH	EET MID
Soluble	Analysis	300.0		1			70976	01/16/24 18:27	CH	EET MID

Client Sample ID: DS 07
Date Collected: 01/11/24 12:32
Date Received: 01/11/24 14:08

Lab Sample ID: 890-5967-5
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	71026	01/16/24 15:37	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71036	01/18/24 08:51	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71107	01/18/24 08:51	SM	EET MID
Total/NA	Analysis	8015 NM		1			71014	01/15/24 23:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	70849	01/15/24 11:27	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70824	01/15/24 23:50	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	70834	01/15/24 08:12	CH	EET MID
Soluble	Analysis	300.0		1			70976	01/16/24 18:34	CH	EET MID

Client Sample ID: DS 12
Date Collected: 01/11/24 10:36
Date Received: 01/11/24 14:08

Lab Sample ID: 890-5967-6
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	71092	01/18/24 14:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71087	01/18/24 17:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71107	01/18/24 17:50	SM	EET MID
Total/NA	Analysis	8015 NM		1			71014	01/16/24 00:12	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	70849	01/15/24 11:27	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70824	01/16/24 00:12	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	70834	01/15/24 08:12	CH	EET MID
Soluble	Analysis	300.0		1			70976	01/16/24 18:54	CH	EET MID

Client Sample ID: DS 12
Date Collected: 01/11/24 12:32
Date Received: 01/11/24 14:08

Lab Sample ID: 890-5967-7
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			5.02 g	5 mL	71026	01/16/24 15:37	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71036	01/18/24 09:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71107	01/18/24 09:43	SM	EET MID
Total/NA	Analysis	8015 NM		1			71014	01/16/24 00:33	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	70849	01/15/24 11:27	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70824	01/16/24 00:33	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

Client Sample ID: DS 12
Date Collected: 01/11/24 12:32
Date Received: 01/11/24 14:08

Lab Sample ID: 890-5967-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.04 g	50 mL	70834	01/15/24 08:12	CH	EET MID
Soluble	Analysis	300.0		1			70976	01/16/24 19:01	CH	EET MID

Client Sample ID: DS 13
Date Collected: 01/11/24 13:07
Date Received: 01/11/24 14:08

Lab Sample ID: 890-5967-8
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			5.02 g	5 mL	71092	01/18/24 09:37	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71087	01/18/24 18:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71107	01/18/24 18:10	SM	EET MID
Total/NA	Analysis	8015 NM		1			71014	01/16/24 00:53	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	70849	01/15/24 11:27	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70824	01/16/24 00:53	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	70834	01/15/24 08:12	CH	EET MID
Soluble	Analysis	300.0		1			70976	01/16/24 19:08	CH	EET MID

Client Sample ID: DS 13
Date Collected: 01/11/24 13:12
Date Received: 01/11/24 14:08

Lab Sample ID: 890-5967-9
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	71026	01/16/24 15:37	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	71036	01/18/24 10:36	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			71107	01/18/24 10:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			71014	01/16/24 01:15	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	70849	01/15/24 11:27	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70824	01/16/24 01:15	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	70834	01/15/24 08:12	CH	EET MID
Soluble	Analysis	300.0		1			70976	01/16/24 19:15	CH	EET MID

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

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

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	T104704400-23-26	06-30-24
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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- 10
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- 13
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Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

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: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5967-1
SDG: KH 237057

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5967-1	DS 01	Solid	01/11/24 10:23	01/11/24 14:08	5'
890-5967-2	DS 02	Solid	01/11/24 09:52	01/11/24 14:08	5'
890-5967-3	DS 03	Solid	01/11/24 10:31	01/11/24 14:08	5'
890-5967-4	DS 05	Solid	01/11/24 12:53	01/11/24 14:08	5'
890-5967-5	DS 07	Solid	01/11/24 12:32	01/11/24 14:08	5'
890-5967-6	DS 12	Solid	01/11/24 10:36	01/11/24 14:08	0.5'
890-5967-7	DS 12	Solid	01/11/24 12:32	01/11/24 14:08	0.5'
890-5967-8	DS 13	Solid	01/11/24 13:07	01/11/24 14:08	0.5'
890-5967-9	DS 13	Solid	01/11/24 13:12	01/11/24 14:08	5'





Environment Testing
Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 502-0300
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 1

Project Manager:	Joseph Guesnier	Bill to: (if different)	Dale Woodall
Company Name:	Terracon	Company Name:	Devon Energy Corp
Address:	4526 W. Pierce St	Address:	205 E. Bender Road #150
City, State ZIP:	Carlsbad NM, 88220	City, State ZIP:	Hobbs, NM 88240
Phone:	(806)-300-0140	Email:	Devon.Sanchez@terracon.com, Travis.Casey@terracon.com, Joseph.Guesnier@terracon.com, Betty.Sue.Miller@terracon.com

Program: ☐ UST/PT ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐	
State of Project: _____	
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐	Deliverables: ☐ EDD ☐ ADAPT ☐ Other: _____

Project Name:	Longview Deep Fed 1-21	Turn Around	☐ Routine ☐ Rush	Pre-Code	ANALYSIS REQUEST		Preservative Codes
Project Number:	KH237057	Due Date:					None: NO DI Water: H ₂ O
Project Location:	Gus Sanchez	TAT starts the day received by the lab. If received by 4:30pm					Cool: Cool MeOH: Me
Sample's Name:		Wet: Yes No					HCL: HC HNO ₃ : HN
PO #:		Temperature Reading: 3.4					H ₂ SO ₄ : H ₂ H ₃ PO ₄ : HP
SAMPLE RECEIPT	Temp Blank: Yes No	Thermometer ID: 11/11/11					NaHSO ₄ : NABIS
Samples Received Intact:	Yes No	Correction Factor: 1					Na ₂ S ₂ O ₃ : NaSO ₃
Cooler Custody Seals:	Yes No	Temperature Reading: 3.4					Zn Acetate+NaOH: Zn
Sample Custody Seals:	Yes No	Corrected Temperature: 3.2					NaOH+Ascorbic Acid: SAPC
Total Containers:							
Sample Identification	Matrix	Date Sampled	Time	Depth	Grab/Comp	# of Cont	Chloride (EPA 300)
OS 01	Soil	11/11	10:23	5'	6	1	X
OS 02	Soil		9:52	5'	6	1	X
OS 03	Soil		10:31	5'	6	1	X
OS 05	Soil		12:53	5'	6	1	X
OS 07	Soil		12:32	5'	6	1	X
OS 12	Soil		10:36	0.5'	6	1	X
OS 12	Soil		10:36	0.5'	6	1	X
OS 13	Soil		11:07	0.5'	6	1	X
OS 13	Soil		11:12	5'	6	1	X
	Soil						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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		11/12/14			

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-5967-1

SDG Number: KH 237057

Login Number: 5967

List Source: Eurofins Carlsbad

List Number: 1

Creator: Bruns, Shannon

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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-5967-1

SDG Number: KH 237057

Login Number: 5967

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 01/15/24 08:54 AM

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



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Joseph Guesnier
Terracon Consulting Eng & Scientists
5847 50th St
Lubbock, Texas 79424
Generated 7/11/2024 2:50:17 PM

JOB DESCRIPTION

LEAK # 149
KH 247005

JOB NUMBER

890-6903-1

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
7/11/2024 2:50:17 PM

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

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Laboratory Job ID: 890-6903-1
SDG: KH 247005

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Definitions/Glossary

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

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

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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: Terracon Consulting Eng & Scientists
Project: LEAK # 149

Job ID: 890-6903-1

Job ID: 890-6903-1

Eurofins Carlsbad

Job Narrative 890-6903-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 7/8/2024 11:14 AM. 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 -0.4°C.

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: CSW - 01 (890-6903-1), CSW - 01 (890-6903-2), CSW - 02 (890-6903-3), CSW - 02 (890-6903-4), CSW - 03 (890-6903-5), CSW - 03 (890-6903-6), CSW - 04 (890-6903-7), CSW - 05 (890-6903-8), CSW - 06 (890-6903-9), CSW - 07 (890-6903-10), CSW - 08 (890-6903-11), CSW - 08 (890-6903-12), CSF - 01 (890-6903-13), CSF - 02 (890-6903-14), CSF - 03 (890-6903-15), CSF - 04 (890-6903-16), CSF - 05 (890-6903-17), CSF - 06 (890-6903-18), CSF - 07 (890-6903-19), CSF - 08 (890-6903-20), CSF - 09 (890-6903-21) and CSF - 10 (890-6903-22).

GC VOA

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-85228 and analytical batch 880-85117 was outside the upper control limits.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-85117 recovered under the lower control limit for Toluene. The samples associated with this CCV were ran within 12 hours of passing CCV; therefore, the data have been reported.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-85215 recovered under the lower control limit for Benzene and Toluene. The samples associated with this CCV were ran within 12 hours of passing CCV; therefore, the data have been 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 samples were outside control limits: CSW - 01 (890-6903-2), CSW - 02 (890-6903-3), CSW - 03 (890-6903-5), CSW - 05 (890-6903-8) and (LCS 880-85207/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-85207 and analytical batch 880-85201 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8015MOD_NM: An incorrect volume of surrogate spiking solution was inadvertently added the following samples: CSF - 10 (890-6903-22) and (890-6904-A-1-D). 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

Method 300_ORGFM_28D - Soluble: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-85262 and analytical batch 880-85264 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was

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Case Narrative

Client: Terracon Consulting Eng & Scientists
Project: LEAK # 149

Job ID: 890-6903-1

Job ID: 890-6903-1 (Continued) **Eurofins Carlsbad**

within acceptance limits.

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: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSW - 01

Lab Sample ID: 890-6903-1

Date Collected: 07/05/24 14:07

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 0 - 4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 13:01	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 13:01	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 13:01	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/09/24 10:46	07/09/24 13:01	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 13:01	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/09/24 10:46	07/09/24 13:01	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	07/09/24 10:46	07/09/24 13:01	1
1,4-Difluorobenzene (Surr)	99		70 - 130	07/09/24 10:46	07/09/24 13:01	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			07/09/24 13:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	72.7		49.8		mg/Kg			07/09/24 10:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		07/09/24 07:22	07/09/24 10:01	1
Diesel Range Organics (Over C10-C28)	72.7	F1	49.8		mg/Kg		07/09/24 07:22	07/09/24 10:01	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/09/24 07:22	07/09/24 10:01	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130	07/09/24 07:22	07/09/24 10:01	1
o-Terphenyl	122		70 - 130	07/09/24 07:22	07/09/24 10:01	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	158	F1	5.03		mg/Kg			07/10/24 04:13	1

Client Sample ID: CSW - 01

Lab Sample ID: 890-6903-2

Date Collected: 07/05/24 14:09

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 4 - 6

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		07/09/24 10:46	07/09/24 13:21	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/09/24 10:46	07/09/24 13:21	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/09/24 10:46	07/09/24 13:21	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/09/24 10:46	07/09/24 13:21	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/09/24 10:46	07/09/24 13:21	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/09/24 10:46	07/09/24 13:21	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSW - 01

Lab Sample ID: 890-6903-2

Date Collected: 07/05/24 14:09

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 4 - 6

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130	07/09/24 10:46	07/09/24 13:21	1
1,4-Difluorobenzene (Surr)	92		70 - 130	07/09/24 10:46	07/09/24 13:21	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			07/09/24 13:21	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			07/09/24 11:03	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		07/09/24 07:22	07/09/24 11:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/09/24 07:22	07/09/24 11:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/09/24 07:22	07/09/24 11:03	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130	07/09/24 07:22	07/09/24 11:03	1
o-Terphenyl	135	S1+	70 - 130	07/09/24 07:22	07/09/24 11:03	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	71.0		5.02		mg/Kg			07/10/24 04:35	1

Client Sample ID: CSW - 02

Lab Sample ID: 890-6903-3

Date Collected: 07/05/24 14:12

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 0 - 4

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		07/09/24 10:46	07/09/24 13:42	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/09/24 10:46	07/09/24 13:42	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/09/24 10:46	07/09/24 13:42	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		07/09/24 10:46	07/09/24 13:42	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/09/24 10:46	07/09/24 13:42	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		07/09/24 10:46	07/09/24 13:42	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	07/09/24 10:46	07/09/24 13:42	1
1,4-Difluorobenzene (Surr)	102		70 - 130	07/09/24 10:46	07/09/24 13:42	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			07/09/24 13:42	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSW - 02

Lab Sample ID: 890-6903-3

Date Collected: 07/05/24 14:12

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 0 - 4

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	102		49.8		mg/Kg			07/09/24 11:24	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		07/09/24 07:22	07/09/24 11:24	1
Diesel Range Organics (Over C10-C28)	102		49.8		mg/Kg		07/09/24 07:22	07/09/24 11:24	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/09/24 07:22	07/09/24 11:24	1
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130				07/09/24 07:22	07/09/24 11:24	1
o-Terphenyl	132	S1+	70 - 130				07/09/24 07:22	07/09/24 11:24	1
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	278		5.05		mg/Kg			07/10/24 04:43	1

Client Sample ID: CSW - 02

Lab Sample ID: 890-6903-4

Date Collected: 07/05/24 14:13

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 4 - 6

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 14:02	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 14:02	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 14:02	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/09/24 10:46	07/09/24 14:02	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 14:02	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/09/24 10:46	07/09/24 14:02	1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130				07/09/24 10:46	07/09/24 14:02	1
1,4-Difluorobenzene (Surr)	101		70 - 130				07/09/24 10:46	07/09/24 14:02	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			07/09/24 14:02	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			07/09/24 11:44	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		07/09/24 07:22	07/09/24 11:44	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		07/09/24 07:22	07/09/24 11:44	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSW - 02

Lab Sample ID: 890-6903-4

Date Collected: 07/05/24 14:13

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 4 - 6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		07/09/24 07:22	07/09/24 11:44	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	07/09/24 07:22	07/09/24 11:44	1
o-Terphenyl	116		70 - 130	07/09/24 07:22	07/09/24 11:44	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	165		4.95		mg/Kg			07/10/24 04:50	1

Client Sample ID: CSW - 03

Lab Sample ID: 890-6903-5

Date Collected: 07/05/24 14:14

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 0 - 4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/09/24 10:46	07/09/24 14:22	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/09/24 10:46	07/09/24 14:22	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/09/24 10:46	07/09/24 14:22	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/09/24 10:46	07/09/24 14:22	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/09/24 10:46	07/09/24 14:22	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/09/24 10:46	07/09/24 14:22	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	07/09/24 10:46	07/09/24 14:22	1
1,4-Difluorobenzene (Surr)	102		70 - 130	07/09/24 10:46	07/09/24 14:22	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			07/09/24 14:22	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			07/09/24 12:04	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	<49.8	U	49.8		mg/Kg		07/09/24 07:22	07/09/24 12:04	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/09/24 07:22	07/09/24 12:04	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/09/24 07:22	07/09/24 12:04	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130	07/09/24 07:22	07/09/24 12:04	1
o-Terphenyl	132	S1+	70 - 130	07/09/24 07:22	07/09/24 12:04	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSW - 03

Lab Sample ID: 890-6903-5

Date Collected: 07/05/24 14:14

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 0 - 4

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	95.3		4.98		mg/Kg			07/10/24 04:57	1

Client Sample ID: CSW - 03

Lab Sample ID: 890-6903-6

Date Collected: 07/05/24 14:16

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 4 - 6

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		07/09/24 10:46	07/09/24 14:43	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/09/24 10:46	07/09/24 14:43	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/09/24 10:46	07/09/24 14:43	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/09/24 10:46	07/09/24 14:43	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/09/24 10:46	07/09/24 14:43	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/09/24 10:46	07/09/24 14:43	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	07/09/24 10:46	07/09/24 14:43	1
1,4-Difluorobenzene (Surr)	100		70 - 130	07/09/24 10:46	07/09/24 14:43	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			07/09/24 14:43	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			07/09/24 12:25	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	<49.8	U	49.8		mg/Kg		07/09/24 07:22	07/09/24 12:25	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/09/24 07:22	07/09/24 12:25	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/09/24 07:22	07/09/24 12:25	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130	07/09/24 07:22	07/09/24 12:25	1
o-Terphenyl	124		70 - 130	07/09/24 07:22	07/09/24 12:25	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	130		5.02		mg/Kg			07/10/24 05:19	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSW - 04

Lab Sample ID: 890-6903-7

Date Collected: 07/05/24 15:28

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 0 - 2

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		07/09/24 10:46	07/09/24 15:03	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/09/24 10:46	07/09/24 15:03	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/09/24 10:46	07/09/24 15:03	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		07/09/24 10:46	07/09/24 15:03	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/09/24 10:46	07/09/24 15:03	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		07/09/24 10:46	07/09/24 15:03	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	07/09/24 10:46	07/09/24 15:03	1
1,4-Difluorobenzene (Surr)	102		70 - 130	07/09/24 10:46	07/09/24 15:03	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			07/09/24 15:03	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	118		49.9		mg/Kg			07/09/24 12:46	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	<49.9	U	49.9		mg/Kg		07/09/24 07:22	07/09/24 12:46	1
Diesel Range Organics (Over C10-C28)	118		49.9		mg/Kg		07/09/24 07:22	07/09/24 12:46	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/09/24 07:22	07/09/24 12:46	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130	07/09/24 07:22	07/09/24 12:46	1
o-Terphenyl	113		70 - 130	07/09/24 07:22	07/09/24 12:46	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	195		4.97		mg/Kg			07/10/24 05:26	1

Client Sample ID: CSW - 05

Lab Sample ID: 890-6903-8

Date Collected: 07/05/24 15:30

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 0 - 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		07/09/24 10:46	07/09/24 15:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 15:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 15:24	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/09/24 10:46	07/09/24 15:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 15:24	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/09/24 10:46	07/09/24 15:24	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSW - 05

Lab Sample ID: 890-6903-8

Date Collected: 07/05/24 15:30

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 0 - 2

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	07/09/24 10:46	07/09/24 15:24	1
1,4-Difluorobenzene (Surr)	101		70 - 130	07/09/24 10:46	07/09/24 15:24	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			07/09/24 15:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	68.8		50.0		mg/Kg			07/09/24 13:06	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		07/09/24 07:22	07/09/24 13:06	1
Diesel Range Organics (Over C10-C28)	68.8		50.0		mg/Kg		07/09/24 07:22	07/09/24 13:06	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/09/24 07:22	07/09/24 13:06	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130	07/09/24 07:22	07/09/24 13:06	1
o-Terphenyl	132	S1+	70 - 130	07/09/24 07:22	07/09/24 13:06	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	53.4		5.02		mg/Kg			07/10/24 05:34	1

Client Sample ID: CSW - 06

Lab Sample ID: 890-6903-9

Date Collected: 07/05/24 15:26

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 0 - 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/09/24 10:46	07/09/24 15:44	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/09/24 10:46	07/09/24 15:44	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/09/24 10:46	07/09/24 15:44	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/09/24 10:46	07/09/24 15:44	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/09/24 10:46	07/09/24 15:44	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/09/24 10:46	07/09/24 15:44	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130	07/09/24 10:46	07/09/24 15:44	1
1,4-Difluorobenzene (Surr)	98		70 - 130	07/09/24 10:46	07/09/24 15:44	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			07/09/24 15:44	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSW - 06

Lab Sample ID: 890-6903-9

Date Collected: 07/05/24 15:26

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 0 - 2

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	540		49.9		mg/Kg			07/09/24 13:27	1
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/09/24 07:22	07/09/24 13:27	1
Diesel Range Organics (Over C10-C28)	540		49.9		mg/Kg		07/09/24 07:22	07/09/24 13:27	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/09/24 07:22	07/09/24 13:27	1
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130				07/09/24 07:22	07/09/24 13:27	1
o-Terphenyl	101		70 - 130				07/09/24 07:22	07/09/24 13:27	1
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	210		5.00		mg/Kg			07/10/24 05:41	1

Client Sample ID: CSW - 07

Lab Sample ID: 890-6903-10

Date Collected: 07/05/24 09:39

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 0 - 4

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/09/24 10:46	07/09/24 16:05	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/09/24 10:46	07/09/24 16:05	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/09/24 10:46	07/09/24 16:05	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/09/24 10:46	07/09/24 16:05	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/09/24 10:46	07/09/24 16:05	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/09/24 10:46	07/09/24 16:05	1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130				07/09/24 10:46	07/09/24 16:05	1
1,4-Difluorobenzene (Surr)	101		70 - 130				07/09/24 10:46	07/09/24 16:05	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			07/09/24 16:05	1
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			07/09/24 13:48	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	<49.8	U	49.8		mg/Kg		07/09/24 07:22	07/09/24 13:48	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/09/24 07:22	07/09/24 13:48	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSW - 07

Lab Sample ID: 890-6903-10

Date Collected: 07/05/24 09:39

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 0 - 4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/09/24 07:22	07/09/24 13:48	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	115		70 - 130	07/09/24 07:22	07/09/24 13:48	1
o-Terphenyl	129		70 - 130	07/09/24 07:22	07/09/24 13:48	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	129		5.03		mg/Kg			07/10/24 05:48	1

Client Sample ID: CSW - 08

Lab Sample ID: 890-6903-11

Date Collected: 07/05/24 10:15

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 0 - 4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		07/09/24 10:46	07/09/24 17:39	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/09/24 10:46	07/09/24 17:39	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/09/24 10:46	07/09/24 17:39	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/09/24 10:46	07/09/24 17:39	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/09/24 10:46	07/09/24 17:39	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/09/24 10:46	07/09/24 17:39	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	07/09/24 10:46	07/09/24 17:39	1
1,4-Difluorobenzene (Surr)	101		70 - 130	07/09/24 10:46	07/09/24 17:39	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			07/09/24 17:39	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			07/09/24 14:29	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		07/09/24 07:22	07/09/24 14:29	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/09/24 07:22	07/09/24 14:29	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/09/24 07:22	07/09/24 14:29	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130	07/09/24 07:22	07/09/24 14:29	1
o-Terphenyl	122		70 - 130	07/09/24 07:22	07/09/24 14:29	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSW - 08

Lab Sample ID: 890-6903-11

Date Collected: 07/05/24 10:15

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 0 - 4

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	127	F1	4.98		mg/Kg			07/10/24 05:56	1

Client Sample ID: CSW - 08

Lab Sample ID: 890-6903-12

Date Collected: 07/05/24 10:19

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 4 - 6

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		07/09/24 10:46	07/09/24 18:00	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/09/24 10:46	07/09/24 18:00	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/09/24 10:46	07/09/24 18:00	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		07/09/24 10:46	07/09/24 18:00	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/09/24 10:46	07/09/24 18:00	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		07/09/24 10:46	07/09/24 18:00	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	07/09/24 10:46	07/09/24 18:00	1
1,4-Difluorobenzene (Surr)	101		70 - 130	07/09/24 10:46	07/09/24 18:00	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			07/09/24 18:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			07/09/24 14:49	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		07/09/24 07:22	07/09/24 14:49	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/09/24 07:22	07/09/24 14:49	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/09/24 07:22	07/09/24 14:49	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130	07/09/24 07:22	07/09/24 14:49	1
o-Terphenyl	114		70 - 130	07/09/24 07:22	07/09/24 14:49	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	335		4.98		mg/Kg			07/10/24 06:18	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSF - 01

Lab Sample ID: 890-6903-13

Date Collected: 07/05/24 14:47

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 6 - 6

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		07/09/24 10:46	07/09/24 18:20	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/09/24 10:46	07/09/24 18:20	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/09/24 10:46	07/09/24 18:20	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/09/24 10:46	07/09/24 18:20	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/09/24 10:46	07/09/24 18:20	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/09/24 10:46	07/09/24 18:20	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	07/09/24 10:46	07/09/24 18:20	1
1,4-Difluorobenzene (Surr)	101		70 - 130	07/09/24 10:46	07/09/24 18:20	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			07/09/24 18:20	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			07/09/24 15:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/09/24 07:22	07/09/24 15:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/09/24 07:22	07/09/24 15:10	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/09/24 07:22	07/09/24 15:10	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130	07/09/24 07:22	07/09/24 15:10	1
o-Terphenyl	119		70 - 130	07/09/24 07:22	07/09/24 15:10	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	114		5.02		mg/Kg			07/10/24 06:25	1

Client Sample ID: CSF - 02

Lab Sample ID: 890-6903-14

Date Collected: 07/05/24 14:45

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 6 - 6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 18:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 18:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 18:41	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/09/24 10:46	07/09/24 18:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 18:41	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/09/24 10:46	07/09/24 18:41	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSF - 02

Lab Sample ID: 890-6903-14

Date Collected: 07/05/24 14:45

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 6 - 6

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	07/09/24 10:46	07/09/24 18:41	1
1,4-Difluorobenzene (Surr)	101		70 - 130	07/09/24 10:46	07/09/24 18:41	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			07/09/24 18:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			07/09/24 15:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		07/09/24 07:22	07/09/24 15:30	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		07/09/24 07:22	07/09/24 15:30	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		07/09/24 07:22	07/09/24 15:30	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130	07/09/24 07:22	07/09/24 15:30	1
o-Terphenyl	122		70 - 130	07/09/24 07:22	07/09/24 15:30	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	160		4.97		mg/Kg			07/10/24 06:47	1

Client Sample ID: CSF - 03

Lab Sample ID: 890-6903-15

Date Collected: 07/05/24 14:43

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 6 - 6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/09/24 10:46	07/09/24 19:01	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/09/24 10:46	07/09/24 19:01	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/09/24 10:46	07/09/24 19:01	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/09/24 10:46	07/09/24 19:01	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/09/24 10:46	07/09/24 19:01	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/09/24 10:46	07/09/24 19:01	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	07/09/24 10:46	07/09/24 19:01	1
1,4-Difluorobenzene (Surr)	101		70 - 130	07/09/24 10:46	07/09/24 19:01	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			07/09/24 19:01	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSF - 03

Lab Sample ID: 890-6903-15

Date Collected: 07/05/24 14:43

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 6 - 6

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			07/09/24 15:51	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		07/09/24 07:22	07/09/24 15:51	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/09/24 07:22	07/09/24 15:51	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/09/24 07:22	07/09/24 15:51	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130	07/09/24 07:22	07/09/24 15:51	1
o-Terphenyl	112		70 - 130	07/09/24 07:22	07/09/24 15:51	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	155		5.03		mg/Kg			07/10/24 06:54	1

Client Sample ID: CSF - 04

Lab Sample ID: 890-6903-16

Date Collected: 07/05/24 15:13

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 2 - 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		07/09/24 10:46	07/09/24 19:21	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 19:21	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 19:21	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/09/24 10:46	07/09/24 19:21	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 19:21	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/09/24 10:46	07/09/24 19:21	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130	07/09/24 10:46	07/09/24 19:21	1
1,4-Difluorobenzene (Surr)	101		70 - 130	07/09/24 10:46	07/09/24 19:21	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			07/09/24 19:21	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			07/09/24 16:12	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		07/09/24 07:22	07/09/24 16:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/09/24 07:22	07/09/24 16:12	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSF - 04

