

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

Printed Name: _____ Title: _____

Signature: Katherine Purvis Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Jocelyn Harimon Date: 02/13/2023

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

Closure Approved by: Robert Hamlet Date: 6/13/2023

Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

Incident ID	
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Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

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Printed Name: _____ Title: _____

Signature: Katherine Purvis Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Jocelyn Harimon Date: 02/13/2023

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Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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Printed Name: _____ Title: _____

Signature: Katherine Purvis Date: _____

email: _____ Telephone: _____

OCD OnlyReceived by: Jocelyn Harimon Date: 02/13/2023☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

- ☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
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- ☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☐ Description of remediation activities

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

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Signature: Katherine Purvis Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Jocelyn Harimon Date: 02/13/2023

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

**Spur Energy Partners LLC
Lakewood AQE State SWD
Section 30, T19S, R26E
NMOCD Reference # nAPP2226327719
Terracon Project # KH227015**



Closure Report

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

RE: **Closure Report**
Lakewood AQE State SWD
Section 30, Township 19 South, Range 26 East
Eddy County, New Mexico
Terracon Project No. KH227015

To Whom It May Concern,

Terracon Consultants, Inc. (Terracon) is pleased to submit our Closure Report for the site referenced above. The Closure Report was developed in accordance with the New Mexico Oil Conservation Division (NMOCD) regulations concerning clean-up actions required for releases of crude oil and produced water. Based on the release investigation assessment and remedial efforts, Terracon took the following actions to achieve protection of fresh water and the environment in accordance with NMOCD regulations. Terracon developed the Closure Report in general accordance with our scope of work (KH227015) dated November 01, 2022.

Action Items

Completed Actions

- 1) During the sampling events, a series of hand-augured boreholes were advanced in an attempt to evaluate the vertical and horizontal extents of the impacts.
- 2) Soil samples collected from the assessment activities were submitted to an approved laboratory to qualify the magnitude of impacts within the release margins.
- 3) All Maps and associated data for approval have been provided.
- 4) Excavation of the contaminated area was completed with the intent to remove impacted soil above remedial action limit (RAL) as determined by the Closure Criteria set by NMOCD.
- 5) All confirmation samples were collected every 200 sq. ft.
- 6) Remedial activities were terminated when a confirmation samples were collected below the NMOCD RAL's for Oil and Gas impacted soils.
- 7) All conditions needed for approval of closure have been met.

Anticipated Actions

- 1) Approval by the NMOCD
- 2) Following the approval of the closure report by the NMOCD, all areas of the excavation activities will be disposed of at an approved waste disposal site as O&G exempt waste.

Spur Energy Partners LLC
Lakewood AQE State SWD
S30, T19S, R26E
NMOCD Reference # nAPP2226327719



Terracon appreciates this opportunity to provide environmental services to Spur Energy Partners LLC (Spur). Should you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,
Terracon Consultants, Inc.

A handwritten signature in blue ink, appearing to read 'J. Guesnier', written over the printed name.

Joseph Guesnier
Senior Staff Scientist
Office Manager – Carlsbad

A handwritten signature in blue ink, appearing to read 'Erin Loyd', written over the printed name.

Erin Loyd, P.G. (TX)
Senior Principal
Office Manager – Lubbock

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Regulatory Framework and Response Action Levels.....	4
Soil Investigation Discussion.....	5
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Confirmation Sampling Data Evaluation	5
Release Investigation Data Summary	6

Attachments:

Appendix A – Exhibits

- Exhibit 1 – Topo Map
- Exhibit 2 – Site Map
- Exhibit 3 – Site Sample Map
- Exhibit 4 – Confirmation Map (Floors)
- Exhibit 4 – Confirmation Map (Walls)
- Exhibit 5 – NMOSE POD Location Map
- Exhibit 6 – Cave Karst Public UCP Map

Appendix B – Tables, Procedures, and Figures

- Table 1 – Closure Criteria for Soils Impacted by a Release
- Table 2 - Soil Sample Analytical Results

Appendix C – Photographic Log

Appendix D – Analytical Report and Chain of Custody

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

Spur Energy Partners LLC
Lakewood AQE State SWD
S30, T19S, R26E
NMOCD Reference # nAPP2226327719



Incident Information

The following table provides detailed information regarding the September 15, 2022, release at the Lakewood AQE site in Eddy County, New Mexico:

Required Information	Site and Release information	
Responsible party	The facility is operated by Spur Energy Partners LLC.	
Local contact	Contact: Chad Hensley	P: (346) 339-1494 E: chensley@spurenergy.com
NMOCD Notification	Notice of the release was provided to the NMOCD web portal by Chad Hensley on September 20, 2022. Incident number nAPP2226327719 was assigned to the release.	
Facility description	Lakewood AQE is in Eddy County, New Mexico. It is an approximate 0.15-acre area located within Section 30, Township 19 South, Range 26 East, approximately 9 miles southwest of Atoka, New Mexico. The site is an Oil and produced water storage facility, surrounded by native pastureland and natural drainage.	
Time of incident	September 15, 2022; discovered	
Discharge event	The cause of the leak was a pipeline blowout which resulted in a leak releasing produced water.	
Type of discharge	The release occurred in an unlined area outside of the containment adjacent to the Lakewood AQE site.	
Quantity of spilled material	Total Fluids: 55bbbls	Produced Water: 55bbbls Total Petroleum Hydrocarbons: N/A
Site characteristics	Relatively flat with drainage following the native ground surface; sloping to the south.	
Immediate corrective actions	The source of the release was shut in and repaired, and all free liquids were recovered.	

Spur Energy Partners LLC
 Lakewood AQE State SWD
 S30, T19S, R26E
 NMOCD Reference # nAPP2226327719



General Site Characteristics	
Remedial Determining Information	Site Ranking Characteristics
Facility description Site Map – (Exhibit 2 in Appendix A)	Lakewood AQE is in Eddy County, New Mexico. It is an approximate 0.15-acre area located within Section 30, Township 19 South, Range 26 East, approximately 9 miles southwest of Atoka, New Mexico. The site is an Oil and produced water storage facility, surrounded by native pastureland and natural drainage.
Site characteristics Topographic Map – (Exhibit 1 in Appendix A)	Site located on a hill with drainage flow in all directions.
Groundwater NMOSE POD Location Map – (Exhibit 6 in Appendix A)	<u>POD Number:</u> (RA-10002) <u>Depth to Groundwater:</u> 95 ft. below grade surface (bgs) <u>Distance to Well:</u> 0.69 miles to the west <u>Date Drilled:</u> February 01, 2001
	<u>Groundwater Quality:</u> Groundwater at the site is predominately used for livestock production and for sanitary purposes in conjunction with commercial use.
Surface Water	Brantley Lake (South-eastern Eddy County, NM), approximately 3.4 miles to the southeast.
Soil Characteristics	Soils at the site are mapped as Reagan-Upton soils, 0 to 9 percent slopes, well-drained, 0 to 9 inches gravelly loam, 9 to 13 inches gravelly loam, 13 to 21 inches cemented, and 21 to 60 inches very gravelly loam. Restrictive features are present at more than 80 inches resulting in the formation being categorized with a low runoff classification.

Spur Energy Partners LLC
Lakewood AQE State SWD
S30, T19S, R26E
NMOCD Reference # nAPP2226327719



Regulatory Framework and Response Action Levels

Oil and gas exploration and production facilities in New Mexico are generally regulated by the New Mexico Oil Conservation Division (NMOCD). The NMOCD has issued the *Closure Criteria for Soils Impacted by a Release, June 21, 2018*, and *Restoration, Reclamation, and Re-vegetation (19.15.29.13) NMAC – D (Reclamation of areas no longer in use)* as guidance documents for the remediation and reclamation of sites impacted by releases from oil and gas exploration and production activities. Sections detailed below the applicability of these guidance documents to the site-specific characteristics associated with the Lakewood AQE State SWD, additionally referenced in Appendix B, Table 1.