Lab Sample ID: 890-6903-16

Date Collected: 07/05/24 15:13

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 2 - 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/09/24 07:22	07/09/24 16:12	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130	07/09/24 07:22	07/09/24 16:12	1
o-Terphenyl	123		70 - 130	07/09/24 07:22	07/09/24 16:12	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	43.5		5.05		mg/Kg			07/10/24 07:02	1

Client Sample ID: CSF - 05

Lab Sample ID: 890-6903-17

Date Collected: 07/05/24 15:10

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 2 - 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		07/09/24 10:46	07/09/24 19:42	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 19:42	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 19:42	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/09/24 10:46	07/09/24 19:42	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 19:42	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/09/24 10:46	07/09/24 19:42	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	07/09/24 10:46	07/09/24 19:42	1
1,4-Difluorobenzene (Surr)	100		70 - 130	07/09/24 10:46	07/09/24 19:42	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			07/09/24 19:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	185		49.9		mg/Kg			07/09/24 16:32	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	<49.9	U	49.9		mg/Kg		07/09/24 07:22	07/09/24 16:32	1
Diesel Range Organics (Over C10-C28)	185		49.9		mg/Kg		07/09/24 07:22	07/09/24 16:32	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/09/24 07:22	07/09/24 16:32	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130	07/09/24 07:22	07/09/24 16:32	1
o-Terphenyl	114		70 - 130	07/09/24 07:22	07/09/24 16:32	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSF - 05

Lab Sample ID: 890-6903-17

Date Collected: 07/05/24 15:10

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 2 - 2

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	72.9		4.97		mg/Kg			07/10/24 07:09	1

Client Sample ID: CSF - 06

Lab Sample ID: 890-6903-18

Date Collected: 07/05/24 15:58

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 2 - 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		07/09/24 10:46	07/09/24 20:02	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/09/24 10:46	07/09/24 20:02	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/09/24 10:46	07/09/24 20:02	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/09/24 10:46	07/09/24 20:02	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/09/24 10:46	07/09/24 20:02	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/09/24 10:46	07/09/24 20:02	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	07/09/24 10:46	07/09/24 20:02	1
1,4-Difluorobenzene (Surr)	102		70 - 130	07/09/24 10:46	07/09/24 20:02	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			07/09/24 20:02	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			07/09/24 16:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		07/09/24 07:22	07/09/24 16:53	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/09/24 07:22	07/09/24 16:53	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/09/24 07:22	07/09/24 16:53	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130	07/09/24 07:22	07/09/24 16:53	1
o-Terphenyl	110		70 - 130	07/09/24 07:22	07/09/24 16:53	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	89.0		4.95		mg/Kg			07/10/24 07:16	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSF - 07

Lab Sample ID: 890-6903-19

Date Collected: 07/05/24 15:59

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 2 - 2

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		07/09/24 10:46	07/09/24 20:23	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/09/24 10:46	07/09/24 20:23	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/09/24 10:46	07/09/24 20:23	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		07/09/24 10:46	07/09/24 20:23	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/09/24 10:46	07/09/24 20:23	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		07/09/24 10:46	07/09/24 20:23	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	07/09/24 10:46	07/09/24 20:23	1
1,4-Difluorobenzene (Surr)	100		70 - 130	07/09/24 10:46	07/09/24 20:23	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			07/09/24 20:23	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			07/10/24 06:26	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		07/09/24 07:22	07/10/24 06:26	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		07/09/24 07:22	07/10/24 06:26	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		07/09/24 07:22	07/10/24 06:26	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130	07/09/24 07:22	07/10/24 06:26	1
o-Terphenyl	109		70 - 130	07/09/24 07:22	07/10/24 06:26	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	132		4.95		mg/Kg			07/10/24 07:24	1

Client Sample ID: CSF - 08

Lab Sample ID: 890-6903-20

Date Collected: 07/05/24 09:33

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 4 - 4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 20:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 20:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 20:43	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/09/24 10:46	07/09/24 20:43	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 20:43	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/09/24 10:46	07/09/24 20:43	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSF - 08

Lab Sample ID: 890-6903-20

Date Collected: 07/05/24 09:33

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 4 - 4

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	07/09/24 10:46	07/09/24 20:43	1
1,4-Difluorobenzene (Surr)	101		70 - 130	07/09/24 10:46	07/09/24 20:43	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			07/09/24 20:43	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			07/10/24 06:59	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		07/09/24 07:22	07/10/24 06:59	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		07/09/24 07:22	07/10/24 06:59	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		07/09/24 07:22	07/10/24 06:59	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	07/09/24 07:22	07/10/24 06:59	1
o-Terphenyl	113		70 - 130	07/09/24 07:22	07/10/24 06:59	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	208		4.95		mg/Kg			07/10/24 07:31	1

Client Sample ID: CSF - 09

Lab Sample ID: 890-6903-21

Date Collected: 07/05/24 09:45

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 4 - 4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:49	07/09/24 14:30	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:49	07/09/24 14:30	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:49	07/09/24 14:30	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/09/24 10:49	07/09/24 14:30	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:49	07/09/24 14:30	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/09/24 10:49	07/09/24 14:30	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	07/09/24 10:49	07/09/24 14:30	1
1,4-Difluorobenzene (Surr)	98		70 - 130	07/09/24 10:49	07/09/24 14:30	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			07/09/24 14:30	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSF - 09

Lab Sample ID: 890-6903-21

Date Collected: 07/05/24 09:45

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 4 - 4

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			07/10/24 14:21	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	<49.7	U	49.7		mg/Kg		07/09/24 16:03	07/10/24 14:21	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		07/09/24 16:03	07/10/24 14:21	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		07/09/24 16:03	07/10/24 14:21	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130	07/09/24 16:03	07/10/24 14:21	1
o-Terphenyl	86		70 - 130	07/09/24 16:03	07/10/24 14:21	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	129		4.98		mg/Kg			07/10/24 11:25	1

Client Sample ID: CSF - 10

Lab Sample ID: 890-6903-22

Date Collected: 07/05/24 09:36

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 4 - 4

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		07/09/24 10:49	07/09/24 14:51	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/09/24 10:49	07/09/24 14:51	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/09/24 10:49	07/09/24 14:51	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		07/09/24 10:49	07/09/24 14:51	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/09/24 10:49	07/09/24 14:51	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		07/09/24 10:49	07/09/24 14:51	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129		70 - 130	07/09/24 10:49	07/09/24 14:51	1
1,4-Difluorobenzene (Surr)	105		70 - 130	07/09/24 10:49	07/09/24 14:51	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			07/09/24 14:51	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			07/10/24 14:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/09/24 16:03	07/10/24 14:39	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/09/24 16:03	07/10/24 14:39	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSF - 10
Date Collected: 07/05/24 09:36
Date Received: 07/08/24 11:14
Sample Depth: 4 - 4

Lab Sample ID: 890-6903-22
Matrix: Solid

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/09/24 16:03	07/10/24 14:39	1
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	67	S1-	70 - 130				07/09/24 16:03	07/10/24 14:39	1
o-Terphenyl	68	S1-	70 - 130				07/09/24 16:03	07/10/24 14:39	1
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	97.0		4.97		mg/Kg			07/10/24 11:32	1

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

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)
890-6903-1	CSW - 01	111	99
890-6903-1 MS	CSW - 01	113	94
890-6903-1 MSD	CSW - 01	101	100
890-6903-2	CSW - 01	116	92
890-6903-3	CSW - 02	108	102
890-6903-4	CSW - 02	106	101
890-6903-5	CSW - 03	107	102
890-6903-6	CSW - 03	109	100
890-6903-7	CSW - 04	109	102
890-6903-8	CSW - 05	107	101
890-6903-9	CSW - 06	114	98
890-6903-10	CSW - 07	107	101
890-6903-11	CSW - 08	108	101
890-6903-12	CSW - 08	108	101
890-6903-13	CSF - 01	106	101
890-6903-14	CSF - 02	108	101
890-6903-15	CSF - 03	109	101
890-6903-16	CSF - 04	110	101
890-6903-17	CSF - 05	106	100
890-6903-18	CSF - 06	109	102
890-6903-19	CSF - 07	113	100
890-6903-20	CSF - 08	111	101
890-6903-21	CSF - 09	99	98
890-6903-21 MS	CSF - 09	105	98
890-6903-21 MSD	CSF - 09	121	98
890-6903-22	CSF - 10	129	105
LCS 880-85226/1-A	Lab Control Sample	100	100
LCS 880-85228/1-A	Lab Control Sample	116	104
LCSD 880-85226/2-A	Lab Control Sample Dup	104	101
LCSD 880-85228/2-A	Lab Control Sample Dup	113	104
MB 880-85226/5-A	Method Blank	102	99
MB 880-85228/5-A	Method Blank	200 S1+	129

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)
890-6903-1	CSW - 01	101	122
890-6903-1 MS	CSW - 01	96	97
890-6903-1 MSD	CSW - 01	95	98
890-6903-2	CSW - 01	114	135 S1+
890-6903-3	CSW - 02	114	132 S1+
890-6903-4	CSW - 02	97	116
890-6903-5	CSW - 03	108	132 S1+

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Surrogate Summary

Client: Terracon Consulting Eng & Scientists

Job ID: 890-6903-1

Project/Site: LEAK # 149

SDG: KH 247005

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-6903-6	CSW - 03	105	124
890-6903-7	CSW - 04	94	113
890-6903-8	CSW - 05	112	132 S1+
890-6903-9	CSW - 06	99	101
890-6903-10	CSW - 07	115	129
890-6903-11	CSW - 08	103	122
890-6903-12	CSW - 08	95	114
890-6903-13	CSF - 01	98	119
890-6903-14	CSF - 02	105	122
890-6903-15	CSF - 03	98	112
890-6903-16	CSF - 04	102	123
890-6903-17	CSF - 05	100	114
890-6903-18	CSF - 06	93	110
890-6903-19	CSF - 07	94	109
890-6903-20	CSF - 08	97	113
890-6903-21	CSF - 09	84	86
890-6903-22	CSF - 10	67 S1-	68 S1-
LCS 880-85207/2-A	Lab Control Sample	122	132 S1+
LCS 880-85268/2-A	Lab Control Sample	94	110
LCSD 880-85207/3-A	Lab Control Sample Dup	113	120
LCSD 880-85268/3-A	Lab Control Sample Dup	116	113
MB 880-85207/1-A	Method Blank	102	127
MB 880-85268/1-A	Method Blank	87	110

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-85226/5-A

Matrix: Solid

Analysis Batch: 85215

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 85226

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 12:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 12:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 12:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/09/24 10:46	07/09/24 12:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:46	07/09/24 12:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/09/24 10:46	07/09/24 12:39	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	102		70 - 130	07/09/24 10:46	07/09/24 12:39	1
1,4-Difluorobenzene (Surr)	99		70 - 130	07/09/24 10:46	07/09/24 12:39	1

Lab Sample ID: LCS 880-85226/1-A

Matrix: Solid

Analysis Batch: 85215

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 85226

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Benzene	0.100	0.08905		mg/Kg		89	70 - 130
Toluene	0.100	0.08736		mg/Kg		87	70 - 130
Ethylbenzene	0.100	0.08671		mg/Kg		87	70 - 130
m-Xylene & p-Xylene	0.200	0.1773		mg/Kg		89	70 - 130
o-Xylene	0.100	0.08657		mg/Kg		87	70 - 130

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

Lab Sample ID: LCSD 880-85226/2-A

Matrix: Solid

Analysis Batch: 85215

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 85226

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec Limits	RPD	
		Result	Qualifier					RPD	Limit
Benzene	0.100	0.08649		mg/Kg		86	70 - 130	3	35
Toluene	0.100	0.08406		mg/Kg		84	70 - 130	4	35
Ethylbenzene	0.100	0.08319		mg/Kg		83	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.1703		mg/Kg		85	70 - 130	4	35
o-Xylene	0.100	0.08409		mg/Kg		84	70 - 130	3	35

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: 890-6903-1 MS

Matrix: Solid

Analysis Batch: 85215

Client Sample ID: CSW - 01

Prep Type: Total/NA

Prep Batch: 85226

Analyte	Sample Sample		Spike Added	MS MS		Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
Benzene	<0.00200	U	0.100	0.09766		mg/Kg		98	70 - 130
Toluene	<0.00200	U	0.100	0.1016		mg/Kg		102	70 - 130

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

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

Lab Sample ID: 890-6903-1 MS

Matrix: Solid

Analysis Batch: 85215

Client Sample ID: CSW - 01

Prep Type: Total/NA

Prep Batch: 85226

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	
	Result	Qualifier		Result	Qualifier				Limits	
Ethylbenzene	<0.00200	U	0.100	0.1017		mg/Kg		102	70 - 130	
m-Xylene & p-Xylene	<0.00399	U	0.200	0.2114		mg/Kg		106	70 - 130	
o-Xylene	<0.00200	U	0.100	0.1013		mg/Kg		101	70 - 130	

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	113		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: 890-6903-1 MSD

Matrix: Solid

Analysis Batch: 85215

Client Sample ID: CSW - 01

Prep Type: Total/NA

Prep Batch: 85226

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec		RPD	
	Result	Qualifier		Result	Qualifier				Limits		RPD	Limit
Benzene	<0.00200	U	0.100	0.09153		mg/Kg		92	70 - 130		6	35
Toluene	<0.00200	U	0.100	0.08800		mg/Kg		88	70 - 130		14	35
Ethylbenzene	<0.00200	U	0.100	0.08518		mg/Kg		85	70 - 130		18	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1755		mg/Kg		88	70 - 130		19	35
o-Xylene	<0.00200	U	0.100	0.08485		mg/Kg		85	70 - 130		18	35

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: MB 880-85228/5-A

Matrix: Solid

Analysis Batch: 85117

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 85228

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:49	07/09/24 14:02	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:49	07/09/24 14:02	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:49	07/09/24 14:02	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/09/24 10:49	07/09/24 14:02	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/09/24 10:49	07/09/24 14:02	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/09/24 10:49	07/09/24 14:02	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	200	S1+	70 - 130	07/09/24 10:49	07/09/24 14:02	1
1,4-Difluorobenzene (Surr)	129		70 - 130	07/09/24 10:49	07/09/24 14:02	1

Lab Sample ID: LCS 880-85228/1-A

Matrix: Solid

Analysis Batch: 85117

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 85228

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec	
							Limits	
Benzene	0.100	0.1022		mg/Kg		102	70 - 130	
Toluene	0.100	0.08444		mg/Kg		84	70 - 130	
Ethylbenzene	0.100	0.09171		mg/Kg		92	70 - 130	
m-Xylene & p-Xylene	0.200	0.1973		mg/Kg		99	70 - 130	

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

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

Lab Sample ID: LCS 880-85228/1-A

Matrix: Solid

Analysis Batch: 85117

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 85228

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
o-Xylene	0.100	0.1036		mg/Kg		104	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	116		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: LCSD 880-85228/2-A

Matrix: Solid

Analysis Batch: 85117

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 85228

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1064		mg/Kg		106	70 - 130	4	35
Toluene	0.100	0.08874		mg/Kg		89	70 - 130	5	35
Ethylbenzene	0.100	0.08956		mg/Kg		90	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.2065		mg/Kg		103	70 - 130	5	35
o-Xylene	0.100	0.1095		mg/Kg		110	70 - 130	6	35

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

Lab Sample ID: 890-6903-21 MS

Matrix: Solid

Analysis Batch: 85117

Client Sample ID: CSF - 09

Prep Type: Total/NA

Prep Batch: 85228

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.100	0.08928		mg/Kg		89	70 - 130
Toluene	<0.00200	U	0.100	0.07657		mg/Kg		77	70 - 130
Ethylbenzene	<0.00200	U	0.100	0.08075		mg/Kg		81	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1559		mg/Kg		78	70 - 130
o-Xylene	<0.00200	U	0.100	0.07808		mg/Kg		78	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: 890-6903-21 MSD

Matrix: Solid

Analysis Batch: 85117

Client Sample ID: CSF - 09

Prep Type: Total/NA

Prep Batch: 85228

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	0.09848		mg/Kg		98	70 - 130	10	35
Toluene	<0.00200	U	0.100	0.08896		mg/Kg		89	70 - 130	15	35
Ethylbenzene	<0.00200	U	0.100	0.08829		mg/Kg		88	70 - 130	9	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1941		mg/Kg		97	70 - 130	22	35
o-Xylene	<0.00200	U	0.100	0.1015		mg/Kg		102	70 - 130	26	35

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

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

Lab Sample ID: 890-6903-21 MSD
Matrix: Solid
Analysis Batch: 85117

Client Sample ID: CSF - 09
Prep Type: Total/NA
Prep Batch: 85228

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	121		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

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

Lab Sample ID: MB 880-85207/1-A
Matrix: Solid
Analysis Batch: 85201

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 85207

Analyte	MB	MB								
	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/09/24 07:22	07/09/24 07:38	1	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/09/24 07:22	07/09/24 07:38	1	
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/09/24 07:22	07/09/24 07:38	1	
Surrogate	MB	MB					Prepared	Analyzed	Dil	Fac
	%Recovery	Qualifier	Limits							
1-Chlorooctane	102		70 - 130				07/09/24 07:22	07/09/24 07:38	1	
o-Terphenyl	127		70 - 130				07/09/24 07:22	07/09/24 07:38	1	

Lab Sample ID: LCS 880-85207/2-A
Matrix: Solid
Analysis Batch: 85201

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 85207

Analyte			Spike	LCS	LCS				%Rec	
			Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10			1000	1053		mg/Kg		105	70 - 130	
Diesel Range Organics (Over C10-C28)			1000	1026		mg/Kg		103	70 - 130	
Surrogate	LCS	LCS								
	%Recovery	Qualifier	Limits							
1-Chlorooctane	122		70 - 130							
o-Terphenyl	132	S1+	70 - 130							

Lab Sample ID: LCSD 880-85207/3-A
Matrix: Solid
Analysis Batch: 85201

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 85207

Analyte			Spike	LCSD	LCSD				%Rec		RPD
			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10			1000	879.7		mg/Kg		88	70 - 130	18	20
Diesel Range Organics (Over C10-C28)			1000	870.0		mg/Kg		87	70 - 130	16	20
Surrogate	LCSD	LCSD									
	%Recovery	Qualifier	Limits								
1-Chlorooctane	113		70 - 130								
o-Terphenyl	120		70 - 130								

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

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

Lab Sample ID: 890-6903-1 MS

Matrix: Solid

Analysis Batch: 85201

Client Sample ID: CSW - 01

Prep Type: Total/NA

Prep Batch: 85207

	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	1000	1113		mg/Kg		111	70 - 130		
Diesel Range Organics (Over C10-C28)	72.7	F1	1000	607.3	F1	mg/Kg		53	70 - 130		
Surrogate	MS %Recovery	MS Qualifier	Limits								
1-Chlorooctane	96		70 - 130								
o-Terphenyl	97		70 - 130								

Lab Sample ID: 890-6903-1 MSD

Matrix: Solid

Analysis Batch: 85201

Client Sample ID: CSW - 01

Prep Type: Total/NA

Prep Batch: 85207

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	1000	1098		mg/Kg		110	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	72.7	F1	1000	614.6	F1	mg/Kg		54	70 - 130	1	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	95		70 - 130								
o-Terphenyl	98		70 - 130								

Lab Sample ID: MB 880-85268/1-A

Matrix: Solid

Analysis Batch: 85236

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 85268

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		07/09/24 16:03	07/10/24 09:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/09/24 16:03	07/10/24 09:37	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/09/24 16:03	07/10/24 09:37	1
Surrogate	MB	MB	Limits				Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier							
1-Chlorooctane	87		70 - 130				07/09/24 16:03	07/10/24 09:37	1
o-Terphenyl	110		70 - 130				07/09/24 16:03	07/10/24 09:37	1

Lab Sample ID: LCS 880-85268/2-A

Matrix: Solid

Analysis Batch: 85236

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 85268

Analyte	Spike	LCS	Unit	D	%Rec	%Rec
	Added	Result				Qualifier
Gasoline Range Organics (GRO)-C6-C10	1000	823.1	mg/Kg		82	70 - 130
Diesel Range Organics (Over C10-C28)	1000	982.5	mg/Kg		98	70 - 130

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

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

Lab Sample ID: LCS 880-85268/2-A

Matrix: Solid

Analysis Batch: 85236

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 85268

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	94		70 - 130
o-Terphenyl	110		70 - 130

Lab Sample ID: LCSD 880-85268/3-A

Matrix: Solid

Analysis Batch: 85236

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 85268

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	836.5		mg/Kg		84	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	964.5		mg/Kg		96	70 - 130	2	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	116		70 - 130
o-Terphenyl	113		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-85211/1-A

Matrix: Solid

Analysis Batch: 85263

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/10/24 08:07	1

Lab Sample ID: LCS 880-85211/2-A

Matrix: Solid

Analysis Batch: 85263

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	250	253.6		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-85211/3-A

Matrix: Solid

Analysis Batch: 85263

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	257.0		mg/Kg		103	90 - 110	1	20

Lab Sample ID: MB 880-85262/1-A

Matrix: Solid

Analysis Batch: 85264

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/10/24 03:51	1

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-85262/2-A

Matrix: Solid

Analysis Batch: 85264

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	273.4		mg/Kg		109	90 - 110		

Lab Sample ID: LCSD 880-85262/3-A

Matrix: Solid

Analysis Batch: 85264

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	254.9		mg/Kg		102	90 - 110	7	20

Lab Sample ID: 890-6903-1 MS

Matrix: Solid

Analysis Batch: 85264

Client Sample ID: CSW - 01

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	158	F1	252	377.1	F1	mg/Kg		87	90 - 110		

Lab Sample ID: 890-6903-1 MSD

Matrix: Solid

Analysis Batch: 85264

Client Sample ID: CSW - 01

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	158	F1	252	376.9	F1	mg/Kg		87	90 - 110	0	20

Lab Sample ID: 890-6903-11 MS

Matrix: Solid

Analysis Batch: 85264

Client Sample ID: CSW - 08

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	127	F1	249	341.4	F1	mg/Kg		86	90 - 110		

Lab Sample ID: 890-6903-11 MSD

Matrix: Solid

Analysis Batch: 85264

Client Sample ID: CSW - 08

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	127	F1	249	342.9	F1	mg/Kg		87	90 - 110	0	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

GC VOA

Analysis Batch: 85117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6903-21	CSF - 09	Total/NA	Solid	8021B	85228
890-6903-22	CSF - 10	Total/NA	Solid	8021B	85228
MB 880-85228/5-A	Method Blank	Total/NA	Solid	8021B	85228
LCS 880-85228/1-A	Lab Control Sample	Total/NA	Solid	8021B	85228
LCSD 880-85228/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	85228
890-6903-21 MS	CSF - 09	Total/NA	Solid	8021B	85228
890-6903-21 MSD	CSF - 09	Total/NA	Solid	8021B	85228

Analysis Batch: 85215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6903-1	CSW - 01	Total/NA	Solid	8021B	85226
890-6903-2	CSW - 01	Total/NA	Solid	8021B	85226
890-6903-3	CSW - 02	Total/NA	Solid	8021B	85226
890-6903-4	CSW - 02	Total/NA	Solid	8021B	85226
890-6903-5	CSW - 03	Total/NA	Solid	8021B	85226
890-6903-6	CSW - 03	Total/NA	Solid	8021B	85226
890-6903-7	CSW - 04	Total/NA	Solid	8021B	85226
890-6903-8	CSW - 05	Total/NA	Solid	8021B	85226
890-6903-9	CSW - 06	Total/NA	Solid	8021B	85226
890-6903-10	CSW - 07	Total/NA	Solid	8021B	85226
890-6903-11	CSW - 08	Total/NA	Solid	8021B	85226
890-6903-12	CSW - 08	Total/NA	Solid	8021B	85226
890-6903-13	CSF - 01	Total/NA	Solid	8021B	85226
890-6903-14	CSF - 02	Total/NA	Solid	8021B	85226
890-6903-15	CSF - 03	Total/NA	Solid	8021B	85226
890-6903-16	CSF - 04	Total/NA	Solid	8021B	85226
890-6903-17	CSF - 05	Total/NA	Solid	8021B	85226
890-6903-18	CSF - 06	Total/NA	Solid	8021B	85226
890-6903-19	CSF - 07	Total/NA	Solid	8021B	85226
890-6903-20	CSF - 08	Total/NA	Solid	8021B	85226
MB 880-85226/5-A	Method Blank	Total/NA	Solid	8021B	85226
LCS 880-85226/1-A	Lab Control Sample	Total/NA	Solid	8021B	85226
LCSD 880-85226/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	85226
890-6903-1 MS	CSW - 01	Total/NA	Solid	8021B	85226
890-6903-1 MSD	CSW - 01	Total/NA	Solid	8021B	85226

Prep Batch: 85226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6903-1	CSW - 01	Total/NA	Solid	5035	
890-6903-2	CSW - 01	Total/NA	Solid	5035	
890-6903-3	CSW - 02	Total/NA	Solid	5035	
890-6903-4	CSW - 02	Total/NA	Solid	5035	
890-6903-5	CSW - 03	Total/NA	Solid	5035	
890-6903-6	CSW - 03	Total/NA	Solid	5035	
890-6903-7	CSW - 04	Total/NA	Solid	5035	
890-6903-8	CSW - 05	Total/NA	Solid	5035	
890-6903-9	CSW - 06	Total/NA	Solid	5035	
890-6903-10	CSW - 07	Total/NA	Solid	5035	
890-6903-11	CSW - 08	Total/NA	Solid	5035	
890-6903-12	CSW - 08	Total/NA	Solid	5035	
890-6903-13	CSF - 01	Total/NA	Solid	5035	

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QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

GC VOA (Continued)

Prep Batch: 85226 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6903-14	CSF - 02	Total/NA	Solid	5035	
890-6903-15	CSF - 03	Total/NA	Solid	5035	
890-6903-16	CSF - 04	Total/NA	Solid	5035	
890-6903-17	CSF - 05	Total/NA	Solid	5035	
890-6903-18	CSF - 06	Total/NA	Solid	5035	
890-6903-19	CSF - 07	Total/NA	Solid	5035	
890-6903-20	CSF - 08	Total/NA	Solid	5035	
MB 880-85226/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-85226/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-85226/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-6903-1 MS	CSW - 01	Total/NA	Solid	5035	
890-6903-1 MSD	CSW - 01	Total/NA	Solid	5035	

Prep Batch: 85228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6903-21	CSF - 09	Total/NA	Solid	5035	
890-6903-22	CSF - 10	Total/NA	Solid	5035	
MB 880-85228/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-85228/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-85228/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-6903-21 MS	CSF - 09	Total/NA	Solid	5035	
890-6903-21 MSD	CSF - 09	Total/NA	Solid	5035	