Reclamation Levels (Surface to 4 ft. bgs)

The below Reclamation Limits for chlorides, TPH (GRO+DRO+MRO), BTEX (includes benzene, toluene, ethylbenzene, and xylenes), and benzene are defined within New Mexico Administration Code (NMAC) *Restoration, Reclamation, and Re-vegetation (19.15.29.13) New Mexico Administration Code (NMAC) – D (Reclamation of areas no longer in use)* for soils extending to 4 ft. bgs.:

Constituent	Remediation Limits
Chloride	600 mg/kg
TPH (GRO+DRO+MRO)	100 mg/kg
BTEX	50 mg/kg
Benzene	10 mg/kg

Remediation Levels (> 4 ft. bgs)

Based on the site-specific characteristics, the applicable NMOCD remediation levels for Total BTEX, chloride, and TPH within soils, exclusive of the Reclamation Zone (surface to 4 ft. bgs), are as follows:

Constituent	Remediation Limit
Chloride	600 mg/kg
TPH (GRO+DRO+MRO)	100 mg/kg
TPH (GRO+DRO)	N/A
BTEX	50 mg/kg
Benzene	10 mg/kg

Spur Energy Partners LLC
Lakewood AQE State SWD
S30, T19S, R26E
NMOCD Reference # nAPP2226327719



Soil Investigation Discussion

During September 23, 2022, Terracon conducted an initial release investigation and collected 5 soil samples to delineate the extent of the release. During excavation activities an additional 26 confirmation samples were collected from December 21, 2022 to January 3, 2032. All samples were stored on ice under a chain of command and transported to Eurofins laboratories in Carlsbad, New Mexico where they were analyzed for chloride, benzene, toluene, ethyl benzene, and xylene (collectively known as BTEX), and total petroleum hydrocarbons (known as TPH). A total of 32 samples were collected from within the release margins.

Release Margins Data Evaluation

■ Release Assessment Data Evaluation

A total of five soil samples were collected throughout the release extent. All samples were analyzed for the presence of chloride, BTEX, and TPH. Two of the samples (SS02 and SS04) contained TPH levels greater than the NMOCD RAL of 100 mg/kg. The detected TPH concentrations were 312 mg/kg in SS02 (surface to 0.5 ft bgs) and 132 mg/kg in SS04 (surface to 0.5 ft bgs). None of the five samples exhibited concentrations of BTEX above applicable laboratory Sample Detection Levels (SDLs), as summarized in Table 2.

Each of the five samples collected were analyzed for the presence of chloride. The detected chloride concentrations ranged from 2,310 mg/kg in bore hole sample BH01 (1 to 2 ft. bgs) to 29,200 mg/kg in soil sample SS01 (surface to 0.5 ft. bgs), which all exceed the NMOCD RAL for chloride of 600 mg/kg, as summarized in Table 2.

Confirmation Sample Data Evaluation

■ Confirmation Assessment Data Evaluation

A total of 26 soil samples were collected from throughout the release extent. All samples were analyzed for the presence of Benzene, BTEX, and TPH. None of the 26 samples exhibited concentrations of BTEX or TPH constituents above applicable laboratory SDLs, as summarized in Table 2.

Each of the 26 collected were analyzed for the presence of chloride. The detected chloride concentrations ranged from 31.3 mg/kg in soil sample N-SW 01 (surface to 4 ft. bgs) to 850 mg/kg in soil sample FS20 (1 ft. bgs), as summarized in Table 2. two samples (FS17 and FS20) exhibited chloride concentrations above NMOCD RAL for chloride of 600 mg/kg, a subsequent sampling event of (FS17.1 and FS20.1) found chloride concentrations were below laboratory SDLs.

**Spur Energy Partners LLC
Lakewood AQE State SWD
S30, T19S, R26E
NMOCD Reference # nAPP2226327719**



Release Investigation Data Summary

Based on the review of the above release investigation analytical results, the presence of petroleum hydrocarbon constituents (BTEX/TPH) were not detected at concentrations above the applicable NMOCD Reclamation and/or Remediation Action Limits.

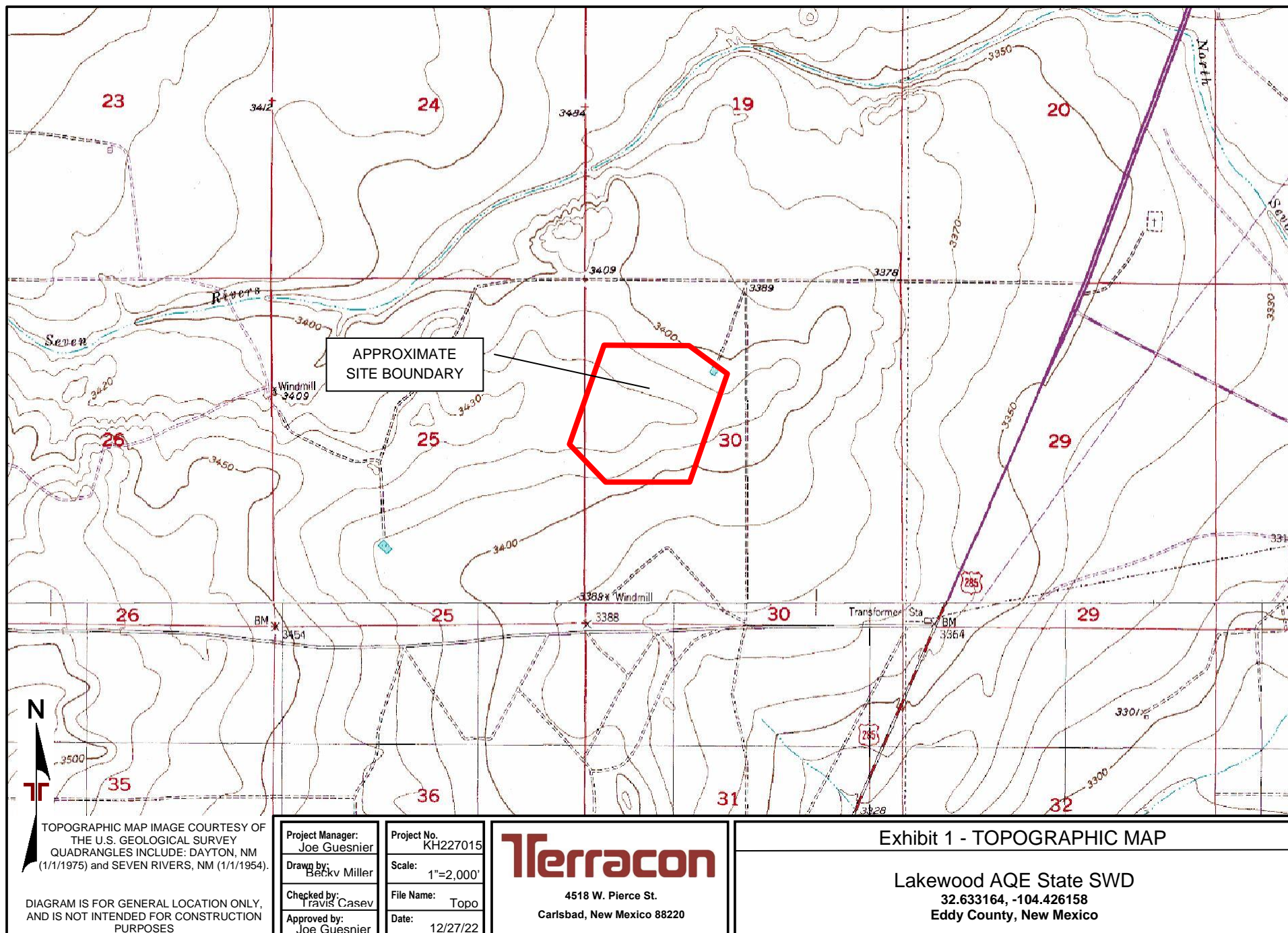
Of the 26 soil samples analyzed, two of the soil samples analyzed for chlorides exceeded the NMOCD Remediation Action Limit of 600 mg/kg, which after completion of soil excavation activities further excavation and resampling, were shown to not exceed the NMOCD Remediation Action Limit of 600 mg/kg and the excavation confirmation samples did not exhibit chloride concentrations above an actionable limit. This closure is being submitted under Spur Energy Partners OGRID number. Spur Energy Partners respectfully requests closure of nAPP2226327719.

Spur Energy Partners LLC
 Lakewood AQE State SWD
 S30, T19S, R26E
 NMOCD Reference # nAPP2226327719




Soil Management Plan	
Soil Objectives	Approach Actions
General Soil Plan	The best approach for this site was determined to be the excavation all impacted materials and disposal.
Reclamation Response Objectives	The objective of reclamation activities at this site were to remove impacted materials from surface to 4 ft. bgs that had chloride concentrations exceeding the NMOCD RAL for chloride of 600 mg/kg.
Remediation Response Objectives	The objective of remediation activities at this site was to evaluate soils at depths greater than 4 ft. bgs. and remove any soils with a chloride concentration greater than 600 mg/kg.
Soil Management	All impacted soils were stockpiled on 20-mil poly liner until it was transported to Lea Land disposal facility.
Depth of Remediation Confirmation Soil Map – (Figure 3 in Appendix A)	The depths of remedial activities at the site were determined by screening samples using a titration on confirmation samples during excavation activities. Excavation floor samples were collected from a depth of 2 ft. bgs. to 4 ft. bgs., while sidewall samples were terminated at 0-4 ft. bgs.
Disposal Facility Waste Manifest – (Appendix E)	All impacted soils were stockpiled on site and sent to Lea Land disposal facility. Site was backfilled with fresh material.
Quantity Disposed	A total of 1,000 cubic yards was excavated and treated on site.

APPENDIX A – EXHIBITS





Project No. KH227015		Exhibit 2 - Site Map	
Scale: As Shown		Lakewood AQE State SWD	
Source: Google Earth		32.633164°, -104.426158°	
Date: 12/27/2022		Eddy County, New Mexico	
			
4518 W. Pierce St. Carlsbad, NM 88220 PH. (806) 300-0104 FAX. (806) 797 0947			

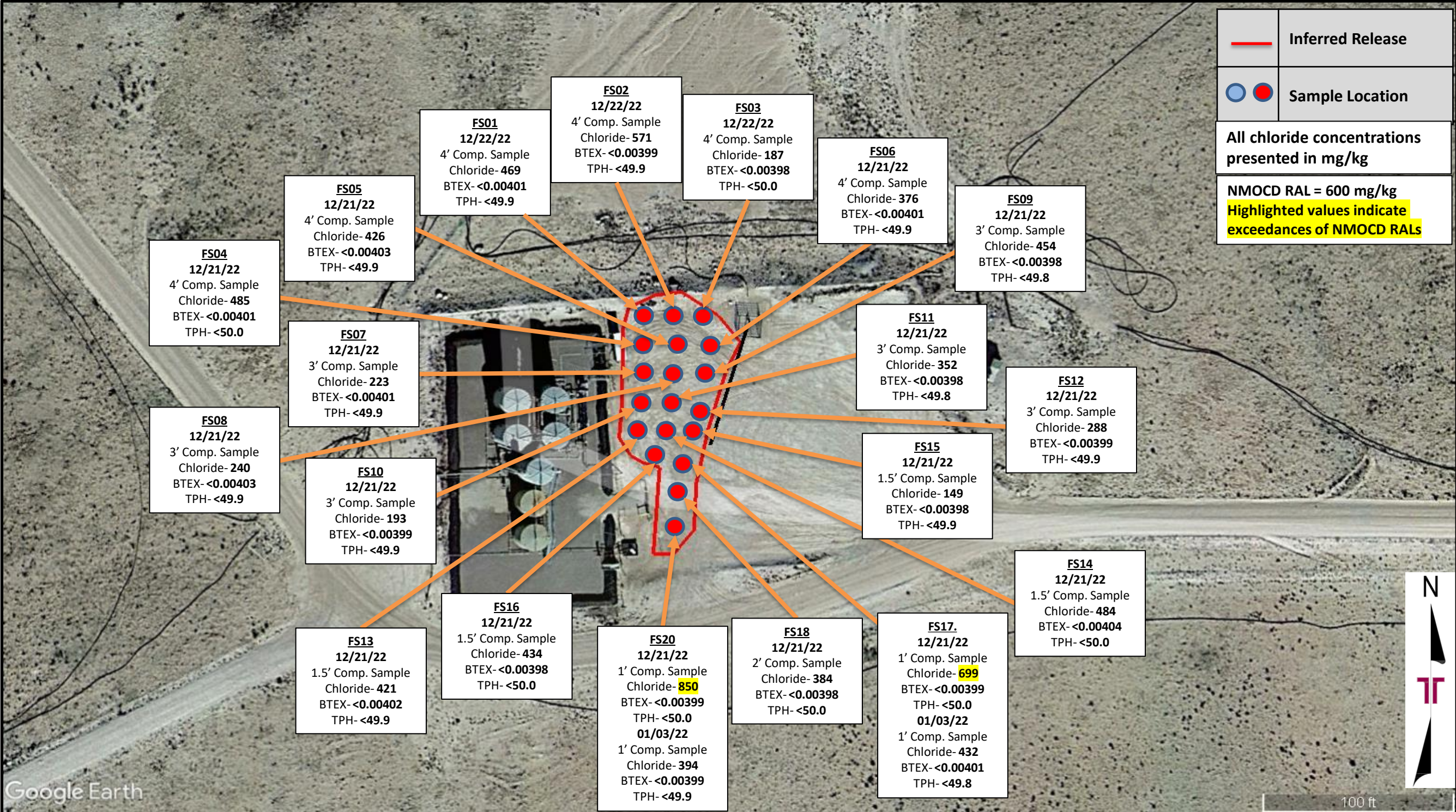


Project No.	KH227015
Scale:	As Shown
Source:	Google Earth
Date:	01/10/2022

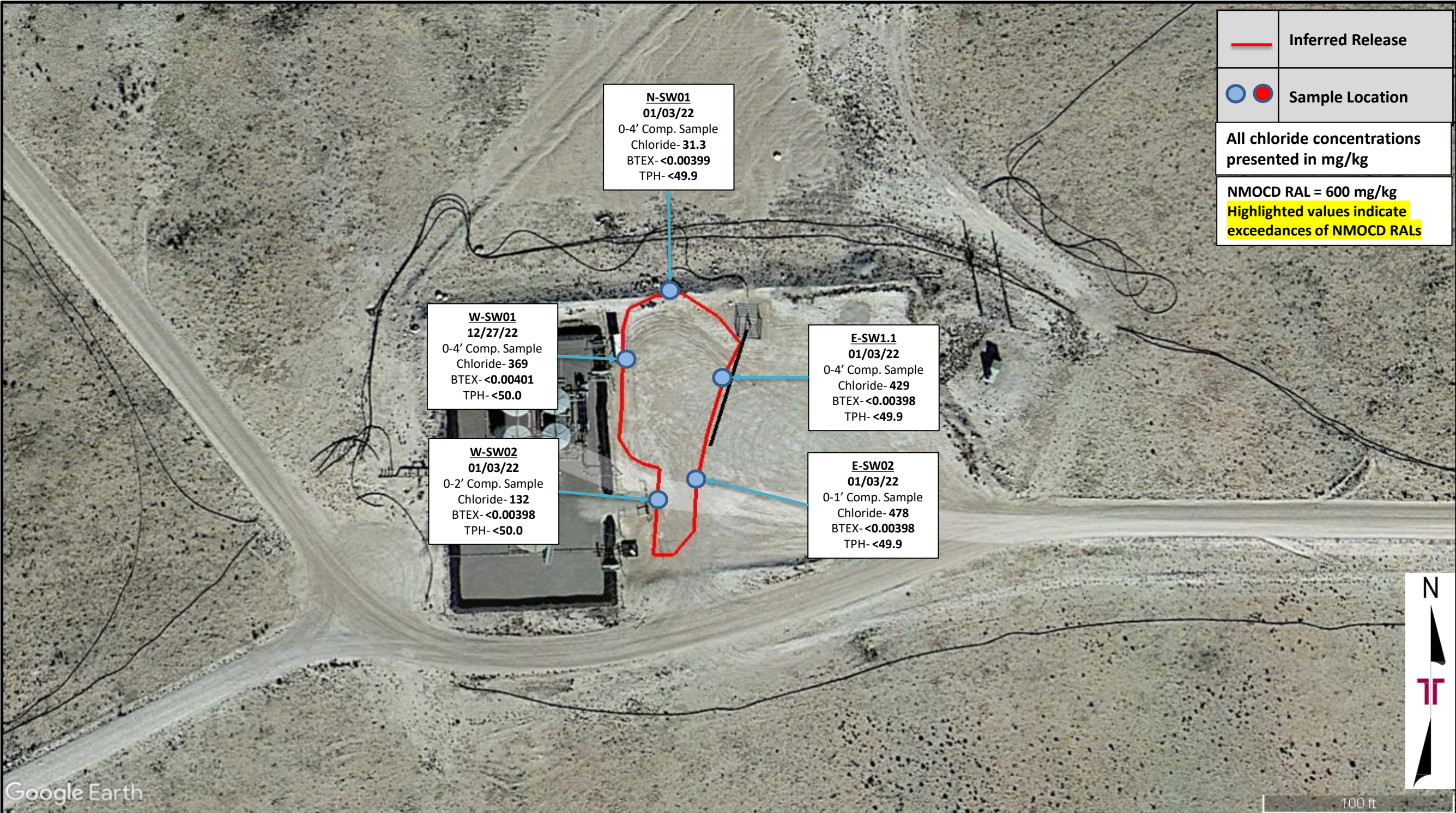
Terracon
Consulting Engineers & Scientists