Analysis Batch: 85322

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6903-1	CSW - 01	Total/NA	Solid	Total BTEX	
890-6903-2	CSW - 01	Total/NA	Solid	Total BTEX	
890-6903-3	CSW - 02	Total/NA	Solid	Total BTEX	
890-6903-4	CSW - 02	Total/NA	Solid	Total BTEX	
890-6903-5	CSW - 03	Total/NA	Solid	Total BTEX	
890-6903-6	CSW - 03	Total/NA	Solid	Total BTEX	
890-6903-7	CSW - 04	Total/NA	Solid	Total BTEX	
890-6903-8	CSW - 05	Total/NA	Solid	Total BTEX	
890-6903-9	CSW - 06	Total/NA	Solid	Total BTEX	
890-6903-10	CSW - 07	Total/NA	Solid	Total BTEX	
890-6903-11	CSW - 08	Total/NA	Solid	Total BTEX	
890-6903-12	CSW - 08	Total/NA	Solid	Total BTEX	
890-6903-13	CSF - 01	Total/NA	Solid	Total BTEX	
890-6903-14	CSF - 02	Total/NA	Solid	Total BTEX	
890-6903-15	CSF - 03	Total/NA	Solid	Total BTEX	
890-6903-16	CSF - 04	Total/NA	Solid	Total BTEX	
890-6903-17	CSF - 05	Total/NA	Solid	Total BTEX	
890-6903-18	CSF - 06	Total/NA	Solid	Total BTEX	
890-6903-19	CSF - 07	Total/NA	Solid	Total BTEX	
890-6903-20	CSF - 08	Total/NA	Solid	Total BTEX	
890-6903-21	CSF - 09	Total/NA	Solid	Total BTEX	
890-6903-22	CSF - 10	Total/NA	Solid	Total BTEX	

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QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

GC Semi VOA

Analysis Batch: 85201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6903-1	CSW - 01	Total/NA	Solid	8015B NM	85207
890-6903-2	CSW - 01	Total/NA	Solid	8015B NM	85207
890-6903-3	CSW - 02	Total/NA	Solid	8015B NM	85207
890-6903-4	CSW - 02	Total/NA	Solid	8015B NM	85207
890-6903-5	CSW - 03	Total/NA	Solid	8015B NM	85207
890-6903-6	CSW - 03	Total/NA	Solid	8015B NM	85207
890-6903-7	CSW - 04	Total/NA	Solid	8015B NM	85207
890-6903-8	CSW - 05	Total/NA	Solid	8015B NM	85207
890-6903-9	CSW - 06	Total/NA	Solid	8015B NM	85207
890-6903-10	CSW - 07	Total/NA	Solid	8015B NM	85207
890-6903-11	CSW - 08	Total/NA	Solid	8015B NM	85207
890-6903-12	CSW - 08	Total/NA	Solid	8015B NM	85207
890-6903-13	CSF - 01	Total/NA	Solid	8015B NM	85207
890-6903-14	CSF - 02	Total/NA	Solid	8015B NM	85207
890-6903-15	CSF - 03	Total/NA	Solid	8015B NM	85207
890-6903-16	CSF - 04	Total/NA	Solid	8015B NM	85207
890-6903-17	CSF - 05	Total/NA	Solid	8015B NM	85207
890-6903-18	CSF - 06	Total/NA	Solid	8015B NM	85207
890-6903-19	CSF - 07	Total/NA	Solid	8015B NM	85207
890-6903-20	CSF - 08	Total/NA	Solid	8015B NM	85207
MB 880-85207/1-A	Method Blank	Total/NA	Solid	8015B NM	85207
LCS 880-85207/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	85207
LCSD 880-85207/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	85207
890-6903-1 MS	CSW - 01	Total/NA	Solid	8015B NM	85207
890-6903-1 MSD	CSW - 01	Total/NA	Solid	8015B NM	85207

Prep Batch: 85207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6903-1	CSW - 01	Total/NA	Solid	8015NM Prep	
890-6903-2	CSW - 01	Total/NA	Solid	8015NM Prep	
890-6903-3	CSW - 02	Total/NA	Solid	8015NM Prep	
890-6903-4	CSW - 02	Total/NA	Solid	8015NM Prep	
890-6903-5	CSW - 03	Total/NA	Solid	8015NM Prep	
890-6903-6	CSW - 03	Total/NA	Solid	8015NM Prep	
890-6903-7	CSW - 04	Total/NA	Solid	8015NM Prep	
890-6903-8	CSW - 05	Total/NA	Solid	8015NM Prep	
890-6903-9	CSW - 06	Total/NA	Solid	8015NM Prep	
890-6903-10	CSW - 07	Total/NA	Solid	8015NM Prep	
890-6903-11	CSW - 08	Total/NA	Solid	8015NM Prep	
890-6903-12	CSW - 08	Total/NA	Solid	8015NM Prep	
890-6903-13	CSF - 01	Total/NA	Solid	8015NM Prep	
890-6903-14	CSF - 02	Total/NA	Solid	8015NM Prep	
890-6903-15	CSF - 03	Total/NA	Solid	8015NM Prep	
890-6903-16	CSF - 04	Total/NA	Solid	8015NM Prep	
890-6903-17	CSF - 05	Total/NA	Solid	8015NM Prep	
890-6903-18	CSF - 06	Total/NA	Solid	8015NM Prep	
890-6903-19	CSF - 07	Total/NA	Solid	8015NM Prep	
890-6903-20	CSF - 08	Total/NA	Solid	8015NM Prep	
MB 880-85207/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-85207/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-85207/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

GC Semi VOA (Continued)

Prep Batch: 85207 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6903-1 MS	CSW - 01	Total/NA	Solid	8015NM Prep	
890-6903-1 MSD	CSW - 01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 85236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6903-21	CSF - 09	Total/NA	Solid	8015B NM	85268
890-6903-22	CSF - 10	Total/NA	Solid	8015B NM	85268
MB 880-85268/1-A	Method Blank	Total/NA	Solid	8015B NM	85268
LCS 880-85268/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	85268
LCSD 880-85268/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	85268

Prep Batch: 85268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6903-21	CSF - 09	Total/NA	Solid	8015NM Prep	
890-6903-22	CSF - 10	Total/NA	Solid	8015NM Prep	
MB 880-85268/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-85268/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-85268/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 85321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6903-1	CSW - 01	Total/NA	Solid	8015 NM	
890-6903-2	CSW - 01	Total/NA	Solid	8015 NM	
890-6903-3	CSW - 02	Total/NA	Solid	8015 NM	
890-6903-4	CSW - 02	Total/NA	Solid	8015 NM	
890-6903-5	CSW - 03	Total/NA	Solid	8015 NM	
890-6903-6	CSW - 03	Total/NA	Solid	8015 NM	
890-6903-7	CSW - 04	Total/NA	Solid	8015 NM	
890-6903-8	CSW - 05	Total/NA	Solid	8015 NM	
890-6903-9	CSW - 06	Total/NA	Solid	8015 NM	
890-6903-10	CSW - 07	Total/NA	Solid	8015 NM	
890-6903-11	CSW - 08	Total/NA	Solid	8015 NM	
890-6903-12	CSW - 08	Total/NA	Solid	8015 NM	
890-6903-13	CSF - 01	Total/NA	Solid	8015 NM	
890-6903-14	CSF - 02	Total/NA	Solid	8015 NM	
890-6903-15	CSF - 03	Total/NA	Solid	8015 NM	
890-6903-16	CSF - 04	Total/NA	Solid	8015 NM	
890-6903-17	CSF - 05	Total/NA	Solid	8015 NM	
890-6903-18	CSF - 06	Total/NA	Solid	8015 NM	
890-6903-19	CSF - 07	Total/NA	Solid	8015 NM	
890-6903-20	CSF - 08	Total/NA	Solid	8015 NM	
890-6903-21	CSF - 09	Total/NA	Solid	8015 NM	
890-6903-22	CSF - 10	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 85211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6903-21	CSF - 09	Soluble	Solid	DI Leach	
890-6903-22	CSF - 10	Soluble	Solid	DI Leach	
MB 880-85211/1-A	Method Blank	Soluble	Solid	DI Leach	

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QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

HPLC/IC (Continued)

Leach Batch: 85211 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-85211/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-85211/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Leach Batch: 85262

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6903-1	CSW - 01	Soluble	Solid	DI Leach	
890-6903-2	CSW - 01	Soluble	Solid	DI Leach	
890-6903-3	CSW - 02	Soluble	Solid	DI Leach	
890-6903-4	CSW - 02	Soluble	Solid	DI Leach	
890-6903-5	CSW - 03	Soluble	Solid	DI Leach	
890-6903-6	CSW - 03	Soluble	Solid	DI Leach	
890-6903-7	CSW - 04	Soluble	Solid	DI Leach	
890-6903-8	CSW - 05	Soluble	Solid	DI Leach	
890-6903-9	CSW - 06	Soluble	Solid	DI Leach	
890-6903-10	CSW - 07	Soluble	Solid	DI Leach	
890-6903-11	CSW - 08	Soluble	Solid	DI Leach	
890-6903-12	CSW - 08	Soluble	Solid	DI Leach	
890-6903-13	CSF - 01	Soluble	Solid	DI Leach	
890-6903-14	CSF - 02	Soluble	Solid	DI Leach	
890-6903-15	CSF - 03	Soluble	Solid	DI Leach	
890-6903-16	CSF - 04	Soluble	Solid	DI Leach	
890-6903-17	CSF - 05	Soluble	Solid	DI Leach	
890-6903-18	CSF - 06	Soluble	Solid	DI Leach	
890-6903-19	CSF - 07	Soluble	Solid	DI Leach	
890-6903-20	CSF - 08	Soluble	Solid	DI Leach	
MB 880-85262/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-85262/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-85262/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-6903-1 MS	CSW - 01	Soluble	Solid	DI Leach	
890-6903-1 MSD	CSW - 01	Soluble	Solid	DI Leach	
890-6903-11 MS	CSW - 08	Soluble	Solid	DI Leach	
890-6903-11 MSD	CSW - 08	Soluble	Solid	DI Leach	

Analysis Batch: 85263

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6903-21	CSF - 09	Soluble	Solid	300.0	85211
890-6903-22	CSF - 10	Soluble	Solid	300.0	85211
MB 880-85211/1-A	Method Blank	Soluble	Solid	300.0	85211
LCS 880-85211/2-A	Lab Control Sample	Soluble	Solid	300.0	85211
LCSD 880-85211/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	85211

Analysis Batch: 85264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6903-1	CSW - 01	Soluble	Solid	300.0	85262
890-6903-2	CSW - 01	Soluble	Solid	300.0	85262
890-6903-3	CSW - 02	Soluble	Solid	300.0	85262
890-6903-4	CSW - 02	Soluble	Solid	300.0	85262
890-6903-5	CSW - 03	Soluble	Solid	300.0	85262
890-6903-6	CSW - 03	Soluble	Solid	300.0	85262
890-6903-7	CSW - 04	Soluble	Solid	300.0	85262
890-6903-8	CSW - 05	Soluble	Solid	300.0	85262

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QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

HPLC/IC (Continued)

Analysis Batch: 85264 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6903-9	CSW - 06	Soluble	Solid	300.0	85262
890-6903-10	CSW - 07	Soluble	Solid	300.0	85262
890-6903-11	CSW - 08	Soluble	Solid	300.0	85262
890-6903-12	CSW - 08	Soluble	Solid	300.0	85262
890-6903-13	CSF - 01	Soluble	Solid	300.0	85262
890-6903-14	CSF - 02	Soluble	Solid	300.0	85262
890-6903-15	CSF - 03	Soluble	Solid	300.0	85262
890-6903-16	CSF - 04	Soluble	Solid	300.0	85262
890-6903-17	CSF - 05	Soluble	Solid	300.0	85262
890-6903-18	CSF - 06	Soluble	Solid	300.0	85262
890-6903-19	CSF - 07	Soluble	Solid	300.0	85262
890-6903-20	CSF - 08	Soluble	Solid	300.0	85262
MB 880-85262/1-A	Method Blank	Soluble	Solid	300.0	85262
LCS 880-85262/2-A	Lab Control Sample	Soluble	Solid	300.0	85262
LCSD 880-85262/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	85262
890-6903-1 MS	CSW - 01	Soluble	Solid	300.0	85262
890-6903-1 MSD	CSW - 01	Soluble	Solid	300.0	85262
890-6903-11 MS	CSW - 08	Soluble	Solid	300.0	85262
890-6903-11 MSD	CSW - 08	Soluble	Solid	300.0	85262

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSW - 01

Lab Sample ID: 890-6903-1

Date Collected: 07/05/24 14:07

Matrix: Solid

Date Received: 07/08/24 11:14

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	85226	07/09/24 10:46	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85215	07/09/24 13:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85322	07/09/24 13:01	SM	EET MID
Total/NA	Analysis	8015 NM		1			85321	07/09/24 10:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	85207	07/09/24 07:22	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85201	07/09/24 10:01	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	85262	07/09/24 14:20	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85264	07/10/24 04:13	CH	EET MID

Client Sample ID: CSW - 01

Lab Sample ID: 890-6903-2

Date Collected: 07/05/24 14:09

Matrix: Solid

Date Received: 07/08/24 11:14

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	85226	07/09/24 10:46	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85215	07/09/24 13:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85322	07/09/24 13:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			85321	07/09/24 11:03	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	85207	07/09/24 07:22	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85201	07/09/24 11:03	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	85262	07/09/24 14:20	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85264	07/10/24 04:35	CH	EET MID

Client Sample ID: CSW - 02

Lab Sample ID: 890-6903-3

Date Collected: 07/05/24 14:12

Matrix: Solid

Date Received: 07/08/24 11:14

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	85226	07/09/24 10:46	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85215	07/09/24 13:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85322	07/09/24 13:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			85321	07/09/24 11:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	85207	07/09/24 07:22	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85201	07/09/24 11:24	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	85262	07/09/24 14:20	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85264	07/10/24 04:43	CH	EET MID

Client Sample ID: CSW - 02

Lab Sample ID: 890-6903-4

Date Collected: 07/05/24 14:13

Matrix: Solid

Date Received: 07/08/24 11:14

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	85226	07/09/24 10:46	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85215	07/09/24 14:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85322	07/09/24 14:02	SM	EET MID

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Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSW - 02

Lab Sample ID: 890-6903-4

Date Collected: 07/05/24 14:13

Matrix: Solid

Date Received: 07/08/24 11:14

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			85321	07/09/24 11:44	SM	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	85207	07/09/24 07:22	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85201	07/09/24 11:44	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	85262	07/09/24 14:20	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85264	07/10/24 04:50	CH	EET MID

Client Sample ID: CSW - 03

Lab Sample ID: 890-6903-5

Date Collected: 07/05/24 14:14

Matrix: Solid

Date Received: 07/08/24 11:14

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	85226	07/09/24 10:46	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85215	07/09/24 14:22	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85322	07/09/24 14:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			85321	07/09/24 12:04	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	85207	07/09/24 07:22	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85201	07/09/24 12:04	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	85262	07/09/24 14:20	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85264	07/10/24 04:57	CH	EET MID

Client Sample ID: CSW - 03

Lab Sample ID: 890-6903-6

Date Collected: 07/05/24 14:16

Matrix: Solid

Date Received: 07/08/24 11:14

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	85226	07/09/24 10:46	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85215	07/09/24 14:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85322	07/09/24 14:43	SM	EET MID
Total/NA	Analysis	8015 NM		1			85321	07/09/24 12:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	85207	07/09/24 07:22	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85201	07/09/24 12:25	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	85262	07/09/24 14:20	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85264	07/10/24 05:19	CH	EET MID

Client Sample ID: CSW - 04

Lab Sample ID: 890-6903-7

Date Collected: 07/05/24 15:28

Matrix: Solid

Date Received: 07/08/24 11:14

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	85226	07/09/24 10:46	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85215	07/09/24 15:03	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85322	07/09/24 15:03	SM	EET MID
Total/NA	Analysis	8015 NM		1			85321	07/09/24 12:46	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	85207	07/09/24 07:22	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85201	07/09/24 12:46	SM	EET MID

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Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSW - 04

Lab Sample ID: 890-6903-7

Date Collected: 07/05/24 15:28

Matrix: Solid

Date Received: 07/08/24 11:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.03 g	50 mL	85262	07/09/24 14:20	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85264	07/10/24 05:26	CH	EET MID

Client Sample ID: CSW - 05

Lab Sample ID: 890-6903-8

Date Collected: 07/05/24 15:30

Matrix: Solid

Date Received: 07/08/24 11:14

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	85226	07/09/24 10:46	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85215	07/09/24 15:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85322	07/09/24 15:24	SM	EET MID
Total/NA	Analysis	8015 NM		1			85321	07/09/24 13:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	85207	07/09/24 07:22	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85201	07/09/24 13:06	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	85262	07/09/24 14:20	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85264	07/10/24 05:34	CH	EET MID

Client Sample ID: CSW - 06

Lab Sample ID: 890-6903-9

Date Collected: 07/05/24 15:26

Matrix: Solid

Date Received: 07/08/24 11:14

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	85226	07/09/24 10:46	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85215	07/09/24 15:44	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85322	07/09/24 15:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			85321	07/09/24 13:27	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	85207	07/09/24 07:22	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85201	07/09/24 13:27	SM	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	85262	07/09/24 14:20	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85264	07/10/24 05:41	CH	EET MID

Client Sample ID: CSW - 07

Lab Sample ID: 890-6903-10

Date Collected: 07/05/24 09:39

Matrix: Solid

Date Received: 07/08/24 11:14

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	85226	07/09/24 10:46	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85215	07/09/24 16:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85322	07/09/24 16:05	SM	EET MID
Total/NA	Analysis	8015 NM		1			85321	07/09/24 13:48	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	85207	07/09/24 07:22	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85201	07/09/24 13:48	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	85262	07/09/24 14:20	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85264	07/10/24 05:48	CH	EET MID

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Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSW - 08

Lab Sample ID: 890-6903-11

Date Collected: 07/05/24 10:15

Matrix: Solid

Date Received: 07/08/24 11:14

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	85226	07/09/24 10:46	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85215	07/09/24 17:39	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85322	07/09/24 17:39	SM	EET MID
Total/NA	Analysis	8015 NM		1			85321	07/09/24 14:29	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	85207	07/09/24 07:22	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85201	07/09/24 14:29	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	85262	07/09/24 14:20	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85264	07/10/24 05:56	CH	EET MID

Client Sample ID: CSW - 08

Lab Sample ID: 890-6903-12

Date Collected: 07/05/24 10:19

Matrix: Solid

Date Received: 07/08/24 11:14

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	85226	07/09/24 10:46	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85215	07/09/24 18:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85322	07/09/24 18:00	SM	EET MID
Total/NA	Analysis	8015 NM		1			85321	07/09/24 14:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	85207	07/09/24 07:22	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85201	07/09/24 14:49	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	85262	07/09/24 14:20	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85264	07/10/24 06:18	CH	EET MID

Client Sample ID: CSF - 01

Lab Sample ID: 890-6903-13

Date Collected: 07/05/24 14:47

Matrix: Solid

Date Received: 07/08/24 11:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	85226	07/09/24 10:46	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85215	07/09/24 18:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85322	07/09/24 18:20	SM	EET MID
Total/NA	Analysis	8015 NM		1			85321	07/09/24 15:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	85207	07/09/24 07:22	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85201	07/09/24 15:10	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	85262	07/09/24 14:20	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85264	07/10/24 06:25	CH	EET MID

Client Sample ID: CSF - 02

Lab Sample ID: 890-6903-14

Date Collected: 07/05/24 14:45

Matrix: Solid

Date Received: 07/08/24 11:14

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	85226	07/09/24 10:46	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85215	07/09/24 18:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85322	07/09/24 18:41	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSF - 02
Date Collected: 07/05/24 14:45
Date Received: 07/08/24 11:14

Lab Sample ID: 890-6903-14
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			85321	07/09/24 15:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	85207	07/09/24 07:22	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85201	07/09/24 15:30	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	85262	07/09/24 14:20	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85264	07/10/24 06:47	CH	EET MID

Client Sample ID: CSF - 03
Date Collected: 07/05/24 14:43
Date Received: 07/08/24 11:14

Lab Sample ID: 890-6903-15
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			5.02 g	5 mL	85226	07/09/24 10:46	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85215	07/09/24 19:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85322	07/09/24 19:01	SM	EET MID
Total/NA	Analysis	8015 NM		1			85321	07/09/24 15:51	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	85207	07/09/24 07:22	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85201	07/09/24 15:51	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	85262	07/09/24 14:20	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85264	07/10/24 06:54	CH	EET MID

Client Sample ID: CSF - 04
Date Collected: 07/05/24 15:13
Date Received: 07/08/24 11:14

Lab Sample ID: 890-6903-16
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			5.00 g	5 mL	85226	07/09/24 10:46	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85215	07/09/24 19:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85322	07/09/24 19:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			85321	07/09/24 16:12	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	85207	07/09/24 07:22	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85201	07/09/24 16:12	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	85262	07/09/24 14:20	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85264	07/10/24 07:02	CH	EET MID

Client Sample ID: CSF - 05
Date Collected: 07/05/24 15:10
Date Received: 07/08/24 11:14

Lab Sample ID: 890-6903-17
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	85226	07/09/24 10:46	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85215	07/09/24 19:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85322	07/09/24 19:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			85321	07/09/24 16:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	85207	07/09/24 07:22	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85201	07/09/24 16:32	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSF - 05

Lab Sample ID: 890-6903-17

Date Collected: 07/05/24 15:10

Matrix: Solid

Date Received: 07/08/24 11:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.03 g	50 mL	85262	07/09/24 14:20	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85264	07/10/24 07:09	CH	EET MID

Client Sample ID: CSF - 06

Lab Sample ID: 890-6903-18

Date Collected: 07/05/24 15:58

Matrix: Solid

Date Received: 07/08/24 11:14

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	85226	07/09/24 10:46	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85215	07/09/24 20:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85322	07/09/24 20:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			85321	07/09/24 16:53	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	85207	07/09/24 07:22	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85201	07/09/24 16:53	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	85262	07/09/24 14:20	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85264	07/10/24 07:16	CH	EET MID

Client Sample ID: CSF - 07

Lab Sample ID: 890-6903-19

Date Collected: 07/05/24 15:59

Matrix: Solid

Date Received: 07/08/24 11:14

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	85226	07/09/24 10:46	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85215	07/09/24 20:23	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85322	07/09/24 20:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			85321	07/10/24 06:26	SM	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	85207	07/09/24 07:22	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85201	07/10/24 06:26	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	85262	07/09/24 14:20	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85264	07/10/24 07:24	CH	EET MID

Client Sample ID: CSF - 08

Lab Sample ID: 890-6903-20

Date Collected: 07/05/24 09:33

Matrix: Solid

Date Received: 07/08/24 11:14

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	85226	07/09/24 10:46	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85215	07/09/24 20:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85322	07/09/24 20:43	SM	EET MID
Total/NA	Analysis	8015 NM		1			85321	07/10/24 06:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	85207	07/09/24 07:22	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85201	07/10/24 06:59	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	85262	07/09/24 14:20	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85264	07/10/24 07:31	CH	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Client Sample ID: CSF - 09
Date Collected: 07/05/24 09:45
Date Received: 07/08/24 11:14

Lab Sample ID: 890-6903-21
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	85228	07/09/24 10:49	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85117	07/09/24 14:30	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85322	07/09/24 14:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			85321	07/10/24 14:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	85268	07/09/24 16:03	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85236	07/10/24 14:21	TKC	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	85211	07/09/24 08:00	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85263	07/10/24 11:25	CH	EET MID

Client Sample ID: CSF - 10
Date Collected: 07/05/24 09:36
Date Received: 07/08/24 11:14

Lab Sample ID: 890-6903-22
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	85228	07/09/24 10:49	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85117	07/09/24 14:51	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85322	07/09/24 14:51	SM	EET MID
Total/NA	Analysis	8015 NM		1			85321	07/10/24 14:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	85268	07/09/24 16:03	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85236	07/10/24 14:39	TKC	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	85211	07/09/24 08:00	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85263	07/10/24 11:32	CH	EET MID

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

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

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	06-30-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

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: Terracon Consulting Eng & Scientists
Project/Site: LEAK # 149

Job ID: 890-6903-1
SDG: KH 247005

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-6903-1	CSW - 01	Solid	07/05/24 14:07	07/08/24 11:14	0 - 4
890-6903-2	CSW - 01	Solid	07/05/24 14:09	07/08/24 11:14	4 - 6
890-6903-3	CSW - 02	Solid	07/05/24 14:12	07/08/24 11:14	0 - 4
890-6903-4	CSW - 02	Solid	07/05/24 14:13	07/08/24 11:14	4 - 6
890-6903-5	CSW - 03	Solid	07/05/24 14:14	07/08/24 11:14	0 - 4
890-6903-6	CSW - 03	Solid	07/05/24 14:16	07/08/24 11:14	4 - 6
890-6903-7	CSW - 04	Solid	07/05/24 15:28	07/08/24 11:14	0 - 2
890-6903-8	CSW - 05	Solid	07/05/24 15:30	07/08/24 11:14	0 - 2
890-6903-9	CSW - 06	Solid	07/05/24 15:26	07/08/24 11:14	0 - 2
890-6903-10	CSW - 07	Solid	07/05/24 09:39	07/08/24 11:14	0 - 4
890-6903-11	CSW - 08	Solid	07/05/24 10:15	07/08/24 11:14	0 - 4
890-6903-12	CSW - 08	Solid	07/05/24 10:19	07/08/24 11:14	4 - 6
890-6903-13	CSF - 01	Solid	07/05/24 14:47	07/08/24 11:14	6 - 6
890-6903-14	CSF - 02	Solid	07/05/24 14:45	07/08/24 11:14	6 - 6
890-6903-15	CSF - 03	Solid	07/05/24 14:43	07/08/24 11:14	6 - 6
890-6903-16	CSF - 04	Solid	07/05/24 15:13	07/08/24 11:14	2 - 2
890-6903-17	CSF - 05	Solid	07/05/24 15:10	07/08/24 11:14	2 - 2
890-6903-18	CSF - 06	Solid	07/05/24 15:58	07/08/24 11:14	2 - 2
890-6903-19	CSF - 07	Solid	07/05/24 15:59	07/08/24 11:14	2 - 2
890-6903-20	CSF - 08	Solid	07/05/24 09:33	07/08/24 11:14	4 - 4
890-6903-21	CSF - 09	Solid	07/05/24 09:45	07/08/24 11:14	4 - 4
890-6903-22	CSF - 10	Solid	07/05/24 09:36	07/08/24 11:14	4 - 4