4518 W. Pierce St. Carlsbad, NM 88220
PH. (806) 300-0104 FAX. (806) 797 0947

Exhibit 3 – Site Sample Map
Lakewood AQE State SWD
32.633164°, -104.426158°
Eddy County, New Mexico



Project No.	KH227015	<div>Exhibit 4 – Confirmation Map (Floors)</div> <div>Lakewood AQE State SWD</div> <div>32.633164°, -104.426158°</div> <div>Eddy County, New Mexico</div>	
Scale:	As Shown		
Source:	Google Earth		
Date:	12/27/2022		
<div>Terracon</div> <div>Consulting Engineers & Scientists</div> <div>4518 W. Pierce St. Carlsbad, NM 88220</div> <div>PH. (806) 300-0104 FAX. (806) 797 0947</div>			



Project No.	KH227015
Scale:	As Shown
Source:	Google Earth
Date:	01/10/2022


Terracon
Consulting Engineers & Scientists

4518 W. Pierce St.
PH. (806) 300-0104

Carlsbad, NM 88220
FAX. (806) 797 0947

Exhibit 4 – Confirmation Map (Walls)
Lakewood AQE State SWD 32.633164°, -104.426158° Eddy County, New Mexico



Project No.	KH227015	 <p>4518 W. Pierce St. Carlsbad, NM 88220 PH. (806) 300-0104 FAX. (806) 797 0947</p>	Exhibit 5 - NMOSE POD Location
Scale:	As Shown		Lakewood AQE State SWD
Source:	Google Earth		32.633164°, -104.426158°
Date:	12/27/2022		Eddy County, New Mexico



Project No.	KH227015	<div><div>Terracon</div><div>Consulting Engineers & Scientists</div><div><div>4518 W. Pierce St.</div><div>PH. (806) 300-0104</div></div><div><div>Carlsbad, NM 88220</div><div>FAX. (806) 797 0947</div></div></div>	Exhibit 6 – Cave Karst Public UPC Map
Scale:	As Shown		Lakewood AQE State SWD
Source:	Google Earth		32.633164°, -104.426158°
Date:	12/27/2022		Eddy County, New Mexico

APPENDIX B – TABLES, PROCEDURES, AND FIGURES

Table 1			
Closure Criteria for Soils Impacted by a Release			
Minimum depth below any point within the horizontal boundary of the release to ground water less than 10,000 mg/L TDS	Constituent	Method*	Limit**
≤50 feet	Chloride***	EPA 300.0 or SM4500 Cl B	600 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015 M	100 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg
51 feet – 100 feet	Chloride***	EPA 300.0 or SM4500 Cl B	10,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015 M	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015 M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg
>100 feet	Chloride***	EPA 300.0 or SM4500 Cl B	20,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015 M	2,500 mg/kg
	TPH (GRO+DRO)	EPA SW-846 Method 8015 M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

*Or other methods approved by the division

**Numerical limits or natural background level, whichever is greater

***This applies to releases of produced water or other fluids, which may contain chloride

TABLE 2 SOIL SAMPLE ANALYTICAL RESULTS - BTEX ¹ , Chloride ² , and TPH ³ Osage Boyd Yaso Terracon Project No. KH227019								
Sample I.D.	Sample Depth (ft. bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)		
						GRO	DRO	EXT DRO
Initial Release Margin Samples (Off Pad)								
BH01	1-2'	Grab	09/23/22	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00401 Total BTEX - <0.00401	2,310	<50.0	<50.0	<50.0
SS01	0.5'	Comp	09/23/22	Benzene - 0.243 Toluene - 0.0704 Ethylbenzene - <0.0398 Total Xylenes - <0.0795 Total BTEX - 0.313	29,200	<50.0	61.8	<50.0
SS02	0.5'	Comp	09/23/22	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00399 Total BTEX - <0.00399	12,300	<49.8	318	<49.8
SS03	0.5'	Comp	09/23/22	Benzene - 0.226 Toluene - <0.0399 Ethylbenzene - <0.0399 Total Xylenes - <0.0798 Total BTEX - 0.266	10,300	<49.9	69.3	<49.9
SS04	0.5'	Comp	09/23/22	Benzene - 0.0842 Toluene - 0.0547 Ethylbenzene - <0.0398 Total Xylenes - <0.0797 Total BTEX - 0.139	20,500	<49.9	132	<49.9
Confirmation Samples (Off Pad)								
N-SW 01	0-4'	Comp	1/3/2023	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00399 Total BTEX - <0.00399	31.3	<49.9	<49.9	<49.9
E-SW 1.1	0-4'	Comp	1/3/2023	Benzene - <0.00199 Toluene - <0.00199 Ethylbenzene - <0.00199 Total Xylenes - <0.00398 Total BTEX - <0.00398	429	<49.9	<49.9	<49.9
E-SW 02	0-1'	Comp	1/3/2023	Benzene - <0.00199 Toluene - <0.00199 Ethylbenzene - <0.00199 Total Xylenes - <0.00398 Total BTEX - <0.00398	478	<49.9	<49.9	<49.9
W-SW 01	0-4'	Comp	12/27/2022	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00401 Total BTEX - <0.00401	369	<50.0	<50.0	<50.0
W-SW 02	0-1'	Comp	1/3/2023	Benzene - <0.00199 Toluene - <0.00199 Ethylbenzene - <0.00199 Total Xylenes - <0.00398 Total BTEX - <0.00398	132	<50.0	<50.0	<50.0
FS01	4'	Comp	12/22/2022	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00401 Total BTEX - <0.00401	469	<49.9	<49.9	<49.9
FS02	4'	Comp	12/22/2022	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00399 Total BTEX - <0.00399	571	<49.9	<49.9	<49.9
FS03	4'	Comp	12/22/2022	Benzene - <0.00199 Toluene - <0.00199 Ethylbenzene - <0.00199 Total Xylenes - <0.00398 Total BTEX - <0.00398	187	<50.0	<50.0	<50.0
FS04	4'	Comp	12/21/2022	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00401 Total BTEX - <0.00401	485	<50.0	<50.0	<50.0
FS05	4'	Comp	12/21/2022	Benzene - <0.00202 Toluene - <0.00202 Ethylbenzene - <0.00202 Total Xylenes - <0.00403 Total BTEX - <0.00403	426	<49.9	<49.9	<49.9
NMOCD Reclamation Standards ⁴ (Applicable for Soils from the Surface to 4 ft. Below Grade Surface)				Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50	600	100		
NMOCD Remediation and Delineation Standards ⁵ (Applicable for Soils at Depths Greater than 4 ft. Below Grade Surface)				Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50	600	100		