CHAIN OF CUSTODY RECORD



4526 W. Pierce St Carlsbad NM, 88220

Project Manager Joseph Guesnier

Sampler's Name Gus Sanchez

Laboratory:

Address:

Phone:

Contact:

SRS #:

Sampler's Signature

ANALYSIS REQUEST



890-6903 Chain of Custody

Page of

Project Number KH247005		Project Name Leak #149		No. Type of Containers		Chloride (EPA Method 300)		TPH Extended 8015		BTX (EPA Method 8021B)		Lab Sample ID	
Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	4 oz Glass	2 oz Glass	250 ml Poly			
S	7/5/2024	14:07	X		CSW-01	0	4	X			X	X	
S	7/5/2024	14:09	X		CSW-01	4	6	X			X	X	
S	7/5/2024	14:12	X		CSW-02	0	4	X			X	X	
S	7/5/2024	14:13	X		CSW-02	4	6	X			X	X	
S	7/5/2024	14:14	X		CSW-03	0	4	X			X	X	
S	7/5/2024	14:16	X		CSW-03	4	6	X			X	X	
S	7/5/2024	15:28	X		CSW-04	0	2	X			X	X	
S	7/5/2024	15:30	X		CSW-05	0	2	X			X	X	
S	7/5/2024	15:26	X		CSW-06	0	2	X			X	X	
S	7/5/2024	9:39	X		CSW-07	0	4	X			X	X	
S	7/5/2024	10:15	X		CSW-08	0	4	X			X	X	
S	7/5/2024	10:19	X		CSW-08	4	6	X			X	X	
S	7/5/2024	14:47	X		CSF-01	6	6	X			X	X	
S	7/5/2024	14:45	X		CSF-02	6	6	X			X	X	
S	7/5/2024	14:43	X		CSF-03	6	6	X			X	X	
S	7/5/2024	15:13	X		CSF-04	2	2	X			X	X	
S	7/5/2024	15:10	X		CSF-05	2	2	X			X	X	
S	7/5/2024	15:58	X		CSF-06	2	2	X			X	X	
S	7/5/2024	15:59	X		CSF-07	2	2	X			X	X	
S	7/5/2024	9:33	X		CSF-08	4	4	X			X	X	
S	7/5/2024	9:45	X		CSF-09	4	4	X			X	X	
S	7/5/2024	9:36	X		CSF-10	4	4	X			X	X	
TURNAROUND TIME ☐ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush TRRP Laboratory Review Checklist ☐ Yes ☐ No													
Relinquished by (Signature)		Date: 7-8-24		Time: 11:00		Received by (Signature)		Date: 7/8		Time: 11:14		Bill To: Devon	
Relinquished by (Signature)		Date:		Time:		Received by (Signature)		Date:		Time:		Att: Dale Woodall	
Relinquished by (Signature)		Date:		Time:		Received by (Signature)		Date:		Time:			
TEMP OF COOLER WHEN RECEIVED (C) 74.0001 - 0.2-6.6													
Matrix WW-Wastewater W - Water S - Soil L - Liquid A - Air Bag C - Charcoal tube SL - Sludge													
Container VOA - 40 ml vial A/G - Amber C 250 ml = Glass wide mouth P/O - Plastic or other													
Lubbock Office 5827 50th Street, Suite 1 Lubbock, Texas 79424 806-300-0140													
e-mail results to: joseph.guesnier@terracon.com travis.casey@terracon.com mlke.adams@terracon.com beckysue.miller@terracon.com gus.sanchez@terracon.com chuck.smith@terracon.com													

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-6903-1

SDG Number: KH 247005

Login Number: 6903
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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-6903-1

SDG Number: KH 247005

Login Number: 6903

List Source: Eurofins Midland

List Number: 2

List Creation: 07/09/24 08:00 AM

Creator: Vasquez, Julisa

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



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Joseph Guesnier
Terracon Consulting Eng & Scientists
5847 50th St
Lubbock, Texas 79424

Generated 7/12/2024 4:30:21 PM Revision 1

JOB DESCRIPTION

Longview Deep Fed 1-21
KH237057

JOB NUMBER

890-6904-1

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



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

Generated
7/12/2024 4:30:21 PM
Revision 1

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Laboratory Job ID: 890-6904-1
SDG: KH237057

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Definitions/Glossary

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6904-1
SDG: KH237057

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low 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.
α	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: Terracon Consulting Eng & Scientists
Project: Longview Deep Fed 1-21

Job ID: 890-6904-1

Job ID: 890-6904-1

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Job Narrative 890-6904-1

REVISION

The report being provided is a revision of the original report sent on 7/11/2024. The report (revision 1) is being revised due to Revision needed to include proper project name.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 7/8/2024 11:14 AM. 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 -0.4°C.

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: CSF - 11 (890-6904-1) and CSF - 12 (890-6904-2).

GC VOA

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-85216 recovered under the lower control limit for Benzene, Toluene and Ethylbenzene. The samples associated with this CCV were ran within 12 hours of passing CCV; therefore, the data have been 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: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-85268 and analytical batch 880-85236 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8015MOD_NM: An incorrect volume of surrogate spiking solution was inadvertently added the following samples: CSF - 11 (890-6904-1) and CSF - 12 (890-6904-2). 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.

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6904-1
SDG: KH237057

Client Sample ID: CSF - 11

Lab Sample ID: 890-6904-1

Date Collected: 07/05/24 10:19

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 6 - 6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/09/24 08:34	07/09/24 16:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/09/24 08:34	07/09/24 16:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/09/24 08:34	07/09/24 16:45	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/09/24 08:34	07/09/24 16:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/09/24 08:34	07/09/24 16:45	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/09/24 08:34	07/09/24 16:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	07/09/24 08:34	07/09/24 16:45	1
1,4-Difluorobenzene (Surr)	90		70 - 130	07/09/24 08:34	07/09/24 16:45	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			07/09/24 16:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			07/10/24 12:35	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 F1	49.8		mg/Kg		07/09/24 16:03	07/10/24 12:35	1
Diesel Range Organics (Over C10-C28)	<49.8	U F1	49.8		mg/Kg		07/09/24 16:03	07/10/24 12:35	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/09/24 16:03	07/10/24 12:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	67	S1-	70 - 130	07/09/24 16:03	07/10/24 12:35	1
o-Terphenyl	67	S1-	70 - 130	07/09/24 16:03	07/10/24 12:35	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	174		5.04		mg/Kg			07/10/24 11:40	1

Client Sample ID: CSF - 12

Lab Sample ID: 890-6904-2

Date Collected: 07/05/24 10:25

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 6 - 6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/09/24 08:34	07/09/24 17:06	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/09/24 08:34	07/09/24 17:06	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/09/24 08:34	07/09/24 17:06	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/09/24 08:34	07/09/24 17:06	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/09/24 08:34	07/09/24 17:06	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/09/24 08:34	07/09/24 17:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	07/09/24 08:34	07/09/24 17:06	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6904-1
SDG: KH237057

Client Sample ID: CSF - 12

Lab Sample ID: 890-6904-2

Date Collected: 07/05/24 10:25

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 6 - 6

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	90		70 - 130	07/09/24 08:34	07/09/24 17:06	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			07/09/24 17:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			07/10/24 13:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		07/09/24 16:03	07/10/24 13:27	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		07/09/24 16:03	07/10/24 13:27	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		07/09/24 16:03	07/10/24 13:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	64	S1-	70 - 130				07/09/24 16:03	07/10/24 13:27	1
o-Terphenyl	65	S1-	70 - 130				07/09/24 16:03	07/10/24 13:27	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	215		4.98		mg/Kg			07/10/24 11:47	1

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Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6904-1
SDG: KH237057

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)
880-45685-A-1-D MS	Matrix Spike	105	93
880-45685-A-1-E MSD	Matrix Spike Duplicate	105	93
890-6904-1	CSF - 11	112	90
890-6904-2	CSF - 12	111	90
LCS 880-85217/1-A	Lab Control Sample	105	92
LCSD 880-85217/2-A	Lab Control Sample Dup	103	92
MB 880-85217/5-A	Method Blank	106	85

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)
890-6904-1	CSF - 11	67 S1-	67 S1-
890-6904-1 MS	CSF - 11	71	76
890-6904-1 MSD	CSF - 11	72	77
890-6904-2	CSF - 12	64 S1-	65 S1-
LCS 880-85268/2-A	Lab Control Sample	94	110
LCSD 880-85268/3-A	Lab Control Sample Dup	116	113
MB 880-85268/1-A	Method Blank	87	110

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6904-1
SDG: KH237057

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-85217/5-A

Matrix: Solid

Analysis Batch: 85216

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 85217

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/09/24 08:34	07/09/24 11:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/09/24 08:34	07/09/24 11:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/09/24 08:34	07/09/24 11:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/09/24 08:34	07/09/24 11:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/09/24 08:34	07/09/24 11:25	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/09/24 08:34	07/09/24 11:25	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	07/09/24 08:34	07/09/24 11:25	1
1,4-Difluorobenzene (Surr)	85		70 - 130	07/09/24 08:34	07/09/24 11:25	1

Lab Sample ID: LCS 880-85217/1-A

Matrix: Solid

Analysis Batch: 85216

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 85217

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09016		mg/Kg		90	70 - 130
Toluene	0.100	0.08651		mg/Kg		87	70 - 130
Ethylbenzene	0.100	0.08719		mg/Kg		87	70 - 130
m-Xylene & p-Xylene	0.200	0.1912		mg/Kg		96	70 - 130
o-Xylene	0.100	0.09632		mg/Kg		96	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: LCSD 880-85217/2-A

Matrix: Solid

Analysis Batch: 85216

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 85217

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08371		mg/Kg		84	70 - 130	7	35
Toluene	0.100	0.07845		mg/Kg		78	70 - 130	10	35
Ethylbenzene	0.100	0.07694		mg/Kg		77	70 - 130	12	35
m-Xylene & p-Xylene	0.200	0.1706		mg/Kg		85	70 - 130	11	35
o-Xylene	0.100	0.08715		mg/Kg		87	70 - 130	10	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: 880-45685-A-1-D MS

Matrix: Solid

Analysis Batch: 85216

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 85217

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.100	0.09157		mg/Kg		92	70 - 130
Toluene	<0.00200	U	0.100	0.08545		mg/Kg		85	70 - 130

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6904-1
SDG: KH237057

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

Lab Sample ID: 880-45685-A-1-D MS

Matrix: Solid

Analysis Batch: 85216

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 85217

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.100	0.08489		mg/Kg		85	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1850		mg/Kg		92	70 - 130
o-Xylene	<0.00200	U	0.100	0.09313		mg/Kg		93	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

Lab Sample ID: 880-45685-A-1-E MSD

Matrix: Solid

Analysis Batch: 85216

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 85217

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	<0.00200	U	0.100	0.09148		mg/Kg		91	70 - 130	0	35
Toluene	<0.00200	U	0.100	0.08622		mg/Kg		86	70 - 130	1	35
Ethylbenzene	<0.00200	U	0.100	0.08508		mg/Kg		85	70 - 130	0	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1851		mg/Kg		93	70 - 130	0	35
o-Xylene	<0.00200	U	0.100	0.09309		mg/Kg		93	70 - 130	0	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

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

Lab Sample ID: MB 880-85268/1-A

Matrix: Solid

Analysis Batch: 85236

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 85268

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/09/24 16:03	07/10/24 09:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/09/24 16:03	07/10/24 09:37	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/09/24 16:03	07/10/24 09:37	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130	07/09/24 16:03	07/10/24 09:37	1
o-Terphenyl	110		70 - 130	07/09/24 16:03	07/10/24 09:37	1

Lab Sample ID: LCS 880-85268/2-A

Matrix: Solid

Analysis Batch: 85236

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 85268

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	823.1		mg/Kg		82	70 - 130
Diesel Range Organics (Over C10-C28)	1000	982.5		mg/Kg		98	70 - 130

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6904-1
SDG: KH237057

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

Lab Sample ID: LCS 880-85268/2-A
Matrix: Solid
Analysis Batch: 85236

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 85268

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	94		70 - 130
o-Terphenyl	110		70 - 130

Lab Sample ID: LCSD 880-85268/3-A
Matrix: Solid
Analysis Batch: 85236

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 85268

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	836.5		mg/Kg		84	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	964.5		mg/Kg		96	70 - 130	2	20
Surrogate		LCSD	LCSD								
	%Recovery	Qualifier	Limits								
1-Chlorooctane	116		70 - 130								
o-Terphenyl	113		70 - 130								

Lab Sample ID: 890-6904-1 MS
Matrix: Solid
Analysis Batch: 85236

Client Sample ID: CSF - 11
Prep Type: Total/NA
Prep Batch: 85268

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.8	U F1	999	621.1	F1	mg/Kg		62	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.8	U F1	999	629.4	F1	mg/Kg		63	70 - 130		
Surrogate		MS	MS								
	%Recovery	Qualifier	Limits								
1-Chlorooctane	71		70 - 130								
o-Terphenyl	76		70 - 130								

Lab Sample ID: 890-6904-1 MSD
Matrix: Solid
Analysis Batch: 85236

Client Sample ID: CSF - 11
Prep Type: Total/NA
Prep Batch: 85268

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U F1	999	649.7	F1	mg/Kg		65	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.8	U F1	999	654.5	F1	mg/Kg		66	70 - 130	4	20
Surrogate		MSD	MSD								
	%Recovery	Qualifier	Limits								
1-Chlorooctane	72		70 - 130								
o-Terphenyl	77		70 - 130								

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6904-1
SDG: KH237057

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-85211/1-A

Matrix: Solid

Analysis Batch: 85263

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/10/24 08:07	1

Lab Sample ID: LCS 880-85211/2-A

Matrix: Solid

Analysis Batch: 85263

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	253.6		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-85211/3-A

Matrix: Solid

Analysis Batch: 85263

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	257.0		mg/Kg		103	90 - 110	1	20

Lab Sample ID: 880-45706-A-3-C MS

Matrix: Solid

Analysis Batch: 85263

Client Sample ID: Matrix Spike

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	336		252	581.8		mg/Kg		98	90 - 110

Lab Sample ID: 880-45706-A-3-D MSD

Matrix: Solid

Analysis Batch: 85263

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	336		252	578.4		mg/Kg		96	90 - 110	1	20

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QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6904-1
SDG: KH237057

GC VOA

Analysis Batch: 85216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6904-1	CSF - 11	Total/NA	Solid	8021B	85217
890-6904-2	CSF - 12	Total/NA	Solid	8021B	85217
MB 880-85217/5-A	Method Blank	Total/NA	Solid	8021B	85217
LCS 880-85217/1-A	Lab Control Sample	Total/NA	Solid	8021B	85217
LCSD 880-85217/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	85217
880-45685-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	85217
880-45685-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	85217

Prep Batch: 85217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6904-1	CSF - 11	Total/NA	Solid	5035	
890-6904-2	CSF - 12	Total/NA	Solid	5035	
MB 880-85217/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-85217/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-85217/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-45685-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-45685-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 85328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6904-1	CSF - 11	Total/NA	Solid	Total BTEX	
890-6904-2	CSF - 12	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 85236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6904-1	CSF - 11	Total/NA	Solid	8015B NM	85268
890-6904-2	CSF - 12	Total/NA	Solid	8015B NM	85268
MB 880-85268/1-A	Method Blank	Total/NA	Solid	8015B NM	85268
LCS 880-85268/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	85268
LCSD 880-85268/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	85268
890-6904-1 MS	CSF - 11	Total/NA	Solid	8015B NM	85268
890-6904-1 MSD	CSF - 11	Total/NA	Solid	8015B NM	85268

Prep Batch: 85268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6904-1	CSF - 11	Total/NA	Solid	8015NM Prep	
890-6904-2	CSF - 12	Total/NA	Solid	8015NM Prep	
MB 880-85268/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-85268/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-85268/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-6904-1 MS	CSF - 11	Total/NA	Solid	8015NM Prep	
890-6904-1 MSD	CSF - 11	Total/NA	Solid	8015NM Prep	

Analysis Batch: 85493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6904-1	CSF - 11	Total/NA	Solid	8015 NM	
890-6904-2	CSF - 12	Total/NA	Solid	8015 NM	

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QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6904-1
SDG: KH237057

HPLC/IC

Leach Batch: 85211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6904-1	CSF - 11	Soluble	Solid	DI Leach	
890-6904-2	CSF - 12	Soluble	Solid	DI Leach	
MB 880-85211/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-85211/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-85211/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-45706-A-3-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-45706-A-3-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 85263

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6904-1	CSF - 11	Soluble	Solid	300.0	85211
890-6904-2	CSF - 12	Soluble	Solid	300.0	85211
MB 880-85211/1-A	Method Blank	Soluble	Solid	300.0	85211
LCS 880-85211/2-A	Lab Control Sample	Soluble	Solid	300.0	85211
LCSD 880-85211/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	85211
880-45706-A-3-C MS	Matrix Spike	Soluble	Solid	300.0	85211
880-45706-A-3-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	85211

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6904-1
SDG: KH237057

Client Sample ID: CSF - 11
Date Collected: 07/05/24 10:19
Date Received: 07/08/24 11:14

Lab Sample ID: 890-6904-1
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	85217	07/09/24 08:34	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85216	07/09/24 16:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85328	07/09/24 16:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			85493	07/10/24 12:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	85268	07/09/24 16:03	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85236	07/10/24 12:35	TKC	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	85211	07/09/24 08:00	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85263	07/10/24 11:40	CH	EET MID

Client Sample ID: CSF - 12
Date Collected: 07/05/24 10:25
Date Received: 07/08/24 11:14

Lab Sample ID: 890-6904-2
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			5.02 g	5 mL	85217	07/09/24 08:34	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85216	07/09/24 17:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85328	07/09/24 17:06	SM	EET MID
Total/NA	Analysis	8015 NM		1			85493	07/10/24 13:27	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	85268	07/09/24 16:03	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85236	07/10/24 13:27	TKC	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	85211	07/09/24 08:00	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85263	07/10/24 11:47	CH	EET MID

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

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6904-1
SDG: KH237057

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	06-30-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6904-1
SDG: KH237057

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: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6904-1
SDG: KH237057

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-6904-1	CSF - 11	Solid	07/05/24 10:19	07/08/24 11:14	6 - 6
890-6904-2	CSF - 12	Solid	07/05/24 10:25	07/08/24 11:14	6 - 6

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CHAIN OF CUSTODY RECORD



Explore with us

4526 W. Pierce St Carlsbad NM, 88220

Project Manager Joseph Guesnier

Sampler's Name Gus Sanchez

Laboratory:

Address:

Phone:

Contact:

SRS #:

Sampler's Signature

Project Number KH247005 KH237057

Project Name Longview Deep Fed 1-21

Leak #149

Identifying Marks of Sample(s)

Matrix	Date	Time	Comp	Grab	Start Depth	End Depth	4 oz Glass	2 oz Glass	250 ml Poly
S	7/5/2024	10:19	X		6	6	X		
S	7/5/2024	10:25	X		6	6	X		

No. Type of Containers

Chloride (EPA Method 300)	X	X	X	X
TPH Extended 8015	X	X	X	X
BTEX (EPA Method 8021B)	X	X	X	X

TURNAROUND TIME

Relinquished by (Signature) *[Signature]* Date: 7-8-24 Time: 11:12

Relinquished by (Signature) *[Signature]* Date: 7-8-24 Time: 11:14

Relinquished by (Signature) *[Signature]* Date: 7-8-24 Time: 11:14

TEMP OF COOLER WHEN RECEIVED (oc) 74.4007 °C 6.2 °C

Matrix WW-Wastewater W - Water S - Soil L - Liquid A - Air Bag C - Charcoal tube SL - Sludge

Container VOA - 40 ml vial A/G - Amber C 250 ml = Glass wide mouth P/O - Plastic or other

Normal ☐ 48-Hour Rush ☐ 24-Hour Rush ☐

TRRP Laboratory Review Checklist

Yes ☐ No ☐

Bill To: Devon

Att: Dale Woodall

e-mail results to:

Joseph.guesnier@terracon.com

travis.casey@terracon.com

mike.adams@terracon.com

beckysue.miller@terracon.com

gus.sanchez@terracon.com

chuck.smith@terracon.com

LAB USE ONLY/DUE DATE:

890-6904 Chain of Custody

Lab Sample ID

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-6904-1

SDG Number: KH237057

Login Number: 6904

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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-6904-1

SDG Number: KH237057

Login Number: 6904

List Number: 2

Creator: Vasquez, Julisa

List Source: Eurofins Midland

List Creation: 07/09/24 08:00 AM

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



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Joseph Guesnier
Terracon Consulting Eng & Scientists
5847 50th St
Lubbock, Texas 79424

Generated 7/12/2024 4:28:58 PM Revision 1

JOB DESCRIPTION

Longview Deep Fed 1-21
KH237057

JOB NUMBER

890-6905-1

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



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

Generated
7/12/2024 4:28:58 PM
Revision 1

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Laboratory Job ID: 890-6905-1
SDG: KH237057

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Definitions/Glossary

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6905-1
SDG: KH237057

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
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.
α	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: Terracon Consulting Eng & Scientists
Project: Longview Deep Fed 1-21

Job ID: 890-6905-1

Job ID: 890-6905-1

Eurofins Carlsbad

Job Narrative 890-6905-1

REVISION

The report being provided is a revision of the original report sent on 7/11/2024. The report (revision 1) is being revised due to Revision needed to include proper project name.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 7/8/2024 11:14 AM. 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 -0.4°C.

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: DS - 09 (890-6905-1) and DS - 09 (890-6905-2).

GC VOA

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-85216 recovered under the lower control limit for Benzene, Toluene and Ethylbenzene. The samples associated with this CCV were ran within 12 hours of passing CCV; therefore, the data have been 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: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-85268 and analytical batch 880-85236 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8015MOD_NM: An incorrect volume of surrogate spiking solution was inadvertently added the following samples: DS - 09 (890-6905-1) and (890-6904-A-1-D). 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

Method 300_ORGFM_28D - Soluble: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-85273 and analytical batch 880-85356 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6905-1
SDG: KH237057

Client Sample ID: DS - 09

Lab Sample ID: 890-6905-1

Date Collected: 07/05/24 13:30

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 6 - 6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/09/24 08:34	07/09/24 17:26	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/09/24 08:34	07/09/24 17:26	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/09/24 08:34	07/09/24 17:26	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/09/24 08:34	07/09/24 17:26	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/09/24 08:34	07/09/24 17:26	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/09/24 08:34	07/09/24 17:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	07/09/24 08:34	07/09/24 17:26	1
1,4-Difluorobenzene (Surr)	91		70 - 130	07/09/24 08:34	07/09/24 17:26	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			07/09/24 17:26	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			07/10/24 13:46	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	<49.7	U	49.7		mg/Kg		07/09/24 16:03	07/10/24 13:46	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		07/09/24 16:03	07/10/24 13:46	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		07/09/24 16:03	07/10/24 13:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	54	S1-	70 - 130	07/09/24 16:03	07/10/24 13:46	1
o-Terphenyl	54	S1-	70 - 130	07/09/24 16:03	07/10/24 13:46	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	64.6		5.03		mg/Kg			07/10/24 23:18	1

Client Sample ID: DS - 09

Lab Sample ID: 890-6905-2

Date Collected: 07/05/24 13:39

Matrix: Solid

Date Received: 07/08/24 11:14

Sample Depth: 7 - 7

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		07/09/24 08:34	07/09/24 17:46	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/09/24 08:34	07/09/24 17:46	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/09/24 08:34	07/09/24 17:46	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		07/09/24 08:34	07/09/24 17:46	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/09/24 08:34	07/09/24 17:46	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		07/09/24 08:34	07/09/24 17:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130	07/09/24 08:34	07/09/24 17:46	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6905-1
SDG: KH237057

Client Sample ID: DS - 09
Date Collected: 07/05/24 13:39
Date Received: 07/08/24 11:14
Sample Depth: 7 - 7

Lab Sample ID: 890-6905-2
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)										
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
1,4-Difluorobenzene (Surr)	89		70 - 130				07/09/24 08:34	07/09/24 17:46		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	-		07/09/24 17:46		1
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	<49.6	U	49.6		mg/Kg	-		07/10/24 14:04		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	<49.6	U	49.6		mg/Kg	-	07/09/24 16:03	07/10/24 14:04		1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg	-	07/09/24 16:03	07/10/24 14:04		1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg	-	07/09/24 16:03	07/10/24 14:04		1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
1-Chlorooctane	72		70 - 130				07/09/24 16:03	07/10/24 14:04		1
o-Terphenyl	72		70 - 130				07/09/24 16:03	07/10/24 14:04		1
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	49.4		4.97		mg/Kg	-		07/10/24 23:23		1

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6905-1
SDG: KH237057

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)
880-45685-A-1-D MS	Matrix Spike	105	93
880-45685-A-1-E MSD	Matrix Spike Duplicate	105	93
890-6905-1	DS - 09	112	91
890-6905-2	DS - 09	110	89
LCS 880-85217/1-A	Lab Control Sample	105	92
LCSD 880-85217/2-A	Lab Control Sample Dup	103	92
MB 880-85217/5-A	Method Blank	106	85

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)
890-6904-A-1-E MS	Matrix Spike	71	76
890-6904-A-1-F MSD	Matrix Spike Duplicate	72	77
890-6905-1	DS - 09	54 S1-	54 S1-
890-6905-2	DS - 09	72	72
LCS 880-85268/2-A	Lab Control Sample	94	110
LCSD 880-85268/3-A	Lab Control Sample Dup	116	113
MB 880-85268/1-A	Method Blank	87	110

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6905-1
SDG: KH237057

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-85217/5-A

Matrix: Solid

Analysis Batch: 85216

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 85217

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/09/24 08:34	07/09/24 11:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/09/24 08:34	07/09/24 11:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/09/24 08:34	07/09/24 11:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/09/24 08:34	07/09/24 11:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/09/24 08:34	07/09/24 11:25	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/09/24 08:34	07/09/24 11:25	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	07/09/24 08:34	07/09/24 11:25	1
1,4-Difluorobenzene (Surr)	85		70 - 130	07/09/24 08:34	07/09/24 11:25	1

Lab Sample ID: LCS 880-85217/1-A

Matrix: Solid

Analysis Batch: 85216

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 85217

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09016		mg/Kg		90	70 - 130
Toluene	0.100	0.08651		mg/Kg		87	70 - 130
Ethylbenzene	0.100	0.08719		mg/Kg		87	70 - 130
m-Xylene & p-Xylene	0.200	0.1912		mg/Kg		96	70 - 130
o-Xylene	0.100	0.09632		mg/Kg		96	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: LCSD 880-85217/2-A

Matrix: Solid

Analysis Batch: 85216

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 85217

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08371		mg/Kg		84	70 - 130	7	35
Toluene	0.100	0.07845		mg/Kg		78	70 - 130	10	35
Ethylbenzene	0.100	0.07694		mg/Kg		77	70 - 130	12	35
m-Xylene & p-Xylene	0.200	0.1706		mg/Kg		85	70 - 130	11	35
o-Xylene	0.100	0.08715		mg/Kg		87	70 - 130	10	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: 880-45685-A-1-D MS

Matrix: Solid

Analysis Batch: 85216

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 85217

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.100	0.09157		mg/Kg		92	70 - 130
Toluene	<0.00200	U	0.100	0.08545		mg/Kg		85	70 - 130

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6905-1
SDG: KH237057

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

Lab Sample ID: 880-45685-A-1-D MS

Matrix: Solid

Analysis Batch: 85216

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 85217

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.100	0.08489		mg/Kg		85	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1850		mg/Kg		92	70 - 130
o-Xylene	<0.00200	U	0.100	0.09313		mg/Kg		93	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

Lab Sample ID: 880-45685-A-1-E MSD

Matrix: Solid

Analysis Batch: 85216

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 85217

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	0.09148		mg/Kg		91	70 - 130	0	35
Toluene	<0.00200	U	0.100	0.08622		mg/Kg		86	70 - 130	1	35
Ethylbenzene	<0.00200	U	0.100	0.08508		mg/Kg		85	70 - 130	0	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1851		mg/Kg		93	70 - 130	0	35
o-Xylene	<0.00200	U	0.100	0.09309		mg/Kg		93	70 - 130	0	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

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

Lab Sample ID: MB 880-85268/1-A

Matrix: Solid

Analysis Batch: 85236

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 85268

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/09/24 16:03	07/10/24 09:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/09/24 16:03	07/10/24 09:37	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/09/24 16:03	07/10/24 09:37	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130	07/09/24 16:03	07/10/24 09:37	1
o-Terphenyl	110		70 - 130	07/09/24 16:03	07/10/24 09:37	1

Lab Sample ID: LCS 880-85268/2-A

Matrix: Solid

Analysis Batch: 85236

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 85268

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	823.1		mg/Kg		82	70 - 130
Diesel Range Organics (Over C10-C28)	1000	982.5		mg/Kg		98	70 - 130

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6905-1
SDG: KH237057

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

Lab Sample ID: LCS 880-85268/2-A
Matrix: Solid
Analysis Batch: 85236

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 85268

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	94		70 - 130
o-Terphenyl	110		70 - 130

Lab Sample ID: LCSD 880-85268/3-A
Matrix: Solid
Analysis Batch: 85236

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 85268

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	836.5		mg/Kg		84	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	964.5		mg/Kg		96	70 - 130	2	20
Surrogate		LCSD	LCSD								
	%Recovery	Qualifier	Limits								
1-Chlorooctane	116		70 - 130								
o-Terphenyl	113		70 - 130								

Lab Sample ID: 890-6904-A-1-E MS
Matrix: Solid
Analysis Batch: 85236

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 85268

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.8	U F1	999	621.1	F1	mg/Kg		62	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.8	U F1	999	629.4	F1	mg/Kg		63	70 - 130		
Surrogate		MS	MS								
	%Recovery	Qualifier	Limits								
1-Chlorooctane	71		70 - 130								
o-Terphenyl	76		70 - 130								

Lab Sample ID: 890-6904-A-1-F MSD
Matrix: Solid
Analysis Batch: 85236

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 85268

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U F1	999	649.7	F1	mg/Kg		65	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.8	U F1	999	654.5	F1	mg/Kg		66	70 - 130	4	20
Surrogate		MSD	MSD								
	%Recovery	Qualifier	Limits								
1-Chlorooctane	72		70 - 130								
o-Terphenyl	77		70 - 130								

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6905-1
SDG: KH237057

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-85273/1-A

Matrix: Solid

Analysis Batch: 85356

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/10/24 20:52	1

Lab Sample ID: LCS 880-85273/2-A

Matrix: Solid

Analysis Batch: 85356

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	262.1		mg/Kg		105	90 - 110

Lab Sample ID: LCSD 880-85273/3-A

Matrix: Solid

Analysis Batch: 85356

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	262.7		mg/Kg		105	90 - 110	0	20

Lab Sample ID: 880-45738-A-4-C MS

Matrix: Solid

Analysis Batch: 85356

Client Sample ID: Matrix Spike

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1200		253	1503	4	mg/Kg		121	90 - 110

Lab Sample ID: 880-45738-A-4-D MSD

Matrix: Solid

Analysis Batch: 85356

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1200		253	1500	4	mg/Kg		120	90 - 110	0	20

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QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6905-1
SDG: KH237057

GC VOA

Analysis Batch: 85216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6905-1	DS - 09	Total/NA	Solid	8021B	85217
890-6905-2	DS - 09	Total/NA	Solid	8021B	85217
MB 880-85217/5-A	Method Blank	Total/NA	Solid	8021B	85217
LCS 880-85217/1-A	Lab Control Sample	Total/NA	Solid	8021B	85217
LCSD 880-85217/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	85217
880-45685-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	85217
880-45685-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	85217

Prep Batch: 85217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6905-1	DS - 09	Total/NA	Solid	5035	
890-6905-2	DS - 09	Total/NA	Solid	5035	
MB 880-85217/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-85217/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-85217/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-45685-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-45685-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 85329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6905-1	DS - 09	Total/NA	Solid	Total BTEX	
890-6905-2	DS - 09	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 85236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6905-1	DS - 09	Total/NA	Solid	8015B NM	85268
890-6905-2	DS - 09	Total/NA	Solid	8015B NM	85268
MB 880-85268/1-A	Method Blank	Total/NA	Solid	8015B NM	85268
LCS 880-85268/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	85268
LCSD 880-85268/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	85268
890-6904-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	85268
890-6904-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	85268

Prep Batch: 85268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6905-1	DS - 09	Total/NA	Solid	8015NM Prep	
890-6905-2	DS - 09	Total/NA	Solid	8015NM Prep	
MB 880-85268/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-85268/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-85268/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-6904-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-6904-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 85494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6905-1	DS - 09	Total/NA	Solid	8015 NM	
890-6905-2	DS - 09	Total/NA	Solid	8015 NM	

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QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6905-1
SDG: KH237057

HPLC/IC

Leach Batch: 85273

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6905-1	DS - 09	Soluble	Solid	DI Leach	
890-6905-2	DS - 09	Soluble	Solid	DI Leach	
MB 880-85273/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-85273/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-85273/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-45738-A-4-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-45738-A-4-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 85356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6905-1	DS - 09	Soluble	Solid	300.0	85273
890-6905-2	DS - 09	Soluble	Solid	300.0	85273
MB 880-85273/1-A	Method Blank	Soluble	Solid	300.0	85273
LCS 880-85273/2-A	Lab Control Sample	Soluble	Solid	300.0	85273
LCSD 880-85273/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	85273
880-45738-A-4-C MS	Matrix Spike	Soluble	Solid	300.0	85273
880-45738-A-4-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	85273

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6905-1
SDG: KH237057

Client Sample ID: DS - 09
Date Collected: 07/05/24 13:30
Date Received: 07/08/24 11:14

Lab Sample ID: 890-6905-1
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			5.00 g	5 mL	85217	07/09/24 08:34	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85216	07/09/24 17:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85329	07/09/24 17:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			85494	07/10/24 13:46	SM	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	85268	07/09/24 16:03	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85236	07/10/24 13:46	TKC	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	85273	07/09/24 17:06	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85356	07/10/24 23:18	CH	EET MID

Client Sample ID: DS - 09
Date Collected: 07/05/24 13:39
Date Received: 07/08/24 11:14

Lab Sample ID: 890-6905-2
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			5.04 g	5 mL	85217	07/09/24 08:34	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85216	07/09/24 17:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			85329	07/09/24 17:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			85494	07/10/24 14:04	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	85268	07/09/24 16:03	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85236	07/10/24 14:04	TKC	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	85273	07/09/24 17:06	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85356	07/10/24 23:23	CH	EET MID

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

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6905-1
SDG: KH237057

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	06-30-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6905-1
SDG: KH237057

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: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-6905-1
SDG: KH237057

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-6905-1	DS - 09	Solid	07/05/24 13:30	07/08/24 11:14	6 - 6
890-6905-2	DS - 09	Solid	07/05/24 13:39	07/08/24 11:14	7 - 7

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CHAIN OF CUSTODY RECORD



4526 W. Pierce St Carlsbad NM, 88220

Project Manager Joseph Guesnier
Sampler's Name Gus Sanchez

Laboratory:
Address:
Phone:
Contact:
SRS #:
Sampler's Signature

Project Number KH247005 KH237057 Project Name Longview Deep Fed 1-21 Leak #149

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	4 oz Glass	2 oz Glass	250 ml Poly	No. Type of Containers
--------	------	------	------	------	--------------------------------	-------------	-----------	------------	------------	-------------	------------------------

S	7/5/2024	13:30		X	DS-09	6	6	X			
S	7/5/2024	13:39		X	DS-09	7	7	X			

X	X	X	X
X	X	X	X
X	X	X	X

ANALYSIS REQUEST

LAB USE ONLY/DUE DATE:



TURNAROUND TIME ☐ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature) Date: 7-8-24 Time: 11:12 Received by (Signature) Date: 7/8 Time: 11:14

Relinquished by (Signature) Date: Time: Received by (Signature) Date: Time: Att: Dale Woodall

Relinquished by (Signature) Date: Time: Received by (Signature) Date: Time:

TEMP OF COOLER WHEN RECEIVED (C) 7.0-2.0-6

Matrix WW-Wastewater W - Water S - Soil L - Liquid A - Air Bag C - Charcoal tube SL - Sludge
Container VOA - 40 ml vial A/G - Amber C 250 ml = Glass wide mouth P/O - Plastic or other

Lubbock Office ■ 5827 50th Street, Suite 1 ■ Lubbock, Texas 79424 ■ 806-300-0140

e-mail results to:
joseph.guesnier@terracon.com
travis.casey@terracon.com
mike.adams@terracon.com
beckysue.miller@terracon.com
gus.sanchez@terracon.com
chuck.smith@terracon.com

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-6905-1

SDG Number: KH237057

Login Number: 6905

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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-6905-1

SDG Number: KH237057

Login Number: 6905
List Number: 2
Creator: Vasquez, Julisa

List Source: Eurofins Midland
List Creation: 07/09/24 08:00 AM

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



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Joseph Guesnier
Terracon Consulting Eng & Scientists
2526 W Pierce Street
Carlsbad, New Mexico 88220

Generated 7/18/2024 12:05:07 PM Revision 1

JOB DESCRIPTION

Longview Deep Fed
KH 237057

JOB NUMBER

890-6924-1

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



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

Generated
7/18/2024 12:05:07 PM
Revision 1

Eurofins Carlsbad

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments. QC data that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result. Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Coliform MCLs

· Based on the EPA primary drinking water standard MCL for total coliforms, a water supply is considered bacteriologically "SAFE" if no coliform bacteria are detected. To be considered "SAFE" your report should indicate "<1 cfu/100mL" or "NEG" for the coliform test. If you report indicates a positive result "POS" or a value greater than or equal to one, then your supply is "UNSAFE FOR DRINKING" contact your local health department.

Warranties, Terms, and Conditions

· Analyses for Field Parameters are performed by Eurofins Philadelphia field staff. Locations and certifications are identified on the Chain of Custody as follows:

ERF = field staff performs tests under NJ State certification # 02015.

VL = field staff performs tests under NJ State certification # 06005.

WG = field staff performs tests under NJ State certification # PA001, PA State certification # 48-01334.

H = field staff performs tests under NJ NELAP certification # PA093, PA NELAP certification # 46-05499.

· Test results meet all TNI or other applicable regulatory agency requirements, including holding times and preservation, unless otherwise indicated.

· The report shall not be reproduced, except in full, without the written consent of the laboratory

· All samples are collected as "grab" samples unless otherwise identified.

· Reported results related only to the samples as tested. Eurofins Philadelphia is not responsible for sample integrity unless sampling has been performed by a member of our staff.

· Eurofins Philadelphia is not responsible for sampling and/or testing omissions. Note that regulatory authorities may assess substantial fines for testing omissions. Please track your sample collection schedules and results on a regular basis (e.g. weekly, monthly, or quarterly) to ensure compliance.

· Eurofins' online data portal "TotalAccess" will provide you with real-time access to collection dates and testing results. Please contact Client Services for further information.

· The following personnel or their deputies have approved the results of the tests performed by Eurofins Philadelphia : Nicki Smith (Environmental Chemistry) and Jacqueline Gartner (Water Microbiology).



Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed

Laboratory Job ID: 890-6924-1
SDG: KH 237057

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Definitions/Glossary

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed

Job ID: 890-6924-1
SDG: KH 237057

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.
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.
α	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: Terracon Consulting Eng & Scientists
Project: Longview Deep Fed

Job ID: 890-6924-1

Job ID: 890-6924-1

Eurofins Carlsbad

Job Narrative 890-6924-1

REVISION

The report being provided is a revision of the original report sent on 7/15/2024. The report (revision 1) is being revised due to Per client email, requesting project name correction.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 7/10/2024 1:41 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 1.0°C.

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: BFM - 01 (890-6924-1) and BFM - 02 (890-6924-2).

GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCS 880-85417/1-A) and (890-6921-A-1-E MS). Evidence of matrix interferences is not obvious.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-85417 and analytical batch 880-85411 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 8015MOD_NM: The method blank for preparation batch 880-85557 and analytical batch 880-85608 contained Gasoline Range Organics (GRO)-C6-C10 and Diesel Range Organics (Over C10-C28) above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL) in the method blank; therefore, re-extraction and re-analysis of samples was not performed.

Method 8015MOD_NM: The continuing calibration verification (CCV) associated with batch 880-85608 exhibited % difference of > 20% for the following analyte(s) o-Terphenyl. These results are within the labs acceptance limits and so the data has been reported.

Method 8015MOD_NM: An incorrect volume of surrogate spiking solution was inadvertently added the following samples: BFM - 01 (890-6924-1), BFM - 02 (890-6924-2) and (890-6919-A-10-C). 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: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed

Job ID: 890-6924-1
SDG: KH 237057

Client Sample ID: BFM - 01

Lab Sample ID: 890-6924-1

Date Collected: 07/10/24 09:30

Matrix: Solid

Date Received: 07/10/24 13:41

Sample Depth: 0 - 0.5'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/11/24 08:18	07/11/24 16:32	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/11/24 08:18	07/11/24 16:32	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/11/24 08:18	07/11/24 16:32	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/11/24 08:18	07/11/24 16:32	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/11/24 08:18	07/11/24 16:32	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/11/24 08:18	07/11/24 16:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130	07/11/24 08:18	07/11/24 16:32	1
1,4-Difluorobenzene (Surr)	102		70 - 130	07/11/24 08:18	07/11/24 16:32	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			07/11/24 16:32	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			07/12/24 20:06	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		07/12/24 10:47	07/12/24 20:06	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		07/12/24 10:47	07/12/24 20:06	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		07/12/24 10:47	07/12/24 20:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	64	S1-	70 - 130	07/12/24 10:47	07/12/24 20:06	1
o-Terphenyl	58	S1-	70 - 130	07/12/24 10:47	07/12/24 20:06	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1310		5.03		mg/Kg			07/12/24 14:24	1

Client Sample ID: BFM - 02

Lab Sample ID: 890-6924-2

Date Collected: 07/10/24 09:40

Matrix: Solid

Date Received: 07/10/24 13:41

Sample Depth: 0 - 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		07/11/24 08:18	07/11/24 16:52	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/11/24 08:18	07/11/24 16:52	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/11/24 08:18	07/11/24 16:52	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/11/24 08:18	07/11/24 16:52	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/11/24 08:18	07/11/24 16:52	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/11/24 08:18	07/11/24 16:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	122		70 - 130	07/11/24 08:18	07/11/24 16:52	1

Eurofins Carlsbad

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed

Job ID: 890-6924-1
SDG: KH 237057

Client Sample ID: BFM - 02

Lab Sample ID: 890-6924-2

Date Collected: 07/10/24 09:40

Matrix: Solid

Date Received: 07/10/24 13:41

Sample Depth: 0 - 0.5'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	110		70 - 130	07/11/24 08:18	07/11/24 16:52	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			07/11/24 16:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			07/12/24 20:21	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	<50.3	U	50.3		mg/Kg		07/12/24 10:47	07/12/24 20:21	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		07/12/24 10:47	07/12/24 20:21	1
Oil Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		07/12/24 10:47	07/12/24 20:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	61	S1-	70 - 130	07/12/24 10:47	07/12/24 20:21	1
o-Terphenyl	54	S1-	70 - 130	07/12/24 10:47	07/12/24 20:21	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	115		5.05		mg/Kg			07/12/24 14:29	1

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed

Job ID: 890-6924-1
SDG: KH 237057

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)
890-6924-1	BFM - 01	105	102
890-6924-2	BFM - 02	122	110
LCS 880-85417/1-A	Lab Control Sample	132 S1+	108
LCSD 880-85417/2-A	Lab Control Sample Dup	122	99
MB 880-85417/5-A	Method Blank	216 S1+	129
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)
890-6924-1	BFM - 01	64 S1-	58 S1-
890-6924-2	BFM - 02	61 S1-	54 S1-
LCS 880-85557/2-A	Lab Control Sample	88	75
LCSD 880-85557/3-A	Lab Control Sample Dup	85	73
MB 880-85557/1-A	Method Blank	101	118
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed

Job ID: 890-6924-1
SDG: KH 237057

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-85417/5-A
Matrix: Solid
Analysis Batch: 85411

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 85417

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/11/24 08:18	07/11/24 11:08	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/11/24 08:18	07/11/24 11:08	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/11/24 08:18	07/11/24 11:08	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/11/24 08:18	07/11/24 11:08	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/11/24 08:18	07/11/24 11:08	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/11/24 08:18	07/11/24 11:08	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	216	S1+	70 - 130	07/11/24 08:18	07/11/24 11:08	1
1,4-Difluorobenzene (Surr)	129		70 - 130	07/11/24 08:18	07/11/24 11:08	1

Lab Sample ID: LCS 880-85417/1-A
Matrix: Solid
Analysis Batch: 85411

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 85417

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1111		mg/Kg		111	70 - 130
Toluene	0.100	0.09002		mg/Kg		90	70 - 130
Ethylbenzene	0.100	0.1052		mg/Kg		105	70 - 130
m-Xylene & p-Xylene	0.200	0.2196		mg/Kg		110	70 - 130
o-Xylene	0.100	0.1157		mg/Kg		116	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	132	S1+	70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

Lab Sample ID: LCSD 880-85417/2-A
Matrix: Solid
Analysis Batch: 85411

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 85417

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1137		mg/Kg		114	70 - 130	2	35
Toluene	0.100	0.09494		mg/Kg		95	70 - 130	5	35
Ethylbenzene	0.100	0.1083		mg/Kg		108	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.2228		mg/Kg		111	70 - 130	1	35
o-Xylene	0.100	0.1134		mg/Kg		113	70 - 130	2	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	122		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed

Job ID: 890-6924-1
SDG: KH 237057

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

Lab Sample ID: MB 880-85557/1-A

Matrix: Solid

Analysis Batch: 85608

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 85557

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/12/24 10:46	07/12/24 14:19	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/12/24 10:46	07/12/24 14:19	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/12/24 10:46	07/12/24 14:19	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130				07/12/24 10:46	07/12/24 14:19	1
o-Terphenyl	118		70 - 130				07/12/24 10:46	07/12/24 14:19	1

Lab Sample ID: LCS 880-85557/2-A

Matrix: Solid

Analysis Batch: 85608

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 85557

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Gasoline Range Organics (GRO)-C6-C10	1000	919.8		mg/Kg		92	70 - 130	
Diesel Range Organics (Over C10-C28)	1000	885.1		mg/Kg		89	70 - 130	
Surrogate		LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane		88		70 - 130				
o-Terphenyl		75		70 - 130				

Lab Sample ID: LCSD 880-85557/3-A

Matrix: Solid

Analysis Batch: 85608

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 85557

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	909.2		mg/Kg		91	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	1000	887.9		mg/Kg		89	70 - 130	0	20
Surrogate		LCSD %Recovery	LCSD Qualifier	Limits					
1-Chlorooctane		85		70 - 130					
o-Terphenyl		73		70 - 130					

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-85460/1-A

Matrix: Solid

Analysis Batch: 85520

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/12/24 12:02	1

Eurofins Carlsbad

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed

Job ID: 890-6924-1
SDG: KH 237057

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-85460/2-A

Matrix: Solid

Analysis Batch: 85520

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	261.8		mg/Kg		105	90 - 110

Lab Sample ID: LCSD 880-85460/3-A

Matrix: Solid

Analysis Batch: 85520

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	261.0		mg/Kg		104	90 - 110	0	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed

Job ID: 890-6924-1
SDG: KH 237057

GC VOA

Analysis Batch: 85411

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6924-1	BFM - 01	Total/NA	Solid	8021B	85417
890-6924-2	BFM - 02	Total/NA	Solid	8021B	85417
MB 880-85417/5-A	Method Blank	Total/NA	Solid	8021B	85417
LCS 880-85417/1-A	Lab Control Sample	Total/NA	Solid	8021B	85417
LCSD 880-85417/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	85417

Prep Batch: 85417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6924-1	BFM - 01	Total/NA	Solid	5035	
890-6924-2	BFM - 02	Total/NA	Solid	5035	
MB 880-85417/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-85417/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-85417/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 85589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6924-1	BFM - 01	Total/NA	Solid	Total BTEX	
890-6924-2	BFM - 02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 85557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6924-1	BFM - 01	Total/NA	Solid	8015NM Prep	
890-6924-2	BFM - 02	Total/NA	Solid	8015NM Prep	
MB 880-85557/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-85557/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-85557/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 85608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6924-1	BFM - 01	Total/NA	Solid	8015B NM	85557
890-6924-2	BFM - 02	Total/NA	Solid	8015B NM	85557
MB 880-85557/1-A	Method Blank	Total/NA	Solid	8015B NM	85557
LCS 880-85557/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	85557
LCSD 880-85557/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	85557

Analysis Batch: 85759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6924-1	BFM - 01	Total/NA	Solid	8015 NM	
890-6924-2	BFM - 02	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 85460

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6924-1	BFM - 01	Soluble	Solid	DI Leach	
890-6924-2	BFM - 02	Soluble	Solid	DI Leach	
MB 880-85460/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-85460/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-85460/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

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QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed

Job ID: 890-6924-1
SDG: KH 237057

HPLC/IC

Analysis Batch: 85520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6924-1	BFM - 01	Soluble	Solid	300.0	85460
890-6924-2	BFM - 02	Soluble	Solid	300.0	85460
MB 880-85460/1-A	Method Blank	Soluble	Solid	300.0	85460
LCS 880-85460/2-A	Lab Control Sample	Soluble	Solid	300.0	85460
LCSD 880-85460/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	85460

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Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed

Job ID: 890-6924-1
SDG: KH 237057

Client Sample ID: BFM - 01
Date Collected: 07/10/24 09:30
Date Received: 07/10/24 13:41

Lab Sample ID: 890-6924-1
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	85417	07/11/24 08:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85411	07/11/24 16:32	SM	EET MID
Total/NA	Analysis	Total BTEX		1			85589	07/11/24 16:32	SM	EET MID
Total/NA	Analysis	8015 NM		1			85759	07/12/24 20:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	85557	07/12/24 10:47	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85608	07/12/24 20:06	TKC	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	85460	07/11/24 12:27	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85520	07/12/24 14:24	CH	EET MID

Client Sample ID: BFM - 02
Date Collected: 07/10/24 09:40
Date Received: 07/10/24 13:41

Lab Sample ID: 890-6924-2
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			5.02 g	5 mL	85417	07/11/24 08:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	85411	07/11/24 16:52	SM	EET MID
Total/NA	Analysis	Total BTEX		1			85589	07/11/24 16:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			85759	07/12/24 20:21	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	85557	07/12/24 10:47	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	85608	07/12/24 20:21	TKC	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	85460	07/11/24 12:27	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	85520	07/12/24 14:29	CH	EET MID

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

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed

Job ID: 890-6924-1
SDG: KH 237057

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	06-30-25
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: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed

Job ID: 890-6924-1
SDG: KH 237057

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: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed

Job ID: 890-6924-1
SDG: KH 237057

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-6924-1	BFM - 01	Solid	07/10/24 09:30	07/10/24 13:41	0 - 0.5'
890-6924-2	BFM - 02	Solid	07/10/24 09:40	07/10/24 13:41	0 - 0.5'

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CHAIN OF CUSTODY RECORD

[illegible]

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-6924-1

SDG Number: KH 237057

Login Number: 6924

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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-6924-1

SDG Number: KH 237057

Login Number: 6924**List Number: 2****Creator: Vasquez, Julisa****List Source: Eurofins Midland****List Creation: 07/11/24 09:23 AM**

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



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Joseph Guesnier
Terracon Consulting Eng & Scientists
5847 50th St
Lubbock, Texas 79424
Generated 1/10/2024 1:48:35 PM

JOB DESCRIPTION

Longview Deep Fed 1-21
KH237057

JOB NUMBER

890-5878-1

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
1/10/2024 1:48:35 PM

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

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Laboratory Job ID: 890-5878-1
SDG: KH237057

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Definitions/Glossary

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-5878-1
SDG: KH237057

Qualifiers

GC VOA

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

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.
α	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: Terracon Consulting Eng & Scientists
Project: Longview Deep Fed 1-21

Job ID: 890-5878-1

Job ID: 890-5878-1

Eurofins Carlsbad

Job Narrative 890-5878-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 1/3/2024 4:25 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 1.8°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: DS-01 (890-5878-1), DS-02 (890-5878-2), DS-03 (890-5878-3), DS-04 (890-5878-4), DS-05 (890-5878-5), DS-06 (890-5878-6) and DS-07 (890-5878-7).

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: (LCSD 880-70438/2-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (890-5878-A-1-G MS) and (890-5878-A-1-H MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-70438 and analytical batch 880-70430 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-70430 recovered under the lower control limit for Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were ran within 12 hours of passing CCV; therefore, the data have been reported.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-70374 and analytical batch 880-70358 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-5869-A-2-C), (890-5869-A-2-D MS) and (890-5869-A-2-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: DS-01 (890-5878-1) and DS-03 (890-5878-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-70374 and analytical batch 880-70358 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (880-37626-A-21-B), (880-37626-A-21-C MS) and (880-37626-A-21-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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Case Narrative

Client: Terracon Consulting Eng & Scientists
Project: Longview Deep Fed 1-21

Job ID: 890-5878-1

Job ID: 890-5878-1 (Continued) Eurofins Carlsbad

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: DS-07 (890-5878-7). 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.