1. BTEX = Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8021B

2. Chloride = Chloride analyzed by EPA Method 300.

3. TPH = Total petroleum hydrocarbons analyzed by EPA Method 8015M (GRO/DRO/MRO)

4. New Mexico Administration Code (NMAC) Restoration, Reclamation, and Re-vegetation (19.15.29.13) New Mexico Administration Code (NMAC) – D (Reclamation of areas no longer in use) for soils extending to 4 ft. bgs

5. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards are proposed in 19.15.29.12 NMAC - N, 8/14/2018

< = Constituent not detected above the indicated laboratory SDL

NA = Not Analyzed

N/A = Not Applicable

Bold and Highlight denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Reclamation and/or Remediation and Delineation Standard

TABLE 2 SOIL SAMPLE ANALYTICAL RESULTS - BTEX ¹ , Chloride ² , and TPH ³ Osage Boyd Yaso Terracon Project No. KH227019								
Sample I.D.	Sample Depth (ft. bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)		
						GRO	DRO	EXT DRO
Confirmation Samples (Off Pad)								
FS06	4'	Comp	12/21/2022	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00401 Total BTEX - <0.00401	376	<49.9	<49.9	<49.9
FS07	3'	Comp	12/21/2022	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00401 Total BTEX - <0.00401	223	<49.9	<49.9	<49.9
FS08	3'	Comp	12/21/2022	Benzene - <0.00202 Toluene - <0.00202 Ethylbenzene - <0.00202 Total Xylenes - <0.00403 Total BTEX - <0.00403	240	<49.9	<49.9	<49.9
FS09	3'	Comp	12/21/2022	Benzene - <0.00199 Toluene - <0.00199 Ethylbenzene - <0.00199 Total Xylenes - <0.00398 Total BTEX - <0.00398	454	<49.8	<49.8	<49.8
FS10	3'	Comp	12/21/2022	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00399 Total BTEX - <0.00399	193	<49.9	<49.9	<49.9
FS11	3'	Comp	12/21/2022	Benzene - <0.00199 Toluene - <0.00199 Ethylbenzene - <0.00199 Total Xylenes - <0.00398 Total BTEX - <0.00398	352	<49.8	<49.8	<49.8
FS12	3'	Comp	12/21/2022	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00399 Total BTEX - <0.00399	288	<49.9	<49.9	<49.9
FS13	1.5'	Comp	12/21/2022	Benzene - <0.00201 Toluene - <0.00201 Ethylbenzene - <0.00201 Total Xylenes - <0.00402 Total BTEX - <0.00402	421	<49.9	<49.9	<49.9
FS14	1.5'	Comp	12/21/2022	Benzene - <0.00202 Toluene - <0.00202 Ethylbenzene - <0.00202 Total Xylenes - <0.00404 Total BTEX - <0.00404	484	<50.0	<50.0	<50.0
FS15	1.5'	Comp	12/21/2022	Benzene - <0.00199 Toluene - <0.00199 Ethylbenzene - <0.00199 Total Xylenes - <0.00398 Total BTEX - <0.00398	149	<49.9	<49.9	<49.9
FS16	1.5'	Comp	12/21/2022	Benzene - <0.00199 Toluene - <0.00199 Ethylbenzene - <0.00199 Total Xylenes - <0.00398 Total BTEX - <0.00398	434	<50.0	<50.0	<50.0
FS17	1'	Comp	12/21/2022	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00399 Total BTEX - <0.00399	699	<50.0	<50.0	<50.0
FS17.1	1'	Comp	1/3/2023	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00401 Total BTEX - <0.00401	432	<49.8	<49.8	<49.8
FS18	2'	Comp	12/21/2022	Benzene - <0.00199 Toluene - <0.00199 Ethylbenzene - <0.0199 Total Xylenes - <0.00398 Total BTEX - <0.00398	384	<50.0	<50.0	<50.0
FS20	1'	Comp	12/21/2022	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00399 Total BTEX - <0.00399	850	<50.0	<50.0	<50.0
FS20.1	1'	Comp	1/3/2023	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00399 Total BTEX - <0.00399	394	<49.9	<49.9	<49.9
NMOCD Reclamation Standards ⁴ (Applicable for Soils from the Surface to 4 ft. Below Grade Surface)				Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50	600	100		
NMOCD Remediation and Delineation Standards ⁵ (Applicable for Soils at Depths Greater than 4 ft. Below Grade Surface)				Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50	600	100		

1. BTEX = Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8021B

2. Chloride = Chloride analyzed by EPA Method 300.

3. TPH = Total petroleum hydrocarbons analyzed by EPA Method 8015M (GRO/DRO/MRO)

4. New Mexico Administration Code (NMAC) Restoration, Reclamation, and Re-vegetation (19.15.29.13) New Mexico Administration Code (NMAC) -- D (Reclamation of areas no longer in use) for soils extending to 4 ft. bgs

5. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards are proposed in 19.15.29.12 NMAC - N, 8/14/2018

< = Constituent not detected above the indicated laboratory SDL

NA = Not Analyzed

N/A = Not Applicable

Bold and Highlight denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Reclamation and/or Remediation and Delineation Standard

APPENDIX C – PHOTOGRAPHIC LOG

Midkiff 38T4S-26-4WS Lakewood AQE State SWD ■ Eddy County, New Mexico
January 13, 2023 ■ Terracon Project No. KH227015

Terracon



PHOTO 1: View of area prior to Excavation toward the West



PHOTO 2: View of area prior Excavation toward the South

Responsive ■ Resourceful ■ Reliable

Midkiff 38T4S-26-4WS Lakewood AQE State SWD ■ Eddy County, New Mexico
January 13, 2023 ■ Terracon Project No. KH227015

Terracon



PHOTO 3: View of area prior Excavation toward the North



PHOTO 4: View of North Excavation

Responsive ■ Resourceful ■ Reliable

Midkiff 38T4S-26-4WS Lakewood AQE State SWD ■ Eddy County, New Mexico
January 13, 2023 ■ Terracon Project No. KH227015

Terracon

PHOTO 5: View of Center of Excavation



PHOTO 6: View of South Excavation

Responsive ■ Resourceful ■ Reliable

APPENDIX D – ANALYTICAL REPORT AND CHAIN OF CUSTODY



Environment Testing America

ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-3038-1

Laboratory Sample Delivery Group: KH227015

Client Project/Site: Lake Wood

For:

Terracon Consulting Eng & Scientists
5847 50th St
Lubbock, Texas 79424

Attn: Joseph Guesnier

Authorized for release by:

10/10/2022 3:02:10 PM

Jessica Kramer, Project Manager
(432)704-5440

Jessica.Kramer@et.eurofinsus.com

LINKS

Review your project
results through



Have a Question?



Visit us at:

www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Terracon Consulting Eng & Scientists
Project/Site: Lake Wood

Laboratory Job ID: 890-3038-1
SDG: KH227015

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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

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).



Jessica Kramer
Project Manager
10/10/2022 3:02:10 PM

Client: Terracon Consulting Eng & Scientists
Project/Site: Lake Wood

Laboratory Job ID: 890-3038-1
SDG: KH227015

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Definitions/Glossary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lake Wood

Job ID: 890-3038-1
SDG: KH227015

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Terracon Consulting Eng & Scientists
Project/Site: Lake Wood

Job ID: 890-3038-1
SDG: KH227015

Job ID: 890-3038-1

Laboratory: Eurofins Carlsbad

Narrative

**Job Narrative
890-3038-1**

Receipt

The samples were received on 9/23/2022 9:40 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 6.2°C

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: SS02 (890-3038-2). 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: (LCS 880-35422/2-A) and (LCSD 880-35422/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The method blank for preparation batch 880-35422 and analytical batch 880-35341 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 the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples 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.

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lake Wood

Job ID: 890-3038-1
SDG: KH227015

Client Sample ID: SS01

Lab Sample ID: 890-3038-1

Date Collected: 09/23/22 06:04

Matrix: Solid

Date Received: 09/23/22 09:40

Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.243		0.0398		mg/Kg		10/04/22 16:09	10/07/22 04:11	20
Toluene	0.0704		0.0398		mg/Kg		10/04/22 16:09	10/07/22 04:11	20
Ethylbenzene	<0.0398	U	0.0398		mg/Kg		10/04/22 16:09	10/07/22 04:11	20
m-Xylene & p-Xylene	<0.0795	U	0.0795		mg/Kg		10/04/22 16:09	10/07/22 04:11	20
o-Xylene	<0.0398	U	0.0398		mg/Kg		10/04/22 16:09	10/07/22 04:11	20
Xylenes, Total	<0.0795	U	0.0795		mg/Kg		10/04/22 16:09	10/07/22 04:11	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	10/04/22 16:09	10/07/22 04:11	20
1,4-Difluorobenzene (Surr)	104		70 - 130	10/04/22 16:09	10/07/22 04:11	20

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.313		0.0795		mg/Kg			10/07/22 10:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	61.8		50.0		mg/Kg			09/27/22 09:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/26/22 15:10	09/26/22 21:05	1
Diesel Range Organics (Over C10-C28)	61.8		50.0		mg/Kg		09/26/22 15:10	09/26/22 21:05	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/26/22 15:10	09/26/22 21:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130	09/26/22 15:10	09/26/22 21:05	1
o-Terphenyl	107		70 - 130	09/26/22 15:10	09/26/22 21:05	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	29200		251		mg/Kg			09/28/22 03:19	50

Client Sample ID: SS02

Lab Sample ID: 890-3038-2

Date Collected: 09/23/22 06:06

Matrix: Solid

Date Received: 09/23/22 09:40

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		10/06/22 15:09	10/07/22 11:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/06/22 15:09	10/07/22 11:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/06/22 15:09	10/07/22 11:51	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		10/06/22 15:09	10/07/22 11:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/06/22 15:09	10/07/22 11:51	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/06/22 15:09	10/07/22 11:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	54	S1-	70 - 130	10/06/22 15:09	10/07/22 11:51	1
1,4-Difluorobenzene (Surr)	68	S1-	70 - 130	10/06/22 15:09	10/07/22 11:51	1

Eurofins Carlsbad

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lake Wood

Job ID: 890-3038-1
SDG: KH227015

Client Sample ID: SS02

Lab Sample ID: 890-3038-2

Date Collected: 09/23/22 06:06

Matrix: Solid

Date Received: 09/23/22 09:40

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			10/07/22 10:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	318		49.8		mg/Kg			09/27/22 09:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/26/22 15:10	09/26/22 22:08	1
Diesel Range Organics (Over C10-C28)	318		49.8		mg/Kg		09/26/22 15:10	09/26/22 22:08	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/26/22 15:10	09/26/22 22:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130				09/26/22 15:10	09/26/22 22:08	1
o-Terphenyl	113		70 - 130				09/26/22 15:10	09/26/22 22:08	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12300		100		mg/Kg			09/28/22 03:34	20

Client Sample ID: SS03

Lab Sample ID: 890-3038-3

Date Collected: 09/23/22 06:08

Matrix: Solid

Date Received: 09/23/22 09:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.226		0.0399		mg/Kg		10/04/22 16:09	10/07/22 04:52	20
Toluene	<0.0399	U	0.0399		mg/Kg		10/04/22 16:09	10/07/22 04:52	20
Ethylbenzene	<0.0399	U	0.0399		mg/Kg		10/04/22 16:09	10/07/22 04:52	20
m-Xylene & p-Xylene	<0.0798	U	0.0798		mg/Kg		10/04/22 16:09	10/07/22 04:52	20
o-Xylene	<0.0399	U	0.0399		mg/Kg		10/04/22 16:09	10/07/22 04:52	20
Xylenes, Total	<0.0798	U	0.0798		mg/Kg		10/04/22 16:09	10/07/22 04:52	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130				10/04/22 16:09	10/07/22 04:52	20
1,4-Difluorobenzene (Surr)	104		70 - 130				10/04/22 16:09	10/07/22 04:52	20

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.226		0.0798		mg/Kg			10/07/22 10:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	69.3		49.9		mg/Kg			09/27/22 09:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/26/22 15:10	09/26/22 22:29	1
Diesel Range Organics (Over C10-C28)	69.3		49.9		mg/Kg		09/26/22 15:10	09/26/22 22:29	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lake Wood

Job ID: 890-3038-1
SDG: KH227015

Client Sample ID: SS03

Lab Sample ID: 890-3038-3

Date Collected: 09/23/22 06:08

Matrix: Solid

Date Received: 09/23/22 09:40

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		09/26/22 15:10	09/26/22 22:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130				09/26/22 15:10	09/26/22 22:29	1
o-Terphenyl	112		70 - 130				09/26/22 15:10	09/26/22 22:29	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10300		99.8		mg/Kg			09/28/22 03:38	20

Client Sample ID: SS04

Lab Sample ID: 890-3038-4

Date Collected: 09/23/22 06:10

Matrix: Solid

Date Received: 09/23/22 09:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0842		0.0398		mg/Kg		10/04/22 16:09	10/07/22 05:13	20
Toluene	0.0547		0.0398		mg/Kg		10/04/22 16:09	10/07/22 05:13	20
Ethylbenzene	<0.0398	U	0.0398		mg/Kg		10/04/22 16:09	10/07/22 05:13	20
m-Xylene & p-Xylene	<0.0797	U	0.0797		mg/Kg		10/04/22 16:09	10/07/22 05:13	20
o-Xylene	<0.0398	U	0.0398		mg/Kg		10/04/22 16:09	10/07/22 05:13	20
Xylenes, Total	<0.0797	U	0.0797		mg/Kg		10/04/22 16:09	10/07/22 05:13	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130				10/04/22 16:09	10/07/22 05:13	20
1,4-Difluorobenzene (Surr)	100		70 - 130				10/04/22 16:09	10/07/22 05:13	20

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.139		0.0797		mg/Kg			10/07/22 10:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	132		49.9		mg/Kg			09/27/22 09:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/26/22 15:10	09/26/22 22:49	1
Diesel Range Organics (Over C10-C28)	132		49.9		mg/Kg		09/26/22 15:10	09/26/22 22:49	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/26/22 15:10	09/26/22 22:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130				09/26/22 15:10	09/26/22 22:49	1
o-Terphenyl	116		70 - 130				09/26/22 15:10	09/26/22 22:49	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20500		253		mg/Kg			09/28/22 03:43	50

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lake Wood

Job ID: 890-3038-1
SDG: KH227015

Client Sample ID: BH01

Lab Sample ID: 890-3038-5

Date Collected: 09/23/22 06:14

Matrix: Solid

Date Received: 09/23/22 09:40

Sample Depth: 1 - 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		10/06/22 15:09	10/07/22 12:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/06/22 15:09	10/07/22 12:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/06/22 15:09	10/07/22 12:11	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		10/06/22 15:09	10/07/22 12:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/06/22 15:09	10/07/22 12:11	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		10/06/22 15:09	10/07/22 12:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		70 - 130	10/06/22 15:09	10/07/22 12:11	1
1,4-Difluorobenzene (Surr)	102		70 - 130	10/06/22 15:09	10/07/22 12:11	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			10/07/22 10:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/27/22 09:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/26/22 15:10	09/26/22 23:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/26/22 15:10	09/26/22 23:10	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/26/22 15:10	09/26/22 23:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 130	09/26/22 15:10	09/26/22 23:10	1
o-Terphenyl	113		70 - 130	09/26/22 15:10	09/26/22 23:10	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2310		50.2		mg/Kg			09/28/22 03:48	10