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-5878-1
SDG: KH237057

Client Sample ID: DS-01

Lab Sample ID: 890-5878-1

Date Collected: 01/03/24 10:31

Matrix: Solid

Date Received: 01/03/24 16:25

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		01/09/24 08:54	01/09/24 17:03	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/09/24 08:54	01/09/24 17:03	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/09/24 08:54	01/09/24 17:03	1
m-Xylene & p-Xylene	<0.00398	U F1	0.00398		mg/Kg		01/09/24 08:54	01/09/24 17:03	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/09/24 08:54	01/09/24 17:03	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/09/24 08:54	01/09/24 17:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130	01/09/24 08:54	01/09/24 17:03	1
1,4-Difluorobenzene (Surr)	70		70 - 130	01/09/24 08:54	01/09/24 17:03	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			01/09/24 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	<50.4	U	50.4		mg/Kg			01/08/24 18:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		01/08/24 09:10	01/08/24 18:31	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		01/08/24 09:10	01/08/24 18:31	1
Oil Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		01/08/24 09:10	01/08/24 18:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	136	S1+	70 - 130	01/08/24 09:10	01/08/24 18:31	1
o-Terphenyl	122		70 - 130	01/08/24 09:10	01/08/24 18:31	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	489		5.01		mg/Kg			01/08/24 13:14	1

Client Sample ID: DS-02

Lab Sample ID: 890-5878-2

Date Collected: 01/03/24 10:35

Matrix: Solid

Date Received: 01/03/24 16:25

Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		01/09/24 08:54	01/09/24 12:56	1
Toluene	<0.00201	U	0.00201		mg/Kg		01/09/24 08:54	01/09/24 12:56	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		01/09/24 08:54	01/09/24 12:56	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		01/09/24 08:54	01/09/24 12:56	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		01/09/24 08:54	01/09/24 12:56	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		01/09/24 08:54	01/09/24 12:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	01/09/24 08:54	01/09/24 12:56	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-5878-1
SDG: KH237057

Client Sample ID: DS-02
Date Collected: 01/03/24 10:35
Date Received: 01/03/24 16:25
Sample Depth: 0.5

Lab Sample ID: 890-5878-2
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	79		70 - 130				01/09/24 08:54	01/09/24 12:56	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			01/09/24 12:56	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			01/08/24 18:54	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		01/08/24 09:10	01/08/24 18:54	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		01/08/24 09:10	01/08/24 18:54	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		01/08/24 09:10	01/08/24 18:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	127		70 - 130				01/08/24 09:10	01/08/24 18:54	1
o-Terphenyl	116		70 - 130				01/08/24 09:10	01/08/24 18:54	1
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19.7		4.98		mg/Kg			01/08/24 13:19	1

Client Sample ID: DS-03
Date Collected: 01/03/24 10:37
Date Received: 01/03/24 16:25
Sample Depth: 0.5

Lab Sample ID: 890-5878-3
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		01/09/24 08:54	01/09/24 13:17	1
Toluene	<0.00202	U	0.00202		mg/Kg		01/09/24 08:54	01/09/24 13:17	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		01/09/24 08:54	01/09/24 13:17	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		01/09/24 08:54	01/09/24 13:17	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		01/09/24 08:54	01/09/24 13:17	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		01/09/24 08:54	01/09/24 13:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130				01/09/24 08:54	01/09/24 13:17	1
1,4-Difluorobenzene (Surr)	72		70 - 130				01/09/24 08:54	01/09/24 13:17	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			01/09/24 13:17	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			01/08/24 19:16	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-5878-1
SDG: KH237057

Client Sample ID: DS-03
Date Collected: 01/03/24 10:37
Date Received: 01/03/24 16:25
Sample Depth: 0.5

Lab Sample ID: 890-5878-3
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		01/08/24 09:10	01/08/24 19:16	1	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/08/24 09:10	01/08/24 19:16	1	
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/08/24 09:10	01/08/24 19:16	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
1-Chlorooctane	146	S1+	70 - 130				01/08/24 09:10	01/08/24 19:16	1	
o-Terphenyl	133	S1+	70 - 130				01/08/24 09:10	01/08/24 19:16	1	

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	29.4		4.98		mg/Kg			01/08/24 13:24	1	

Client Sample ID: DS-04
Date Collected: 01/03/24 10:42
Date Received: 01/03/24 16:25
Sample Depth: 0.5

Lab Sample ID: 890-5878-4
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		01/09/24 08:54	01/09/24 13:37	1	
Toluene	<0.00198	U	0.00198		mg/Kg		01/09/24 08:54	01/09/24 13:37	1	
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		01/09/24 08:54	01/09/24 13:37	1	
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		01/09/24 08:54	01/09/24 13:37	1	
o-Xylene	<0.00198	U	0.00198		mg/Kg		01/09/24 08:54	01/09/24 13:37	1	
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		01/09/24 08:54	01/09/24 13:37	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	117		70 - 130				01/09/24 08:54	01/09/24 13:37	1	
1,4-Difluorobenzene (Surr)	99		70 - 130				01/09/24 08:54	01/09/24 13:37	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			01/09/24 13:37	1	

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	3680		50.1		mg/Kg			01/09/24 14:42	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	<50.1	U	50.1		mg/Kg		01/09/24 08:43	01/09/24 14:42	1	
Diesel Range Organics (Over C10-C28)	3220		50.1		mg/Kg		01/09/24 08:43	01/09/24 14:42	1	
Oil Range Organics (Over C28-C36)	460		50.1		mg/Kg		01/09/24 08:43	01/09/24 14:42	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
1-Chlorooctane	88		70 - 130				01/09/24 08:43	01/09/24 14:42	1	
o-Terphenyl	77		70 - 130				01/09/24 08:43	01/09/24 14:42	1	

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-5878-1
SDG: KH237057

Client Sample ID: DS-04
Date Collected: 01/03/24 10:42
Date Received: 01/03/24 16:25
Sample Depth: 0.5

Lab Sample ID: 890-5878-4
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1470		4.99		mg/Kg			01/08/24 13:30	1

Client Sample ID: DS-05
Date Collected: 01/03/24 10:46
Date Received: 01/03/24 16:25
Sample Depth: 0.5

Lab Sample ID: 890-5878-5
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		01/09/24 08:54	01/09/24 13:57	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/09/24 08:54	01/09/24 13:57	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/09/24 08:54	01/09/24 13:57	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/09/24 08:54	01/09/24 13:57	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/09/24 08:54	01/09/24 13:57	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/09/24 08:54	01/09/24 13:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		70 - 130				01/09/24 08:54	01/09/24 13:57	1
1,4-Difluorobenzene (Surr)	76		70 - 130				01/09/24 08:54	01/09/24 13:57	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			01/09/24 13:57	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	385		50.5		mg/Kg			01/09/24 15:03	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		01/09/24 08:43	01/09/24 15:03	1
Diesel Range Organics (Over C10-C28)	293		50.5		mg/Kg		01/09/24 08:43	01/09/24 15:03	1
Oil Range Organics (Over C28-C36)	91.5		50.5		mg/Kg		01/09/24 08:43	01/09/24 15:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	78		70 - 130				01/09/24 08:43	01/09/24 15:03	1
o-Terphenyl	80		70 - 130				01/09/24 08:43	01/09/24 15:03	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	309		5.01		mg/Kg			01/08/24 13:35	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-5878-1
SDG: KH237057

Client Sample ID: DS-06
Date Collected: 01/03/24 10:51
Date Received: 01/03/24 16:25
Sample Depth: 0.5

Lab Sample ID: 890-5878-6
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		01/09/24 08:54	01/09/24 14:18	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/09/24 08:54	01/09/24 14:18	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/09/24 08:54	01/09/24 14:18	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/09/24 08:54	01/09/24 14:18	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/09/24 08:54	01/09/24 14:18	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/09/24 08:54	01/09/24 14:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130				01/09/24 08:54	01/09/24 14:18	1
1,4-Difluorobenzene (Surr)	73		70 - 130				01/09/24 08:54	01/09/24 14:18	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			01/09/24 14:18	1
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	182		50.0		mg/Kg			01/09/24 15:47	1
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/09/24 08:43	01/09/24 15:47	1
Diesel Range Organics (Over C10-C28)	182		50.0		mg/Kg		01/09/24 08:43	01/09/24 15:47	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/09/24 08:43	01/09/24 15:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	71		70 - 130				01/09/24 08:43	01/09/24 15:47	1
o-Terphenyl	70		70 - 130				01/09/24 08:43	01/09/24 15:47	1
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.05		4.99		mg/Kg			01/08/24 13:40	1

Client Sample ID: DS-07
Date Collected: 01/03/24 10:58
Date Received: 01/03/24 16:25
Sample Depth: 0.5

Lab Sample ID: 890-5878-7
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		01/09/24 08:54	01/09/24 14:38	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/09/24 08:54	01/09/24 14:38	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/09/24 08:54	01/09/24 14:38	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/09/24 08:54	01/09/24 14:38	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/09/24 08:54	01/09/24 14:38	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/09/24 08:54	01/09/24 14:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130				01/09/24 08:54	01/09/24 14:38	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-5878-1
SDG: KH237057

Client Sample ID: DS-07
Date Collected: 01/03/24 10:58
Date Received: 01/03/24 16:25
Sample Depth: 0.5

Lab Sample ID: 890-5878-7
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)										
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
1,4-Difluorobenzene (Surr)	80		70 - 130				01/09/24 08:54	01/09/24 14:38	1	
Method: TAL SOP Total BTEX - Total BTEX Calculation										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	<0.00398	U	0.00398		mg/Kg			01/09/24 14:38	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			01/09/24 16:08	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		01/09/24 08:43	01/09/24 16:08	1	
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/09/24 08:43	01/09/24 16:08	1	
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/09/24 08:43	01/09/24 16:08	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
1-Chlorooctane	69	S1-	70 - 130				01/09/24 08:43	01/09/24 16:08	1	
o-Terphenyl	71		70 - 130				01/09/24 08:43	01/09/24 16:08	1	
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	50.7		5.05		mg/Kg			01/08/24 13:45	1	

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-5878-1
SDG: KH237057

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-5878-1	DS-01	93	70
890-5878-1 MS	DS-01	146 S1+	102
890-5878-1 MSD	DS-01	138 S1+	108
890-5878-2	DS-02	103	79
890-5878-3	DS-03	96	72
890-5878-4	DS-04	117	99
890-5878-5	DS-05	87	76
890-5878-6	DS-06	99	73
890-5878-7	DS-07	98	80
LCS 880-70438/1-A	Lab Control Sample	122	98
LCSD 880-70438/2-A	Lab Control Sample Dup	135 S1+	98
MB 880-70438/5-B	Method Blank	87	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 (70-130)	OTPH1 (70-130)
880-37626-A-21-C MS	Matrix Spike	72	63 S1-
880-37626-A-21-D MSD	Matrix Spike Duplicate	70	63 S1-
890-5869-A-2-D MS	Matrix Spike	138 S1+	105
890-5869-A-2-E MSD	Matrix Spike Duplicate	142 S1+	108
890-5878-1	DS-01	136 S1+	122
890-5878-2	DS-02	127	116
890-5878-3	DS-03	146 S1+	133 S1+
890-5878-4	DS-04	88	77
890-5878-5	DS-05	78	80
890-5878-6	DS-06	71	70
890-5878-7	DS-07	69 S1-	71
LCS 880-70374/2-A	Lab Control Sample	79	81
LCS 880-70436/2-A	Lab Control Sample	92	105
LCSD 880-70374/3-A	Lab Control Sample Dup	73	73
LCSD 880-70436/3-A	Lab Control Sample Dup	93	106
MB 880-70374/1-A	Method Blank	153 S1+	153 S1+
MB 880-70436/1-A - RA2	Method Blank	90	98
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-5878-1
SDG: KH237057

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-70438/5-B							Client Sample ID: Method Blank		
Matrix: Solid							Prep Type: Total/NA		
Analysis Batch: 70430							Prep Batch: 70438		
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/09/24 08:54	01/09/24 12:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/09/24 08:54	01/09/24 12:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/09/24 08:54	01/09/24 12:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/09/24 08:54	01/09/24 12:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/09/24 08:54	01/09/24 12:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/09/24 08:54	01/09/24 12:14	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		70 - 130				01/09/24 08:54	01/09/24 12:14	1
1,4-Difluorobenzene (Surr)	80		70 - 130				01/09/24 08:54	01/09/24 12:14	1

Lab Sample ID: LCS 880-70438/1-A							Client Sample ID: Lab Control Sample		
Matrix: Solid							Prep Type: Total/NA		
Analysis Batch: 70430							Prep Batch: 70438		
Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Benzene		0.100	0.1264		mg/Kg		126	70 - 130	
Toluene		0.100	0.1077		mg/Kg		108	70 - 130	
Ethylbenzene		0.100	0.1157		mg/Kg		116	70 - 130	
m-Xylene & p-Xylene		0.200	0.2349		mg/Kg		117	70 - 130	
o-Xylene		0.100	0.1115		mg/Kg		112	70 - 130	
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	122		70 - 130						
1,4-Difluorobenzene (Surr)	98		70 - 130						

Lab Sample ID: LCSD 880-70438/2-A							Client Sample ID: Lab Control Sample Dup			
Matrix: Solid							Prep Type: Total/NA			
Analysis Batch: 70430							Prep Batch: 70438			
Analyte		Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene		0.100	0.1185		mg/Kg		118	70 - 130	6	35
Toluene		0.100	0.1040		mg/Kg		104	70 - 130	4	35
Ethylbenzene		0.100	0.1185		mg/Kg		118	70 - 130	2	35
m-Xylene & p-Xylene		0.200	0.2542		mg/Kg		127	70 - 130	8	35
o-Xylene		0.100	0.1214		mg/Kg		121	70 - 130	9	35
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits							
4-Bromofluorobenzene (Surr)	135	S1+	70 - 130							
1,4-Difluorobenzene (Surr)	98		70 - 130							

Lab Sample ID: 890-5878-1 MS							Client Sample ID: DS-01		
Matrix: Solid							Prep Type: Total/NA		
Analysis Batch: 70430							Prep Batch: 70438		
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.100	0.1207		mg/Kg		120	70 - 130
Toluene	<0.00199	U	0.100	0.1040		mg/Kg		104	70 - 130

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-5878-1
SDG: KH237057

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

Lab Sample ID: 890-5878-1 MS
Matrix: Solid
Analysis Batch: 70430

Client Sample ID: DS-01
Prep Type: Total/NA
Prep Batch: 70438

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.100	0.1095		mg/Kg		109	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.201	0.2299		mg/Kg		115	70 - 130
o-Xylene	<0.00199	U	0.100	0.1108		mg/Kg		110	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	146	S1+	70 - 130						
1,4-Difluorobenzene (Surr)	102		70 - 130						

Lab Sample ID: 890-5878-1 MSD
Matrix: Solid
Analysis Batch: 70430

Client Sample ID: DS-01
Prep Type: Total/NA
Prep Batch: 70438

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.101	0.1283		mg/Kg		127	70 - 130	6	35
Toluene	<0.00199	U	0.101	0.1075		mg/Kg		107	70 - 130	3	35
Ethylbenzene	<0.00199	U	0.101	0.1252		mg/Kg		124	70 - 130	13	35
m-Xylene & p-Xylene	<0.00398	U F1	0.202	0.2656	F1	mg/Kg		132	70 - 130	14	35
o-Xylene	<0.00199	U	0.101	0.1278		mg/Kg		127	70 - 130	14	35
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	138	S1+	70 - 130								
1,4-Difluorobenzene (Surr)	108		70 - 130								

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

Lab Sample ID: MB 880-70374/1-A
Matrix: Solid
Analysis Batch: 70358

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 70374

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/08/24 08:10	01/08/24 08:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/08/24 08:10	01/08/24 08:24	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/08/24 08:10	01/08/24 08:24	1
Surrogate	MB %Recovery	MB Qualifier	Limits						
1-Chlorooctane	153	S1+	70 - 130						
o-Terphenyl	153	S1+	70 - 130						

Lab Sample ID: LCS 880-70374/2-A
Matrix: Solid
Analysis Batch: 70358

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 70374

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	941.1		mg/Kg		94	70 - 130
Diesel Range Organics (Over C10-C28)	1000	775.1		mg/Kg		78	70 - 130

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-5878-1
SDG: KH237057

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

Lab Sample ID: LCS 880-70374/2-A

Matrix: Solid

Analysis Batch: 70358

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 70374

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	79		70 - 130
o-Terphenyl	81		70 - 130

Lab Sample ID: LCSD 880-70374/3-A

Matrix: Solid

Analysis Batch: 70358

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 70374

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	949.4		mg/Kg		95	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	1000	805.4		mg/Kg		81	70 - 130	4	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	73		70 - 130
o-Terphenyl	73		70 - 130

Lab Sample ID: 890-5869-A-2-D MS

Matrix: Solid

Analysis Batch: 70358

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 70374

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	992	1200		mg/Kg		116	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U F1	992	1335	F1	mg/Kg		131	70 - 130		

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	138	S1+	70 - 130
o-Terphenyl	105		70 - 130

Lab Sample ID: 890-5869-A-2-E MSD

Matrix: Solid

Analysis Batch: 70358

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 70374

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	992	1227		mg/Kg		119	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	992	1388	F1	mg/Kg		137	70 - 130	4	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	142	S1+	70 - 130
o-Terphenyl	108		70 - 130

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-5878-1
SDG: KH237057

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

Lab Sample ID: LCS 880-70436/2-A

Matrix: Solid

Analysis Batch: 70423

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 70436

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	851.4		mg/Kg		85	70 - 130
Diesel Range Organics (Over C10-C28)	1000	897.2		mg/Kg		90	70 - 130
Surrogate	%Recovery	LCS Qualifier	Limits				
1-Chlorooctane	92		70 - 130				
o-Terphenyl	105		70 - 130				

Lab Sample ID: LCSD 880-70436/3-A

Matrix: Solid

Analysis Batch: 70423

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 70436

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	904.0		mg/Kg		90	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	1000	942.9		mg/Kg		94	70 - 130	5	20
Surrogate	%Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	93		70 - 130						
o-Terphenyl	106		70 - 130						

Lab Sample ID: 880-37626-A-21-C MS

Matrix: Solid

Analysis Batch: 70423

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 70436

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	1000	748.2		mg/Kg		72	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	1000	739.6		mg/Kg		72	70 - 130
Surrogate	%Recovery	MS Qualifier	Limits						
1-Chlorooctane	72		70 - 130						
o-Terphenyl	63	S1-	70 - 130						

Lab Sample ID: 880-37626-A-21-D MSD

Matrix: Solid

Analysis Batch: 70423

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 70436

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	1000	725.3		mg/Kg		70	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U	1000	778.0		mg/Kg		76	70 - 130	5	20
Surrogate	%Recovery	MSD Qualifier	Limits								
1-Chlorooctane	70		70 - 130								

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-5878-1
SDG: KH237057

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

Lab Sample ID: 880-37626-A-21-D MSD				Client Sample ID: Matrix Spike Duplicate			
Matrix: Solid				Prep Type: Total/NA			
Analysis Batch: 70423				Prep Batch: 70436			
	MSD	MSD					
Surrogate	%Recovery	Qualifier	Limits				
o-Terphenyl	63	S1-	70 - 130				

Method: 8015B NM - Diesel Range Organics (DRO) (GC) - RA2

Lab Sample ID: MB 880-70436/1-A							Client Sample ID: Method Blank		
Matrix: Solid							Prep Type: Total/NA		
Analysis Batch: 70423							Prep Batch: 70436		
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10 - RA2	<50.0	U	50.0		mg/Kg		01/09/24 08:00	01/09/24 08:26	1
Diesel Range Organics (Over C10-C28) - RA2	<50.0	U	50.0		mg/Kg		01/09/24 08:00	01/09/24 08:26	1
Oil Range Organics (Over C28-C36) - RA2	<50.0	U	50.0		mg/Kg		01/09/24 08:00	01/09/24 08:26	1
	MB	MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane - RA2	90		70 - 130				01/09/24 08:00	01/09/24 08:26	1
o-Terphenyl - RA2	98		70 - 130				01/09/24 08:00	01/09/24 08:26	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-70272/1-A							Client Sample ID: Method Blank		
Matrix: Solid							Prep Type: Soluble		
Analysis Batch: 70376									
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			01/08/24 10:55	1

Lab Sample ID: LCS 880-70272/2-A					Client Sample ID: Lab Control Sample				
Matrix: Solid					Prep Type: Soluble				
Analysis Batch: 70376									
			Spike	LCS	LCS			%Rec	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits
Chloride			250	235.8		mg/Kg		94	90 - 110

Lab Sample ID: LCSD 880-70272/3-A						Client Sample ID: Lab Control Sample Dup					
Matrix: Solid						Prep Type: Soluble					
Analysis Batch: 70376											
			Spike	LCSD	LCSD				%Rec	RPD	RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250	236.5		mg/Kg		95	90 - 110	0	20

Lab Sample ID: 880-37554-A-2-B MS

Client Sample ID: Matrix Spike

Matrix: Solid

Prep Type: Soluble

Analysis Batch: 70376

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	379		248	620.1		mg/Kg		97	90 - 110

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-5878-1
SDG: KH237057

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-37554-A-2-C MSD					Client Sample ID: Matrix Spike Duplicate							
Matrix: Solid					Prep Type: Soluble							
Analysis Batch: 70376												
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit	
Chloride	379		248	620.8		mg/Kg		98	90 - 110	0	20	

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-5878-1
SDG: KH237057

GC VOA

Analysis Batch: 70430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5878-1	DS-01	Total/NA	Solid	8021B	70438
890-5878-2	DS-02	Total/NA	Solid	8021B	70438
890-5878-3	DS-03	Total/NA	Solid	8021B	70438
890-5878-4	DS-04	Total/NA	Solid	8021B	70438
890-5878-5	DS-05	Total/NA	Solid	8021B	70438
890-5878-6	DS-06	Total/NA	Solid	8021B	70438
890-5878-7	DS-07	Total/NA	Solid	8021B	70438
MB 880-70438/5-B	Method Blank	Total/NA	Solid	8021B	70438
LCS 880-70438/1-A	Lab Control Sample	Total/NA	Solid	8021B	70438
LCSD 880-70438/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	70438
890-5878-1 MS	DS-01	Total/NA	Solid	8021B	70438
890-5878-1 MSD	DS-01	Total/NA	Solid	8021B	70438

Prep Batch: 70438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5878-1	DS-01	Total/NA	Solid	5035	
890-5878-2	DS-02	Total/NA	Solid	5035	
890-5878-3	DS-03	Total/NA	Solid	5035	
890-5878-4	DS-04	Total/NA	Solid	5035	
890-5878-5	DS-05	Total/NA	Solid	5035	
890-5878-6	DS-06	Total/NA	Solid	5035	
890-5878-7	DS-07	Total/NA	Solid	5035	
MB 880-70438/5-B	Method Blank	Total/NA	Solid	5035	
LCS 880-70438/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-70438/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5878-1 MS	DS-01	Total/NA	Solid	5035	
890-5878-1 MSD	DS-01	Total/NA	Solid	5035	

Analysis Batch: 70518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5878-1	DS-01	Total/NA	Solid	Total BTEX	
890-5878-2	DS-02	Total/NA	Solid	Total BTEX	
890-5878-3	DS-03	Total/NA	Solid	Total BTEX	
890-5878-4	DS-04	Total/NA	Solid	Total BTEX	
890-5878-5	DS-05	Total/NA	Solid	Total BTEX	
890-5878-6	DS-06	Total/NA	Solid	Total BTEX	
890-5878-7	DS-07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 70358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5878-1	DS-01	Total/NA	Solid	8015B NM	70374
890-5878-2	DS-02	Total/NA	Solid	8015B NM	70374
890-5878-3	DS-03	Total/NA	Solid	8015B NM	70374
MB 880-70374/1-A	Method Blank	Total/NA	Solid	8015B NM	70374
LCS 880-70374/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	70374
LCSD 880-70374/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	70374
890-5869-A-2-D MS	Matrix Spike	Total/NA	Solid	8015B NM	70374
890-5869-A-2-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	70374

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QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-5878-1
SDG: KH237057

GC Semi VOA

Prep Batch: 70374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5878-1	DS-01	Total/NA	Solid	8015NM Prep	
890-5878-2	DS-02	Total/NA	Solid	8015NM Prep	
890-5878-3	DS-03	Total/NA	Solid	8015NM Prep	
MB 880-70374/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-70374/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-70374/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5869-A-2-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5869-A-2-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 70423

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5878-4	DS-04	Total/NA	Solid	8015B NM	70436
890-5878-5	DS-05	Total/NA	Solid	8015B NM	70436
890-5878-6	DS-06	Total/NA	Solid	8015B NM	70436
890-5878-7	DS-07	Total/NA	Solid	8015B NM	70436
MB 880-70436/1-A - RA2	Method Blank	Total/NA	Solid	8015B NM	70436
LCS 880-70436/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	70436
LCSD 880-70436/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	70436
880-37626-A-21-C MS	Matrix Spike	Total/NA	Solid	8015B NM	70436
880-37626-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	70436

Prep Batch: 70436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5878-4	DS-04	Total/NA	Solid	8015NM Prep	
890-5878-5	DS-05	Total/NA	Solid	8015NM Prep	
890-5878-6	DS-06	Total/NA	Solid	8015NM Prep	
890-5878-7	DS-07	Total/NA	Solid	8015NM Prep	
MB 880-70436/1-A - RA2	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-70436/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-70436/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-37626-A-21-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-37626-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 70476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5878-1	DS-01	Total/NA	Solid	8015 NM	
890-5878-2	DS-02	Total/NA	Solid	8015 NM	
890-5878-3	DS-03	Total/NA	Solid	8015 NM	
890-5878-4	DS-04	Total/NA	Solid	8015 NM	
890-5878-5	DS-05	Total/NA	Solid	8015 NM	
890-5878-6	DS-06	Total/NA	Solid	8015 NM	
890-5878-7	DS-07	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 70272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5878-1	DS-01	Soluble	Solid	DI Leach	
890-5878-2	DS-02	Soluble	Solid	DI Leach	
890-5878-3	DS-03	Soluble	Solid	DI Leach	
890-5878-4	DS-04	Soluble	Solid	DI Leach	

Eurofins Carlsbad

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-5878-1
SDG: KH237057

HPLC/IC (Continued)

Leach Batch: 70272 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5878-5	DS-05	Soluble	Solid	DI Leach	
890-5878-6	DS-06	Soluble	Solid	DI Leach	
890-5878-7	DS-07	Soluble	Solid	DI Leach	
MB 880-70272/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-70272/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-70272/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-37554-A-2-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-37554-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 70376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5878-1	DS-01	Soluble	Solid	300.0	70272
890-5878-2	DS-02	Soluble	Solid	300.0	70272
890-5878-3	DS-03	Soluble	Solid	300.0	70272
890-5878-4	DS-04	Soluble	Solid	300.0	70272
890-5878-5	DS-05	Soluble	Solid	300.0	70272
890-5878-6	DS-06	Soluble	Solid	300.0	70272
890-5878-7	DS-07	Soluble	Solid	300.0	70272
MB 880-70272/1-A	Method Blank	Soluble	Solid	300.0	70272
LCS 880-70272/2-A	Lab Control Sample	Soluble	Solid	300.0	70272
LCSD 880-70272/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	70272
880-37554-A-2-B MS	Matrix Spike	Soluble	Solid	300.0	70272
880-37554-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	70272

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-5878-1
SDG: KH237057

Client Sample ID: DS-01

Date Collected: 01/03/24 10:31

Date Received: 01/03/24 16:25

Lab Sample ID: 890-5878-1

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			5.02 g	5 mL	70438	01/09/24 08:54	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	70430	01/09/24 17:03	SM	EET MID
Total/NA	Analysis	Total BTEX		1			70518	01/09/24 17:03	SM	EET MID
Total/NA	Analysis	8015 NM		1			70476	01/08/24 18:31	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	70374	01/08/24 09:10	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70358	01/08/24 18:31	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	70272	01/05/24 10:13	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	70376	01/08/24 13:14	CH	EET MID

Client Sample ID: DS-02

Date Collected: 01/03/24 10:35

Date Received: 01/03/24 16:25

Lab Sample ID: 890-5878-2

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	70438	01/09/24 08:54	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	70430	01/09/24 12:56	SM	EET MID
Total/NA	Analysis	Total BTEX		1			70518	01/09/24 12:56	SM	EET MID
Total/NA	Analysis	8015 NM		1			70476	01/08/24 18:54	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	70374	01/08/24 09:10	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70358	01/08/24 18:54	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	70272	01/05/24 10:13	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	70376	01/08/24 13:19	CH	EET MID

Client Sample ID: DS-03

Date Collected: 01/03/24 10:37

Date Received: 01/03/24 16:25

Lab Sample ID: 890-5878-3

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	70438	01/09/24 08:54	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	70430	01/09/24 13:17	SM	EET MID
Total/NA	Analysis	Total BTEX		1			70518	01/09/24 13:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			70476	01/08/24 19:16	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	70374	01/08/24 09:10	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70358	01/08/24 19:16	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	70272	01/05/24 10:13	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	70376	01/08/24 13:24	CH	EET MID

Client Sample ID: DS-04

Date Collected: 01/03/24 10:42

Date Received: 01/03/24 16:25

Lab Sample ID: 890-5878-4

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			5.04 g	5 mL	70438	01/09/24 08:54	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	70430	01/09/24 13:37	SM	EET MID
Total/NA	Analysis	Total BTEX		1			70518	01/09/24 13:37	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-5878-1
SDG: KH237057

Client Sample ID: DS-04

Date Collected: 01/03/24 10:42

Date Received: 01/03/24 16:25

Lab Sample ID: 890-5878-4

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			70476	01/09/24 14:42	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	70436	01/09/24 08:43	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70423	01/09/24 14:42	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	70272	01/05/24 10:13	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	70376	01/08/24 13:30	CH	EET MID

Client Sample ID: DS-05

Date Collected: 01/03/24 10:46

Date Received: 01/03/24 16:25

Lab Sample ID: 890-5878-5

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	70438	01/09/24 08:54	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	70430	01/09/24 13:57	SM	EET MID
Total/NA	Analysis	Total BTEX		1			70518	01/09/24 13:57	SM	EET MID
Total/NA	Analysis	8015 NM		1			70476	01/09/24 15:03	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	70436	01/09/24 08:43	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70423	01/09/24 15:03	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	70272	01/05/24 10:13	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	70376	01/08/24 13:35	CH	EET MID

Client Sample ID: DS-06

Date Collected: 01/03/24 10:51

Date Received: 01/03/24 16:25

Lab Sample ID: 890-5878-6

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			5.00 g	5 mL	70438	01/09/24 08:54	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	70430	01/09/24 14:18	SM	EET MID
Total/NA	Analysis	Total BTEX		1			70518	01/09/24 14:18	SM	EET MID
Total/NA	Analysis	8015 NM		1			70476	01/09/24 15:47	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	70436	01/09/24 08:43	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70423	01/09/24 15:47	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	70272	01/05/24 10:13	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	70376	01/08/24 13:40	CH	EET MID

Client Sample ID: DS-07

Date Collected: 01/03/24 10:58

Date Received: 01/03/24 16:25

Lab Sample ID: 890-5878-7

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			5.02 g	5 mL	70438	01/09/24 08:54	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	70430	01/09/24 14:38	SM	EET MID
Total/NA	Analysis	Total BTEX		1			70518	01/09/24 14:38	SM	EET MID
Total/NA	Analysis	8015 NM		1			70476	01/09/24 16:08	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	70436	01/09/24 08:43	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70423	01/09/24 16:08	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-5878-1
SDG: KH237057

Client Sample ID: DS-07
Date Collected: 01/03/24 10:58
Date Received: 01/03/24 16:25

Lab Sample ID: 890-5878-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.95 g	50 mL	70272	01/05/24 10:13	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	70376	01/08/24 13:45	CH	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: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-5878-1
SDG: KH237057

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	T104704400-23-26	06-30-24
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: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-5878-1
SDG: KH237057

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: Terracon Consulting Eng & Scientists
Project/Site: Longview Deep Fed 1-21

Job ID: 890-5878-1
SDG: KH237057

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5878-1	DS-01	Solid	01/03/24 10:31	01/03/24 16:25	0.5
890-5878-2	DS-02	Solid	01/03/24 10:35	01/03/24 16:25	0.5
890-5878-3	DS-03	Solid	01/03/24 10:37	01/03/24 16:25	0.5
890-5878-4	DS-04	Solid	01/03/24 10:42	01/03/24 16:25	0.5
890-5878-5	DS-05	Solid	01/03/24 10:46	01/03/24 16:25	0.5
890-5878-6	DS-06	Solid	01/03/24 10:51	01/03/24 16:25	0.5
890-5878-7	DS-07	Solid	01/03/24 10:58	01/03/24 16:25	0.5

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Environment Testing
Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page _____ of _____

Project Manager: Joseph Guesnier	Bill to: (if different)	Dale Woodall
Company Name: Terracon	Company Name:	Devon Energy Corp
Address: 4526 W. Pierce St	Address:	205 E. Bender Road #150
City, State ZIP: Carlsbad NM, 88220	City, State ZIP:	Hobbs, NM 88240
Phone: (806)-300-0140	Email:	Gus.Sanchez@terracon.com; Joseph.Guesnier@terracon.com

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

Project Name:		Turn Around		Parameters		ANALYSIS REQUEST		Preservative Codes	
Project Number:	KH237057	☒ Routine	☐ Rush	Pris. Code				None: NO	DI Water: H ₂ O
Project Location:	Eddy	Due Date:						Cool: Cool	MeOH: Me
Sampler's Name:	Gus Sanchez	TAT starts the day received by the lab, if received by 4:30pm						HCL: HC	HNO ₃ : HN
PO #:								H ₂ SO ₄ : H ₂	NaOH: Na

SAMPLE RECEIPT		Temp Blank:		Thermometer ID:		Correction Factor:		Temperature Reading:		Corrected Temperature:	
Samples Received Intact:	Yes ☒ No ☐	Yes ☒ No ☐	Wet Ice:	Yes ☒ No ☐	Thermometer ID:	T/MAX 2					
Cooler Custody Seals:	Yes ☒ No ☐	Yes ☒ No ☐			Correction Factor:	-0.2					
Sample Custody Seals:	Yes ☒ No ☐	Yes ☒ No ☐			Temperature Reading:	2.0					
Total Containers:					Corrected Temperature:	1.8					

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Chloride (EPA 300)	BTEX (8021 B)	TPH (8015)	Sample Comments
DS-01	Soil	1-7-24	10:31	0.5'	Grab	1	X	X	X	
DS-02	Soil	1-7-24	10:35	0.5'	Grab	1	X	X	X	
DS-03	Soil	1-7-24	10:39	0.5'	Grab	1	X	X	X	
DS-04	Soil	1-7-24	10:42	0.5'	Grab	1	X	X	X	
DS-05	Soil	1-7-24	10:46	0.5'	Grab	1	X	X	X	
DS-06	Soil	1-7-24	10:51	0.5'	Grab	1	X	X	X	
DS-07	Soil	1-7-24	10:58	0.5'	Grab	1	X	X	X	
	Soil						X	X	X	
	Soil						X	X	X	
	Soil						X	X	X	
	Soil						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
1. <i>[Signature]</i>	<i>[Signature]</i>	1-7-25 1:30			
3. <i>[Signature]</i>					
5. <i>[Signature]</i>					

Revised Date: 08/23/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-5878-1

SDG Number: KH237057

Login Number: 5878

List Number: 1

Creator: Lopez, Abraham

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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-5878-1

SDG Number: KH237057

Login Number: 5878

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 01/08/24 08:34 AM

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



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Joseph Guesnier
Terracon Consulting Eng & Scientists
5847 50th St
Lubbock, Texas 79424
Generated 1/17/2024 3:53:17 PM

JOB DESCRIPTION

LONGVIEW DEEP FED 1-21
KH237057

JOB NUMBER

890-5938-1

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
1/17/2024 3:53:17 PM

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

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Laboratory Job ID: 890-5938-1
SDG: KH237057

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Definitions/Glossary

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

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
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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: Terracon Consulting Eng & Scientists
Project: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1

Job ID: 890-5938-1

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Job Narrative 890-5938-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 1/10/2024 9:48 AM. 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 -7.2°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: DS-08 (890-5938-1), DS-08 (890-5938-2), DS-09 (890-5938-3), DS-09 (890-5938-4), DS-10 (890-5938-5), DS-10 (890-5938-6), DS-11 (890-5938-7) and DS-11 (890-5938-8).

GC VOA

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-70989 and analytical batch 880-70978 was outside the upper control limits.

Method 8021B: The following sample was diluted due to the nature of the sample matrix: DS-09 (890-5938-4). Elevated reporting limits (RLs) are provided.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-70668 and analytical batch 880-70803 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: DS-08 (890-5938-1), DS-08 (890-5938-2), DS-09 (890-5938-3), DS-09 (890-5938-4), DS-10 (890-5938-5), DS-10 (890-5938-6), DS-11 (890-5938-7), DS-11 (890-5938-8), (890-5930-A-41-E), (890-5930-A-41-F MS) and (890-5930-A-41-G MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: DS-09 (890-5938-4), (890-5972-A-1-D) and (890-5972-A-1-E MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-71029 and analytical batch 880-71032 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-70714 and analytical batch 880-70747 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

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Case Narrative

Client: Terracon Consulting Eng & Scientists
Project: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1

Job ID: 890-5938-1 (Continued)

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

Client Sample ID: DS-08

Lab Sample ID: 890-5938-1

Date Collected: 01/09/24 12:41

Matrix: Solid

Date Received: 01/10/24 09:48

Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		01/15/24 13:22	01/17/24 01:58	1
Toluene	<0.00201	U	0.00201		mg/Kg		01/15/24 13:22	01/17/24 01:58	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		01/15/24 13:22	01/17/24 01:58	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		01/15/24 13:22	01/17/24 01:58	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		01/15/24 13:22	01/17/24 01:58	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		01/15/24 13:22	01/17/24 01:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	01/15/24 13:22	01/17/24 01:58	1
1,4-Difluorobenzene (Surr)	103		70 - 130	01/15/24 13:22	01/17/24 01:58	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			01/17/24 01:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	459		50.5		mg/Kg			01/14/24 03:19	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	<50.5	U	50.5		mg/Kg		01/11/24 14:55	01/14/24 03:19	1
Diesel Range Organics (Over C10-C28)	459		50.5		mg/Kg		01/11/24 14:55	01/14/24 03:19	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		01/11/24 14:55	01/14/24 03:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	143	S1+	70 - 130	01/11/24 14:55	01/14/24 03:19	1
o-Terphenyl	126		70 - 130	01/11/24 14:55	01/14/24 03:19	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3090		25.0		mg/Kg			01/12/24 14:09	5

Client Sample ID: DS-08

Lab Sample ID: 890-5938-2

Date Collected: 01/09/24 12:52

Matrix: Solid

Date Received: 01/10/24 09:48

Sample Depth: 5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		01/15/24 13:22	01/17/24 02:18	1
Toluene	<0.00202	U	0.00202		mg/Kg		01/15/24 13:22	01/17/24 02:18	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		01/15/24 13:22	01/17/24 02:18	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		01/15/24 13:22	01/17/24 02:18	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		01/15/24 13:22	01/17/24 02:18	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		01/15/24 13:22	01/17/24 02:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	01/15/24 13:22	01/17/24 02:18	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

Client Sample ID: DS-08
Date Collected: 01/09/24 12:52
Date Received: 01/10/24 09:48
Sample Depth: 5

Lab Sample ID: 890-5938-2
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				01/15/24 13:22	01/17/24 02:18	1
Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			01/17/24 02:18	1
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			01/14/24 04:01	1
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		01/11/24 14:55	01/14/24 04:01	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		01/11/24 14:55	01/14/24 04:01	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		01/11/24 14:55	01/14/24 04:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	145	S1+	70 - 130				01/11/24 14:55	01/14/24 04:01	1
o-Terphenyl	130		70 - 130				01/11/24 14:55	01/14/24 04:01	1
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	174		4.99		mg/Kg			01/12/24 14:14	1

Client Sample ID: DS-09
Date Collected: 01/09/24 01:03
Date Received: 01/10/24 09:48
Sample Depth: 0.5

Lab Sample ID: 890-5938-3
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		01/15/24 13:22	01/17/24 02:39	1
Toluene	<0.00198	U	0.00198		mg/Kg		01/15/24 13:22	01/17/24 02:39	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		01/15/24 13:22	01/17/24 02:39	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		01/15/24 13:22	01/17/24 02:39	1
o-Xylene	0.00257		0.00198		mg/Kg		01/15/24 13:22	01/17/24 02:39	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		01/15/24 13:22	01/17/24 02:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130				01/15/24 13:22	01/17/24 02:39	1
1,4-Difluorobenzene (Surr)	102		70 - 130				01/15/24 13:22	01/17/24 02:39	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			01/17/24 02:39	1
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	504		49.7		mg/Kg			01/14/24 02:38	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

Client Sample ID: DS-09
Date Collected: 01/09/24 01:03
Date Received: 01/10/24 09:48
Sample Depth: 0.5

Lab Sample ID: 890-5938-3
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	<49.7	U	49.7		mg/Kg		01/11/24 14:55	01/14/24 02:38	1	
Diesel Range Organics (Over C10-C28)	504		49.7		mg/Kg		01/11/24 14:55	01/14/24 02:38	1	
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		01/11/24 14:55	01/14/24 02:38	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
1-Chlorooctane	149	S1+	70 - 130				01/11/24 14:55	01/14/24 02:38	1	
o-Terphenyl	135	S1+	70 - 130				01/11/24 14:55	01/14/24 02:38	1	

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	263		4.97		mg/Kg			01/12/24 14:30	1	

Client Sample ID: DS-09
Date Collected: 01/09/24 01:18
Date Received: 01/10/24 09:48
Sample Depth: 5

Lab Sample ID: 890-5938-4
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.0998	U	0.0998		mg/Kg		01/15/24 13:22	01/17/24 04:01	50	
Toluene	<0.0998	U	0.0998		mg/Kg		01/15/24 13:22	01/17/24 04:01	50	
Ethylbenzene	1.11		0.0998		mg/Kg		01/15/24 13:22	01/17/24 04:01	50	
m-Xylene & p-Xylene	4.83		0.200		mg/Kg		01/15/24 13:22	01/17/24 04:01	50	
o-Xylene	5.66		0.0998		mg/Kg		01/15/24 13:22	01/17/24 04:01	50	
Xylenes, Total	10.5		0.200		mg/Kg		01/15/24 13:22	01/17/24 04:01	50	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	117		70 - 130				01/15/24 13:22	01/17/24 04:01	50	
1,4-Difluorobenzene (Surr)	93		70 - 130				01/15/24 13:22	01/17/24 04:01	50	

Method: TAL SOP Total BTEX - Total BTEX Calculation										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	11.6		0.200		mg/Kg			01/17/24 04:01	1	

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	3530		252		mg/Kg			01/17/24 14:48	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	280		49.9		mg/Kg		01/11/24 14:55	01/14/24 01:56	1	
Diesel Range Organics (Over C10-C28)	3250		252		mg/Kg		01/16/24 16:03	01/17/24 14:48	5	
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/11/24 14:55	01/14/24 01:56	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
1-Chlorooctane	207	S1+	70 - 130				01/11/24 14:55	01/14/24 01:56	1	
o-Terphenyl	155	S1+	70 - 130				01/11/24 14:55	01/14/24 01:56	1	

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

Client Sample ID: DS-09

Lab Sample ID: 890-5938-4

Date Collected: 01/09/24 01:18

Matrix: Solid

Date Received: 01/10/24 09:48

Sample Depth: 5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1060		24.8		mg/Kg			01/12/24 14:35	5

Client Sample ID: DS-10

Lab Sample ID: 890-5938-5

Date Collected: 01/09/24 01:33

Matrix: Solid

Date Received: 01/10/24 09:48

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		01/15/24 13:22	01/17/24 02:59	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/15/24 13:22	01/17/24 02:59	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/15/24 13:22	01/17/24 02:59	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/15/24 13:22	01/17/24 02:59	1
o-Xylene	0.00556		0.00199		mg/Kg		01/15/24 13:22	01/17/24 02:59	1
Xylenes, Total	0.00556		0.00398		mg/Kg		01/15/24 13:22	01/17/24 02:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130				01/15/24 13:22	01/17/24 02:59	1
1,4-Difluorobenzene (Surr)	102		70 - 130				01/15/24 13:22	01/17/24 02:59	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.00556		0.00398		mg/Kg			01/17/24 02:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	212		50.3		mg/Kg			01/14/24 03:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3		mg/Kg		01/11/24 14:55	01/14/24 03:40	1
Diesel Range Organics (Over C10-C28)	212		50.3		mg/Kg		01/11/24 14:55	01/14/24 03:40	1
Oil Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		01/11/24 14:55	01/14/24 03:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	150	S1+	70 - 130				01/11/24 14:55	01/14/24 03:40	1
o-Terphenyl	133	S1+	70 - 130				01/11/24 14:55	01/14/24 03:40	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.8		5.04		mg/Kg			01/12/24 14:40	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

Client Sample ID: DS-10
Date Collected: 01/09/24 01:47
Date Received: 01/10/24 09:48
Sample Depth: 5

Lab Sample ID: 890-5938-6
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		01/15/24 13:22	01/17/24 03:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/15/24 13:22	01/17/24 03:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/15/24 13:22	01/17/24 03:20	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		01/15/24 13:22	01/17/24 03:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/15/24 13:22	01/17/24 03:20	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		01/15/24 13:22	01/17/24 03:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130				01/15/24 13:22	01/17/24 03:20	1
1,4-Difluorobenzene (Surr)	97		70 - 130				01/15/24 13:22	01/17/24 03:20	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			01/17/24 03:20	1
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	266		50.1		mg/Kg			01/14/24 02:59	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		01/11/24 14:55	01/14/24 02:59	1
Diesel Range Organics (Over C10-C28)	266		50.1		mg/Kg		01/11/24 14:55	01/14/24 02:59	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		01/11/24 14:55	01/14/24 02:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	146	S1+	70 - 130				01/11/24 14:55	01/14/24 02:59	1
o-Terphenyl	139	S1+	70 - 130				01/11/24 14:55	01/14/24 02:59	1
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17.5		4.98		mg/Kg			01/12/24 14:45	1

Client Sample ID: DS-11
Date Collected: 01/09/24 02:02
Date Received: 01/10/24 09:48
Sample Depth: 0.5

Lab Sample ID: 890-5938-7
Matrix: Solid

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		01/15/24 13:22	01/17/24 03:40	1
Toluene	0.00553		0.00201		mg/Kg		01/15/24 13:22	01/17/24 03:40	1
Ethylbenzene	0.00471		0.00201		mg/Kg		01/15/24 13:22	01/17/24 03:40	1
m-Xylene & p-Xylene	0.0110		0.00402		mg/Kg		01/15/24 13:22	01/17/24 03:40	1
o-Xylene	0.0298		0.00201		mg/Kg		01/15/24 13:22	01/17/24 03:40	1
Xylenes, Total	0.0408		0.00402		mg/Kg		01/15/24 13:22	01/17/24 03:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130				01/15/24 13:22	01/17/24 03:40	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

Client Sample ID: DS-11
Date Collected: 01/09/24 02:02
Date Received: 01/10/24 09:48
Sample Depth: 0.5

Lab Sample ID: 890-5938-7
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	92		70 - 130				01/15/24 13:22	01/17/24 03:40	1
Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0510		0.00402		mg/Kg			01/17/24 03:40	1
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	4120		50.4		mg/Kg			01/14/24 02:17	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	<50.4	U	50.4		mg/Kg		01/11/24 14:55	01/14/24 02:17	1
Diesel Range Organics (Over C10-C28)	4120		50.4		mg/Kg		01/11/24 14:55	01/14/24 02:17	1
Oil Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		01/11/24 14:55	01/14/24 02:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	151	S1+	70 - 130				01/11/24 14:55	01/14/24 02:17	1
o-Terphenyl	123		70 - 130				01/11/24 14:55	01/14/24 02:17	1
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2770		25.0		mg/Kg			01/12/24 14:50	5

Client Sample ID: DS-11
Date Collected: 01/09/24 02:31
Date Received: 01/10/24 09:48
Sample Depth: 5

Lab Sample ID: 890-5938-8
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		01/15/24 13:22	01/17/24 10:53	1
Toluene	<0.00202	U	0.00202		mg/Kg		01/15/24 13:22	01/17/24 10:53	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		01/15/24 13:22	01/17/24 10:53	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		01/15/24 13:22	01/17/24 10:53	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		01/15/24 13:22	01/17/24 10:53	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		01/15/24 13:22	01/17/24 10:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130				01/15/24 13:22	01/17/24 10:53	1
1,4-Difluorobenzene (Surr)	105		70 - 130				01/15/24 13:22	01/17/24 10:53	1
Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			01/17/24 10:53	1
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	95.9		50.5		mg/Kg			01/14/24 04:22	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

Client Sample ID: DS-11
Date Collected: 01/09/24 02:31
Date Received: 01/10/24 09:48
Sample Depth: 5

Lab Sample ID: 890-5938-8
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	<50.5	U	50.5		mg/Kg		01/11/24 14:55	01/14/24 04:22	1	
Diesel Range Organics (Over C10-C28)	95.9		50.5		mg/Kg		01/11/24 14:55	01/14/24 04:22	1	
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		01/11/24 14:55	01/14/24 04:22	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
1-Chlorooctane	191	S1+	70 - 130				01/11/24 14:55	01/14/24 04:22	1	
o-Terphenyl	169	S1+	70 - 130				01/11/24 14:55	01/14/24 04:22	1	

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	205		5.04		mg/Kg			01/12/24 14:55	1	

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-5938-1	DS-08	96	103
890-5938-1 MS	DS-08	115	99
890-5938-1 MSD	DS-08	109	99
890-5938-2	DS-08	108	106
890-5938-3	DS-09	101	102
890-5938-4	DS-09	117	93
890-5938-5	DS-10	114	102
890-5938-6	DS-10	101	97
890-5938-7	DS-11	90	92
890-5938-8	DS-11	108	105
LCS 880-70861/1-A	Lab Control Sample	108	103
LCSD 880-70861/2-A	Lab Control Sample Dup	108	100
MB 880-70861/5-A	Method Blank	120	128
MB 880-70989/5-A	Method Blank	133 S1+	130
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-5930-A-41-F MS	Matrix Spike	132 S1+	107
890-5930-A-41-G MSD	Matrix Spike Duplicate	131 S1+	104
890-5938-1	DS-08	143 S1+	126
890-5938-2	DS-08	145 S1+	130
890-5938-3	DS-09	149 S1+	135 S1+
890-5938-4	DS-09	207 S1+	155 S1+
890-5938-5	DS-10	150 S1+	133 S1+
890-5938-6	DS-10	146 S1+	139 S1+
890-5938-7	DS-11	151 S1+	123
890-5938-8	DS-11	191 S1+	169 S1+
890-5972-A-1-E MS	Matrix Spike	63 S1-	60 S1-
890-5972-A-1-F MSD	Matrix Spike Duplicate	76	73
LCS 880-70668/2-A	Lab Control Sample	94	91
LCS 880-71029/2-A	Lab Control Sample	90	104
LCSD 880-70668/3-A	Lab Control Sample Dup	103	109
LCSD 880-71029/3-A	Lab Control Sample Dup	84	98
MB 880-70668/1-A	Method Blank	194 S1+	182 S1+
MB 880-71029/1-A - RA2	Method Blank	85	91
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-70861/5-A

Matrix: Solid

Analysis Batch: 70978

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 70861

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/15/24 13:22	01/17/24 01:29	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/15/24 13:22	01/17/24 01:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/15/24 13:22	01/17/24 01:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/15/24 13:22	01/17/24 01:29	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/15/24 13:22	01/17/24 01:29	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/15/24 13:22	01/17/24 01:29	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130	01/15/24 13:22	01/17/24 01:29	1
1,4-Difluorobenzene (Surr)	128		70 - 130	01/15/24 13:22	01/17/24 01:29	1

Lab Sample ID: LCS 880-70861/1-A

Matrix: Solid

Analysis Batch: 70978

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 70861

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1172		mg/Kg		117	70 - 130
Toluene	0.100	0.09872		mg/Kg		99	70 - 130
Ethylbenzene	0.100	0.1082		mg/Kg		108	70 - 130
m-Xylene & p-Xylene	0.200	0.1946		mg/Kg		97	70 - 130
o-Xylene	0.100	0.09403		mg/Kg		94	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: LCSD 880-70861/2-A

Matrix: Solid

Analysis Batch: 70978

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 70861

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	0.100	0.1127		mg/Kg		113	70 - 130	4	35
Toluene	0.100	0.1016		mg/Kg		102	70 - 130	3	35
Ethylbenzene	0.100	0.09819		mg/Kg		98	70 - 130	10	35
m-Xylene & p-Xylene	0.200	0.1897		mg/Kg		95	70 - 130	3	35
o-Xylene	0.100	0.1079		mg/Kg		108	70 - 130	14	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: 890-5938-1 MS

Matrix: Solid

Analysis Batch: 70978

Client Sample ID: DS-08

Prep Type: Total/NA

Prep Batch: 70861

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U	0.0996	0.1057		mg/Kg		106	70 - 130
Toluene	<0.00201	U	0.0996	0.09441		mg/Kg		94	70 - 130