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Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lake Wood

Job ID: 890-3038-1
SDG: KH227015

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)
890-3038-1	SS01	112	104
890-3038-2	SS02	54 S1-	68 S1-
890-3038-3	SS03	113	104
890-3038-4	SS04	99	100
890-3038-5	BH01	117	102
LCS 880-36073/1-A	Lab Control Sample	91	100
LCS 880-36284/1-A	Lab Control Sample	87	96
LCSD 880-36073/2-A	Lab Control Sample Dup	85	94
LCSD 880-36284/2-A	Lab Control Sample Dup	91	101
MB 880-36073/5-A	Method Blank	98	85
MB 880-36203/5-A	Method Blank	97	82
MB 880-36284/5-A	Method Blank	98	82
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)
890-3038-1	SS01	100	107
890-3038-1 MS	SS01	95	90
890-3038-1 MSD	SS01	107	99
890-3038-2	SS02	110	113
890-3038-3	SS03	105	112
890-3038-4	SS04	110	116
890-3038-5	BH01	104	113
LCS 880-35422/2-A	Lab Control Sample	133 S1+	143 S1+
LCSD 880-35422/3-A	Lab Control Sample Dup	134 S1+	145 S1+
MB 880-35422/1-A	Method Blank	99	106
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lake Wood

Job ID: 890-3038-1
SDG: KH227015

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-36073/5-A

Matrix: Solid

Analysis Batch: 36225

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 36073

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/04/22 16:09	10/06/22 21:35	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/04/22 16:09	10/06/22 21:35	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/04/22 16:09	10/06/22 21:35	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/04/22 16:09	10/06/22 21:35	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/04/22 16:09	10/06/22 21:35	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/04/22 16:09	10/06/22 21:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	10/04/22 16:09	10/06/22 21:35	1
1,4-Difluorobenzene (Surr)	85		70 - 130	10/04/22 16:09	10/06/22 21:35	1

Lab Sample ID: LCS 880-36073/1-A

Matrix: Solid

Analysis Batch: 36225

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 36073

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09262		mg/Kg		93	70 - 130
Toluene	0.100	0.09281		mg/Kg		93	70 - 130
Ethylbenzene	0.100	0.08488		mg/Kg		85	70 - 130
m-Xylene & p-Xylene	0.200	0.1805		mg/Kg		90	70 - 130
o-Xylene	0.100	0.09406		mg/Kg		94	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	91		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: LCSD 880-36073/2-A

Matrix: Solid

Analysis Batch: 36225

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 36073

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1015		mg/Kg		102	70 - 130	9	35
Toluene	0.100	0.1014		mg/Kg		101	70 - 130	9	35
Ethylbenzene	0.100	0.09329		mg/Kg		93	70 - 130	9	35
m-Xylene & p-Xylene	0.200	0.1918		mg/Kg		96	70 - 130	6	35
o-Xylene	0.100	0.09782		mg/Kg		98	70 - 130	4	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	85		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: MB 880-36203/5-A

Matrix: Solid

Analysis Batch: 36225

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 36203

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/05/22 16:37	10/06/22 10:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/05/22 16:37	10/06/22 10:14	1

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lake Wood

Job ID: 890-3038-1
SDG: KH227015

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

Lab Sample ID: MB 880-36203/5-A

Matrix: Solid

Analysis Batch: 36225

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 36203

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/05/22 16:37	10/06/22 10:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/05/22 16:37	10/06/22 10:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/05/22 16:37	10/06/22 10:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/05/22 16:37	10/06/22 10:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	10/05/22 16:37	10/06/22 10:14	1
1,4-Difluorobenzene (Surr)	82		70 - 130	10/05/22 16:37	10/06/22 10:14	1

Lab Sample ID: MB 880-36284/5-A

Matrix: Solid

Analysis Batch: 36323

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 36284

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/06/22 15:09	10/07/22 10:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/06/22 15:09	10/07/22 10:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/06/22 15:09	10/07/22 10:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/06/22 15:09	10/07/22 10:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/06/22 15:09	10/07/22 10:37	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/06/22 15:09	10/07/22 10:37	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	10/06/22 15:09	10/07/22 10:37	1
1,4-Difluorobenzene (Surr)	82		70 - 130	10/06/22 15:09	10/07/22 10:37	1

Lab Sample ID: LCS 880-36284/1-A

Matrix: Solid

Analysis Batch: 36323

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 36284

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09199		mg/Kg		92	70 - 130
Toluene	0.100	0.09098		mg/Kg		91	70 - 130
Ethylbenzene	0.100	0.08449		mg/Kg		84	70 - 130
m-Xylene & p-Xylene	0.200	0.1700		mg/Kg		85	70 - 130
o-Xylene	0.100	0.08766		mg/Kg		88	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	87		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: LCSD 880-36284/2-A

Matrix: Solid

Analysis Batch: 36323

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 36284

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1127		mg/Kg		113	70 - 130	20	35
Toluene	0.100	0.1118		mg/Kg		112	70 - 130	21	35
Ethylbenzene	0.100	0.1068		mg/Kg		107	70 - 130	23	35

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lake Wood

Job ID: 890-3038-1
SDG: KH227015

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

Lab Sample ID: LCSD 880-36284/2-A

Matrix: Solid

Analysis Batch: 36323

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 36284

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
m-Xylene & p-Xylene	0.200	0.2204		mg/Kg		110	70 - 130	26	35
o-Xylene	0.100	0.1091		mg/Kg		109	70 - 130	22	35
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	91		70 - 130						
1,4-Difluorobenzene (Surr)	101		70 - 130						

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

Lab Sample ID: MB 880-35422/1-A

Matrix: Solid

Analysis Batch: 35341

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 35422

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/26/22 15:10	09/26/22 20:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/26/22 15:10	09/26/22 20:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/26/22 15:10	09/26/22 20:03	1
Surrogate	MB %Recovery	MB Qualifier	Limits						
1-Chlorooctane	99		70 - 130						
o-Terphenyl	106		70 - 130						

Lab Sample ID: LCS 880-35422/2-A

Matrix: Solid

Analysis Batch: 35341

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 35422

Analyte			Spike	LCS	LCS	Unit	D	%Rec	%Rec		
			Added	Result	Qualifier			Limits			
Gasoline Range Organics (GRO)-C6-C10			1000	1096		mg/Kg		110		70 - 130	
Diesel Range Organics (Over C10-C28)			1000	814.0		mg/Kg		81		70 - 130	

Lab Sample ID: LCSD 880-35422/3-A

Matrix: Solid

Analysis Batch: 35341

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 35422

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1110		mg/Kg		111	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	1000	829.5		mg/Kg		83	70 - 130	2	20

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lake Wood

Job ID: 890-3038-1
SDG: KH227015

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

Lab Sample ID: LCSD 880-35422/3-A

Matrix: Solid

Analysis Batch: 35341

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 35422

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	134	S1+	70 - 130
o-Terphenyl	145	S1+	70 - 130

Lab Sample ID: 890-3038-1 MS

Matrix: Solid

Analysis Batch: 35341

Client Sample ID: SS01

Prep Type: Total/NA

Prep Batch: 35422

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1150		mg/Kg		113	70 - 130	
Diesel Range Organics (Over C10-C28)	61.8		998	857.1		mg/Kg		80	70 - 130	
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	95		70 - 130							
o-Terphenyl	90		70 - 130							

Lab Sample ID: 890-3038-1 MSD

Matrix: Solid

Analysis Batch: 35341

Client Sample ID: SS01

Prep Type: Total/NA

Prep Batch: 35422

	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	<50.0	U	999	1175		mg/Kg		116	70 - 130	2	20	
Diesel Range Organics (Over C10-C28)	61.8		999	952.6		mg/Kg		89	70 - 130	11	20	
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane	107		70 - 130									
o-Terphenyl	99		70 - 130									