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

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

Lab Sample ID: 890-5938-1 MS

Matrix: Solid

Analysis Batch: 70978

Client Sample ID: DS-08

Prep Type: Total/NA

Prep Batch: 70861

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U	0.0996	0.09971		mg/Kg		100	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.199	0.1872		mg/Kg		93	70 - 130
o-Xylene	<0.00201	U	0.0996	0.09422		mg/Kg		94	70 - 130
Surrogate	%Recovery	MS Qualifier	MS Limits						
4-Bromofluorobenzene (Surr)	115		70 - 130						
1,4-Difluorobenzene (Surr)	99		70 - 130						

Lab Sample ID: 890-5938-1 MSD

Matrix: Solid

Analysis Batch: 70978

Client Sample ID: DS-08

Prep Type: Total/NA

Prep Batch: 70861

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0990	0.1041		mg/Kg		105	70 - 130	2	35
Toluene	<0.00201	U	0.0990	0.08543		mg/Kg		86	70 - 130	10	35
Ethylbenzene	<0.00201	U	0.0990	0.09146		mg/Kg		92	70 - 130	9	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1811		mg/Kg		91	70 - 130	3	35
o-Xylene	<0.00201	U	0.0990	0.08799		mg/Kg		88	70 - 130	7	35
Surrogate	%Recovery	MSD Qualifier	MSD Limits								
4-Bromofluorobenzene (Surr)	109		70 - 130								
1,4-Difluorobenzene (Surr)	99		70 - 130								

Lab Sample ID: MB 880-70989/5-A

Matrix: Solid

Analysis Batch: 70978

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 70989

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/16/24 10:58	01/16/24 13:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/16/24 10:58	01/16/24 13:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/16/24 10:58	01/16/24 13:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/16/24 10:58	01/16/24 13:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/16/24 10:58	01/16/24 13:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/16/24 10:58	01/16/24 13:40	1
Surrogate	%Recovery	MB Qualifier	MB Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	133	S1+	70 - 130				01/16/24 10:58	01/16/24 13:40	1
1,4-Difluorobenzene (Surr)	130		70 - 130				01/16/24 10:58	01/16/24 13:40	1

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

Lab Sample ID: MB 880-70668/1-A

Matrix: Solid

Analysis Batch: 70803

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 70668

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/11/24 14:55	01/13/24 19:40	1

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

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

Lab Sample ID: MB 880-70668/1-A

Matrix: Solid

Analysis Batch: 70803

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 70668

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/11/24 14:55	01/13/24 19:40	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/11/24 14:55	01/13/24 19:40	1
Surrogate	MB	MB	Limits				Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier							
1-Chlorooctane	194	S1+	70 - 130				01/11/24 14:55	01/13/24 19:40	1
o-Terphenyl	182	S1+	70 - 130				01/11/24 14:55	01/13/24 19:40	1

Lab Sample ID: LCS 880-70668/2-A

Matrix: Solid

Analysis Batch: 70803

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 70668

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	1000	972.0		mg/Kg		97	70 - 130		
Diesel Range Organics (Over C10-C28)	1000	974.2		mg/Kg		97	70 - 130		
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
1-Chlorooctane	94		70 - 130						
o-Terphenyl	91		70 - 130						

Lab Sample ID: LCSD 880-70668/3-A

Matrix: Solid

Analysis Batch: 70803

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 70668

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	999.4		mg/Kg		100	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	1000	966.6		mg/Kg		97	70 - 130	1	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	103		70 - 130						
o-Terphenyl	109		70 - 130						

Lab Sample ID: 890-5930-A-41-F MS

Matrix: Solid

Analysis Batch: 70803

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 70668

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	1010	1257		mg/Kg		122	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.8	U	1010	1311		mg/Kg		127	70 - 130		
Surrogate	MS %Recovery	MS Qualifier	Limits								
1-Chlorooctane	132	S1+	70 - 130								
o-Terphenyl	107		70 - 130								

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

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

Lab Sample ID: 890-5930-A-41-G MSD

Matrix: Solid

Analysis Batch: 70803

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 70668

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	1010	1252		mg/Kg		122	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<49.8	U	1010	1303		mg/Kg		126	70 - 130	1	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	131	S1+	70 - 130								
o-Terphenyl	104		70 - 130								

Lab Sample ID: LCS 880-71029/2-A

Matrix: Solid

Analysis Batch: 71032

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 71029

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	823.0		mg/Kg		82	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	852.7		mg/Kg		85	70 - 130		
Surrogate	LCS %Recovery	LCS Qualifier	Limits								
1-Chlorooctane	90		70 - 130								
o-Terphenyl	104		70 - 130								

Lab Sample ID: LCSD 880-71029/3-A

Matrix: Solid

Analysis Batch: 71032

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 71029

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	858.5		mg/Kg		86	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	807.3		mg/Kg		81	70 - 130	5	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits								
1-Chlorooctane	84		70 - 130								
o-Terphenyl	98		70 - 130								

Lab Sample ID: 890-5972-A-1-E MS

Matrix: Solid

Analysis Batch: 71032

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 71029

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.7	U F1	1000	667.6	F1	mg/Kg		62	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.7	U F1 F2	1000	635.5	F1	mg/Kg		63	70 - 130		
Surrogate	MS %Recovery	MS Qualifier	Limits								
1-Chlorooctane	63	S1-	70 - 130								

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

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

Lab Sample ID: 890-5972-A-1-E MS
Matrix: Solid
Analysis Batch: 71032

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 71029

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
o-Terphenyl	60	S1-	70 - 130

Lab Sample ID: 890-5972-A-1-F MSD
Matrix: Solid
Analysis Batch: 71032

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 71029

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.7	U F1	1000	785.7		mg/Kg		74	70 - 130	16	20
Diesel Range Organics (Over C10-C28)	<49.7	U F1 F2	1000	796.8	F2	mg/Kg		80	70 - 130	23	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	76		70 - 130								
o-Terphenyl	73		70 - 130								

Method: 8015B NM - Diesel Range Organics (DRO) (GC) - RA2

Lab Sample ID: MB 880-71029/1-A
Matrix: Solid
Analysis Batch: 71032

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 71029

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10 - RA2	<50.0	U	50.0		mg/Kg		01/16/24 16:03	01/17/24 08:01	1
Diesel Range Organics (Over C10-C28) - RA2	<50.0	U	50.0		mg/Kg		01/16/24 16:03	01/17/24 08:01	1
Oil Range Organics (Over C28-C36) - RA2	<50.0	U	50.0		mg/Kg		01/16/24 16:03	01/17/24 08:01	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane - RA2	85		70 - 130				01/16/24 16:03	01/17/24 08:01	1
o-Terphenyl - RA2	91		70 - 130				01/16/24 16:03	01/17/24 08:01	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-70714/1-A
Matrix: Solid
Analysis Batch: 70747

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			01/12/24 12:26	1

Lab Sample ID: LCS 880-70714/2-A
Matrix: Solid
Analysis Batch: 70747

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	249.8		mg/Kg		100	90 - 110

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-70714/3-A				Client Sample ID: Lab Control Sample Dup							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 70747											
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	249.9		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 880-37811-A-1-B MS				Client Sample ID: Matrix Spike							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 70747											
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	20.7	F1	250	241.7	F1	mg/Kg		88	90 - 110		

Lab Sample ID: 880-37811-A-1-C MSD				Client Sample ID: Matrix Spike Duplicate							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 70747											
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	20.7	F1	250	242.1	F1	mg/Kg		89	90 - 110	0	20

Lab Sample ID: 890-5931-A-5-C MS				Client Sample ID: Matrix Spike							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 70747											
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	4900		2490	7280		mg/Kg		96	90 - 110		

Lab Sample ID: 890-5931-A-5-E MSD				Client Sample ID: Matrix Spike Duplicate							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 70747											
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	4900		2490	7267		mg/Kg		95	90 - 110	0	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

GC VOA

Prep Batch: 70861

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5938-1	DS-08	Total/NA	Solid	5035	
890-5938-2	DS-08	Total/NA	Solid	5035	
890-5938-3	DS-09	Total/NA	Solid	5035	
890-5938-4	DS-09	Total/NA	Solid	5035	
890-5938-5	DS-10	Total/NA	Solid	5035	
890-5938-6	DS-10	Total/NA	Solid	5035	
890-5938-7	DS-11	Total/NA	Solid	5035	
890-5938-8	DS-11	Total/NA	Solid	5035	
MB 880-70861/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-70861/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-70861/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5938-1 MS	DS-08	Total/NA	Solid	5035	
890-5938-1 MSD	DS-08	Total/NA	Solid	5035	

Analysis Batch: 70978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5938-1	DS-08	Total/NA	Solid	8021B	70861
890-5938-2	DS-08	Total/NA	Solid	8021B	70861
890-5938-3	DS-09	Total/NA	Solid	8021B	70861
890-5938-4	DS-09	Total/NA	Solid	8021B	70861
890-5938-5	DS-10	Total/NA	Solid	8021B	70861
890-5938-6	DS-10	Total/NA	Solid	8021B	70861
890-5938-7	DS-11	Total/NA	Solid	8021B	70861
890-5938-8	DS-11	Total/NA	Solid	8021B	70861
MB 880-70861/5-A	Method Blank	Total/NA	Solid	8021B	70861
MB 880-70989/5-A	Method Blank	Total/NA	Solid	8021B	70989
LCS 880-70861/1-A	Lab Control Sample	Total/NA	Solid	8021B	70861
LCSD 880-70861/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	70861
890-5938-1 MS	DS-08	Total/NA	Solid	8021B	70861
890-5938-1 MSD	DS-08	Total/NA	Solid	8021B	70861

Prep Batch: 70989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-70989/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 71065

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5938-1	DS-08	Total/NA	Solid	Total BTEX	
890-5938-2	DS-08	Total/NA	Solid	Total BTEX	
890-5938-3	DS-09	Total/NA	Solid	Total BTEX	
890-5938-4	DS-09	Total/NA	Solid	Total BTEX	
890-5938-5	DS-10	Total/NA	Solid	Total BTEX	
890-5938-6	DS-10	Total/NA	Solid	Total BTEX	
890-5938-7	DS-11	Total/NA	Solid	Total BTEX	
890-5938-8	DS-11	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 70668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5938-1	DS-08	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

GC Semi VOA (Continued)

Prep Batch: 70668 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5938-2	DS-08	Total/NA	Solid	8015NM Prep	
890-5938-3	DS-09	Total/NA	Solid	8015NM Prep	
890-5938-4	DS-09	Total/NA	Solid	8015NM Prep	
890-5938-5	DS-10	Total/NA	Solid	8015NM Prep	
890-5938-6	DS-10	Total/NA	Solid	8015NM Prep	
890-5938-7	DS-11	Total/NA	Solid	8015NM Prep	
890-5938-8	DS-11	Total/NA	Solid	8015NM Prep	
MB 880-70668/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-70668/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-70668/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5930-A-41-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5930-A-41-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 70803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5938-1	DS-08	Total/NA	Solid	8015B NM	70668
890-5938-2	DS-08	Total/NA	Solid	8015B NM	70668
890-5938-3	DS-09	Total/NA	Solid	8015B NM	70668
890-5938-4	DS-09	Total/NA	Solid	8015B NM	70668
890-5938-5	DS-10	Total/NA	Solid	8015B NM	70668
890-5938-6	DS-10	Total/NA	Solid	8015B NM	70668
890-5938-7	DS-11	Total/NA	Solid	8015B NM	70668
890-5938-8	DS-11	Total/NA	Solid	8015B NM	70668
MB 880-70668/1-A	Method Blank	Total/NA	Solid	8015B NM	70668
LCS 880-70668/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	70668
LCSD 880-70668/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	70668
890-5930-A-41-F MS	Matrix Spike	Total/NA	Solid	8015B NM	70668
890-5930-A-41-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	70668

Analysis Batch: 70913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5938-1	DS-08	Total/NA	Solid	8015 NM	
890-5938-2	DS-08	Total/NA	Solid	8015 NM	
890-5938-3	DS-09	Total/NA	Solid	8015 NM	
890-5938-4	DS-09	Total/NA	Solid	8015 NM	
890-5938-5	DS-10	Total/NA	Solid	8015 NM	
890-5938-6	DS-10	Total/NA	Solid	8015 NM	
890-5938-7	DS-11	Total/NA	Solid	8015 NM	
890-5938-8	DS-11	Total/NA	Solid	8015 NM	

Prep Batch: 71029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5938-4	DS-09	Total/NA	Solid	8015NM Prep	
MB 880-71029/1-A - RA2	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-71029/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-71029/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5972-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5972-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

GC Semi VOA

Analysis Batch: 71032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5938-4	DS-09	Total/NA	Solid	8015B NM	71029
MB 880-71029/1-A - RA2	Method Blank	Total/NA	Solid	8015B NM	71029
LCS 880-71029/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	71029
LCSD 880-71029/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	71029
890-5972-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	71029
890-5972-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	71029

HPLC/IC

Leach Batch: 70714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5938-1	DS-08	Soluble	Solid	DI Leach	
890-5938-2	DS-08	Soluble	Solid	DI Leach	
890-5938-3	DS-09	Soluble	Solid	DI Leach	
890-5938-4	DS-09	Soluble	Solid	DI Leach	
890-5938-5	DS-10	Soluble	Solid	DI Leach	
890-5938-6	DS-10	Soluble	Solid	DI Leach	
890-5938-7	DS-11	Soluble	Solid	DI Leach	
890-5938-8	DS-11	Soluble	Solid	DI Leach	
MB 880-70714/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-70714/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-70714/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-37811-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-37811-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-5931-A-5-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-5931-A-5-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 70747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5938-1	DS-08	Soluble	Solid	300.0	70714
890-5938-2	DS-08	Soluble	Solid	300.0	70714
890-5938-3	DS-09	Soluble	Solid	300.0	70714
890-5938-4	DS-09	Soluble	Solid	300.0	70714
890-5938-5	DS-10	Soluble	Solid	300.0	70714
890-5938-6	DS-10	Soluble	Solid	300.0	70714
890-5938-7	DS-11	Soluble	Solid	300.0	70714
890-5938-8	DS-11	Soluble	Solid	300.0	70714
MB 880-70714/1-A	Method Blank	Soluble	Solid	300.0	70714
LCS 880-70714/2-A	Lab Control Sample	Soluble	Solid	300.0	70714
LCSD 880-70714/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	70714
880-37811-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	70714
880-37811-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	70714
890-5931-A-5-C MS	Matrix Spike	Soluble	Solid	300.0	70714
890-5931-A-5-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	70714

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Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

Client Sample ID: DS-08
Date Collected: 01/09/24 12:41
Date Received: 01/10/24 09:48

Lab Sample ID: 890-5938-1
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			4.97 g	5 mL	70861	01/15/24 13:22	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	70978	01/17/24 01:58	SM	EET MID
Total/NA	Analysis	Total BTEX		1			71065	01/17/24 01:58	SM	EET MID
Total/NA	Analysis	8015 NM		1			70913	01/14/24 03:19	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	70668	01/11/24 14:55	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70803	01/14/24 03:19	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	70714	01/12/24 08:03	CH	EET MID
Soluble	Analysis	300.0		5			70747	01/12/24 14:09	CH	EET MID

Client Sample ID: DS-08
Date Collected: 01/09/24 12:52
Date Received: 01/10/24 09:48

Lab Sample ID: 890-5938-2
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			4.96 g	5 mL	70861	01/15/24 13:22	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	70978	01/17/24 02:18	SM	EET MID
Total/NA	Analysis	Total BTEX		1			71065	01/17/24 02:18	SM	EET MID
Total/NA	Analysis	8015 NM		1			70913	01/14/24 04:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	70668	01/11/24 14:55	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70803	01/14/24 04:01	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	70714	01/12/24 08:03	CH	EET MID
Soluble	Analysis	300.0		1			70747	01/12/24 14:14	CH	EET MID

Client Sample ID: DS-09
Date Collected: 01/09/24 01:03
Date Received: 01/10/24 09:48

Lab Sample ID: 890-5938-3
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			5.05 g	5 mL	70861	01/15/24 13:22	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	70978	01/17/24 02:39	SM	EET MID
Total/NA	Analysis	Total BTEX		1			71065	01/17/24 02:39	SM	EET MID
Total/NA	Analysis	8015 NM		1			70913	01/14/24 02:38	SM	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	70668	01/11/24 14:55	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70803	01/14/24 02:38	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	70714	01/12/24 08:03	CH	EET MID
Soluble	Analysis	300.0		1			70747	01/12/24 14:30	CH	EET MID

Client Sample ID: DS-09
Date Collected: 01/09/24 01:18
Date Received: 01/10/24 09:48

Lab Sample ID: 890-5938-4
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			5.01 g	5 mL	70861	01/15/24 13:22	MNR	EET MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	70978	01/17/24 04:01	SM	EET MID
Total/NA	Analysis	Total BTEX		1			71065	01/17/24 04:01	SM	EET MID

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Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

Client Sample ID: DS-09
Date Collected: 01/09/24 01:18
Date Received: 01/10/24 09:48

Lab Sample ID: 890-5938-4
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			70913	01/17/24 14:48	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	71029	01/16/24 16:03	TKC	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	71032	01/17/24 14:48	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	70668	01/11/24 14:55	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70803	01/14/24 01:56	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	70714	01/12/24 08:03	CH	EET MID
Soluble	Analysis	300.0		5			70747	01/12/24 14:35	CH	EET MID

Client Sample ID: DS-10
Date Collected: 01/09/24 01:33
Date Received: 01/10/24 09:48

Lab Sample ID: 890-5938-5
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	70861	01/15/24 13:22	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	70978	01/17/24 02:59	SM	EET MID
Total/NA	Analysis	Total BTEX		1			71065	01/17/24 02:59	SM	EET MID
Total/NA	Analysis	8015 NM		1			70913	01/14/24 03:40	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	70668	01/11/24 14:55	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70803	01/14/24 03:40	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	70714	01/12/24 08:03	CH	EET MID
Soluble	Analysis	300.0		1			70747	01/12/24 14:40	CH	EET MID

Client Sample ID: DS-10
Date Collected: 01/09/24 01:47
Date Received: 01/10/24 09:48

Lab Sample ID: 890-5938-6
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	70861	01/15/24 13:22	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	70978	01/17/24 03:20	SM	EET MID
Total/NA	Analysis	Total BTEX		1			71065	01/17/24 03:20	SM	EET MID
Total/NA	Analysis	8015 NM		1			70913	01/14/24 02:59	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	70668	01/11/24 14:55	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70803	01/14/24 02:59	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	70714	01/12/24 08:03	CH	EET MID
Soluble	Analysis	300.0		1			70747	01/12/24 14:45	CH	EET MID

Client Sample ID: DS-11
Date Collected: 01/09/24 02:02
Date Received: 01/10/24 09:48

Lab Sample ID: 890-5938-7
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			4.97 g	5 mL	70861	01/15/24 13:22	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	70978	01/17/24 03:40	SM	EET MID
Total/NA	Analysis	Total BTEX		1			71065	01/17/24 03:40	SM	EET MID
Total/NA	Analysis	8015 NM		1			70913	01/14/24 02:17	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

Client Sample ID: DS-11
Date Collected: 01/09/24 02:02
Date Received: 01/10/24 09:48

Lab Sample ID: 890-5938-7
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	8015NM Prep			9.92 g	10 mL	70668	01/11/24 14:55	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70803	01/14/24 02:17	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	70714	01/12/24 08:03	CH	EET MID
Soluble	Analysis	300.0		5			70747	01/12/24 14:50	CH	EET MID

Client Sample ID: DS-11
Date Collected: 01/09/24 02:31
Date Received: 01/10/24 09:48

Lab Sample ID: 890-5938-8
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			4.96 g	5 mL	70861	01/15/24 13:22	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	70978	01/17/24 10:53	SM	EET MID
Total/NA	Analysis	Total BTEX		1			71065	01/17/24 10:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			70913	01/14/24 04:22	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	70668	01/11/24 14:55	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	70803	01/14/24 04:22	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	70714	01/12/24 08:03	CH	EET MID
Soluble	Analysis	300.0		1			70747	01/12/24 14:55	CH	EET MID

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

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

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	T104704400-23-26	06-30-24
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: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

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: Terracon Consulting Eng & Scientists
Project/Site: LONGVIEW DEEP FED 1-21

Job ID: 890-5938-1
SDG: KH237057

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5938-1	DS-08	Solid	01/09/24 12:41	01/10/24 09:48	0.5
890-5938-2	DS-08	Solid	01/09/24 12:52	01/10/24 09:48	5
890-5938-3	DS-09	Solid	01/09/24 01:03	01/10/24 09:48	0.5
890-5938-4	DS-09	Solid	01/09/24 01:18	01/10/24 09:48	5
890-5938-5	DS-10	Solid	01/09/24 01:33	01/10/24 09:48	0.5
890-5938-6	DS-10	Solid	01/09/24 01:47	01/10/24 09:48	5
890-5938-7	DS-11	Solid	01/09/24 02:02	01/10/24 09:48	0.5
890-5938-8	DS-11	Solid	01/09/24 02:31	01/10/24 09:48	5

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



Houston, TX (281) 240-4200, Dallas, TX (214) 902-0230
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 _____ of _____

Project Manager:	Joseph Guesnier	Bill to: (if different)	Dale Woodall
Company Name:	Terracon	Company Name:	Devon Energy Corp
Address:	4526 W. Pierce St	Address:	205 E. Bender Road #150
City, State ZIP:	Carlsbad NM, 88220	City, State ZIP:	Hobbs, NM 88240
Phone:	(806)-300-0140	Email:	Gus.Stuchlik@terracon.com; Trevis.Caspi@terracon.com; Joseph.Guesnier@terracon.com; Becky.Sue.Miller@terracon.com

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

[illegible]

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xanaco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xanaco 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 Xanaco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xanaco, but not analyzed. These terms will be enforced unless previously negated by Eurofins Xanaco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xanaco, but not analyzed. These terms will be enforced unless previously negated by Eurofins Xanaco.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 <i>[Signature]</i>	<i>[Signature]</i>	9/28/16	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-5938-1

SDG Number: KH237057

Login Number: 5938

List Source: Eurofins Carlsbad

List Number: 1

Creator: Lopez, Abraham

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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-5938-1

SDG Number: KH237057

Login Number: 5938
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 01/11/24 11:21 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	

APPENDIX E – TERRACON STANDARD OF CARE, LIMITATION, AND RELIANCE

Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time. Terracon makes no warranties, either express or implied, regarding the findings, conclusions, or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information used in the preparation of the report. These services were performed in accordance with the scope of work agreed with you, Devon Energy Production Company, LP, as reflected in our Assessment Report sent via email on May 20, 3024.

Additional Scope Limitations

The development of this Closure Report is based on information provided by the Devon Energy Production Company, LP and Terracon's remediation and construction services line. Such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, nondetectable, or not present during these services. We cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those by information provided by the Devon Energy Production Company, LP. The data, interpretations, findings, and recommendations are based solely upon reformation executed within the scope of these services.

Reliance

This report has been prepared for the exclusive use of Devon Energy Production Company, LP, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of Devon Energy Production Company, LP and Terracon. Any unauthorized distribution or reuse is at Devon Energy Production Company, LP sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions, and limitations stated in the proposal and Devon Energy Production Company, LP and Terracon's Master Services Agreement. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to Devon Energy Production Company, LP and all relying parties unless otherwise agreed in writing.

District I
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District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS

Action 376384

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 376384
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2336140713
Incident Name	NAPP2336140713 LONGVIEW FEDERAL 1 #021H @ 30-015-40651
Incident Type	Fire
Incident Status	Remediation Closure Report Received
Incident Well	[30-015-40651] LONGVIEW FEDERAL 1 #021H

Location of Release Source	
Please answer all the questions in this group.	
Site Name	LONGVIEW FEDERAL 1 #021H
Date Release Discovered	12/26/2023
Surface Owner	Federal

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

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Fire Other (Specify) Crude Oil Released: 2 BBL Recovered: 0 BBL Lost: 2 BBL.
Produced Water Released (bbls) Details	Not answered.
Is the concentration of chloride in the produced water >10,000 mg/l	No
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)	FLARE SWAMPED OUT DUE TO SCRUBBER DUMP LINES FREEZING. FIRE WAS SMALL AND EXTINGUISHED BY OPERATOR. SCRUBBER WAS MANUALLY DRAINED. WELL SHUT IN UNTIL DAMAGED EQUIPMENT IS REPLACED.

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QUESTIONS, Page 2

Action 376384

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID:	6137
	Action Number:	376384
	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	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (2) an unauthorized release of a volume that: (a) results in a fire or is the result of a fire.
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	fluids soaked into the ground

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: Dale Woodall Title: EHS Professional Email: Dale.Woodall@dmn.com Date: 08/22/2024
--	--

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Santa Fe, NM 87505

QUESTIONS, Page 3

Action 376384

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 376384
	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 51 and 75 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between 1 and 5 (mi.)
A wetland	Between 1 and 100 (ft.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan

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

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

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

Chloride	(EPA 300.0 or SM4500 Cl B)	3090
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	4120
GRO+DRO	(EPA SW-846 Method 8015M)	4120
BTEX	(EPA SW-846 Method 8021B or 8260B)	11.6
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	06/01/2024
On what date will (or did) the final sampling or liner inspection occur	07/12/2024
On what date will (or was) the remediation complete(d)	07/19/2024
What is the estimated surface area (in square feet) that will be reclaimed	400
What is the estimated volume (in cubic yards) that will be reclaimed	30
What is the estimated surface area (in square feet) that will be remediated	1317
What is the estimated volume (in cubic yards) that will be remediated	386

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 376384

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID:	6137
	Action Number:	376384
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for off-site disposal	LEA LAND LANDFILL [fEEM0112342028]
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
OR is the off-site disposal site, to be used, out-of-state	Not answered.
OR is the off-site disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Not answered.
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Dale Woodall Title: EHS Professional Email: Dale.Woodall@dmn.com Date: 08/22/2024
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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

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

QUESTIONS, Page 5

Action 376384

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 376384
	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 376384

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID:	6137
	Action Number:	376384
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	360298
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	07/05/2024
What was the (estimated) number of samples that were to be gathered	10
What was the sampling surface area in square feet	1200

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	1317
What was the total volume (cubic yards) remediated	420
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	1317
What was the total volume (in cubic yards) reclaimed	420
Summarize any additional remediation activities not included by answers (above)	see report

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: Dale Woodall Title: EHS Professional Email: Dale.Woodall@dmn.com Date: 08/22/2024
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QUESTIONS, Page 7

Action 376384

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID:
	6137
	Action Number:
	376384
Action Type:	
[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Action 376384

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 376384
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your Remediation Closure Report for Incident #NAPP2336140713 LONGVIEW FEDERAL 1 #021H, thank you. This Remediation Closure Report is approved.	9/13/2024