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-35376/1-A

Matrix: Solid

Analysis Batch: 35521

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			09/28/22 01:37	1	

Lab Sample ID: LCS 880-35376/2-A

Matrix: Solid

Analysis Batch: 35521

Client Sample ID: Lab Control Sample

Prep Type: Soluble

	Spike	LCS	LCS					%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	250	241.3		mg/Kg		97	90 - 110		

Eurofins Carlsbad

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lake Wood

Job ID: 890-3038-1
SDG: KH227015

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-35376/3-A				Client Sample ID: Lab Control Sample Dup							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 35521											
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit		
Chloride	250	242.1		mg/Kg		97	90 - 110	0	20		

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lake Wood

Job ID: 890-3038-1
SDG: KH227015

GC VOA

Prep Batch: 36073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3038-1	SS01	Total/NA	Solid	5035	
890-3038-3	SS03	Total/NA	Solid	5035	
890-3038-4	SS04	Total/NA	Solid	5035	
MB 880-36073/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-36073/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-36073/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 36203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-36203/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 36225

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3038-1	SS01	Total/NA	Solid	8021B	36073
890-3038-3	SS03	Total/NA	Solid	8021B	36073
890-3038-4	SS04	Total/NA	Solid	8021B	36073
MB 880-36073/5-A	Method Blank	Total/NA	Solid	8021B	36073
MB 880-36203/5-A	Method Blank	Total/NA	Solid	8021B	36203
LCS 880-36073/1-A	Lab Control Sample	Total/NA	Solid	8021B	36073
LCSD 880-36073/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	36073

Prep Batch: 36284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3038-2	SS02	Total/NA	Solid	5035	
890-3038-5	BH01	Total/NA	Solid	5035	
MB 880-36284/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-36284/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-36284/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 36323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3038-2	SS02	Total/NA	Solid	8021B	36284
890-3038-5	BH01	Total/NA	Solid	8021B	36284
MB 880-36284/5-A	Method Blank	Total/NA	Solid	8021B	36284
LCS 880-36284/1-A	Lab Control Sample	Total/NA	Solid	8021B	36284
LCSD 880-36284/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	36284

Analysis Batch: 36375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3038-1	SS01	Total/NA	Solid	Total BTEX	
890-3038-2	SS02	Total/NA	Solid	Total BTEX	
890-3038-3	SS03	Total/NA	Solid	Total BTEX	
890-3038-4	SS04	Total/NA	Solid	Total BTEX	
890-3038-5	BH01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 35341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3038-1	SS01	Total/NA	Solid	8015B NM	35422
890-3038-2	SS02	Total/NA	Solid	8015B NM	35422

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QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lake Wood

Job ID: 890-3038-1
SDG: KH227015

GC Semi VOA (Continued)

Analysis Batch: 35341 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3038-3	SS03	Total/NA	Solid	8015B NM	35422
890-3038-4	SS04	Total/NA	Solid	8015B NM	35422
890-3038-5	BH01	Total/NA	Solid	8015B NM	35422
MB 880-35422/1-A	Method Blank	Total/NA	Solid	8015B NM	35422
LCS 880-35422/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	35422
LCSD 880-35422/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	35422
890-3038-1 MS	SS01	Total/NA	Solid	8015B NM	35422
890-3038-1 MSD	SS01	Total/NA	Solid	8015B NM	35422

Prep Batch: 35422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3038-1	SS01	Total/NA	Solid	8015NM Prep	
890-3038-2	SS02	Total/NA	Solid	8015NM Prep	
890-3038-3	SS03	Total/NA	Solid	8015NM Prep	
890-3038-4	SS04	Total/NA	Solid	8015NM Prep	
890-3038-5	BH01	Total/NA	Solid	8015NM Prep	
MB 880-35422/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-35422/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-35422/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3038-1 MS	SS01	Total/NA	Solid	8015NM Prep	
890-3038-1 MSD	SS01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 35484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3038-1	SS01	Total/NA	Solid	8015 NM	
890-3038-2	SS02	Total/NA	Solid	8015 NM	
890-3038-3	SS03	Total/NA	Solid	8015 NM	
890-3038-4	SS04	Total/NA	Solid	8015 NM	
890-3038-5	BH01	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 35376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3038-1	SS01	Soluble	Solid	DI Leach	
890-3038-2	SS02	Soluble	Solid	DI Leach	
890-3038-3	SS03	Soluble	Solid	DI Leach	
890-3038-4	SS04	Soluble	Solid	DI Leach	
890-3038-5	BH01	Soluble	Solid	DI Leach	
MB 880-35376/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-35376/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-35376/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 35521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3038-1	SS01	Soluble	Solid	300.0	35376
890-3038-2	SS02	Soluble	Solid	300.0	35376
890-3038-3	SS03	Soluble	Solid	300.0	35376
890-3038-4	SS04	Soluble	Solid	300.0	35376
890-3038-5	BH01	Soluble	Solid	300.0	35376
MB 880-35376/1-A	Method Blank	Soluble	Solid	300.0	35376

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QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lake Wood

Job ID: 890-3038-1
SDG: KH227015

HPLC/IC (Continued)

Analysis Batch: 35521 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-35376/2-A	Lab Control Sample	Soluble	Solid	300.0	35376
LCSD 880-35376/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	35376

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Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Lake Wood

Job ID: 890-3038-1
SDG: KH227015

Client Sample ID: SS01

Lab Sample ID: 890-3038-1

Date Collected: 09/23/22 06:04

Matrix: Solid

Date Received: 09/23/22 09:40

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	36073	10/04/22 16:09	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	36225	10/07/22 04:11	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36375	10/07/22 10:22	AJ	EET MID
Total/NA	Analysis	8015 NM		1			35484	09/27/22 09:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	35422	09/26/22 15:10	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35341	09/26/22 21:05	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	35376	09/26/22 10:30	SMC	EET MID
Soluble	Analysis	300.0		50			35521	09/28/22 03:19	CH	EET MID

Client Sample ID: SS02

Lab Sample ID: 890-3038-2

Date Collected: 09/23/22 06:06

Matrix: Solid

Date Received: 09/23/22 09:40

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	36284	10/06/22 15:09	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36323	10/07/22 11:51	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36375	10/07/22 10:22	AJ	EET MID
Total/NA	Analysis	8015 NM		1			35484	09/27/22 09:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	35422	09/26/22 15:10	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35341	09/26/22 22:08	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	35376	09/26/22 10:30	SMC	EET MID
Soluble	Analysis	300.0		20			35521	09/28/22 03:34	CH	EET MID

Client Sample ID: SS03

Lab Sample ID: 890-3038-3

Date Collected: 09/23/22 06:08

Matrix: Solid

Date Received: 09/23/22 09:40

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	36073	10/04/22 16:09	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	36225	10/07/22 04:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36375	10/07/22 10:22	AJ	EET MID
Total/NA	Analysis	8015 NM		1			35484	09/27/22 09:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	35422	09/26/22 15:10	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35341	09/26/22 22:29	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	35376	09/26/22 10:30	SMC	EET MID
Soluble	Analysis	300.0		20			35521	09/28/22 03:38	CH	EET MID

Client Sample ID: SS04

Lab Sample ID: 890-3038-4

Date Collected: 09/23/22 06:10

Matrix: Solid

Date Received: 09/23/22 09:40

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	36073	10/04/22 16:09	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	36225	10/07/22 05:13	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36375	10/07/22 10:22	AJ	EET MID

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Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Lake Wood

Job ID: 890-3038-1
SDG: KH227015

Client Sample ID: SS04

Lab Sample ID: 890-3038-4

Date Collected: 09/23/22 06:10

Matrix: Solid

Date Received: 09/23/22 09:40

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			35484	09/27/22 09:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	35422	09/26/22 15:10	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35341	09/26/22 22:49	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	35376	09/26/22 10:30	SMC	EET MID
Soluble	Analysis	300.0		50			35521	09/28/22 03:43	CH	EET MID

Client Sample ID: BH01

Lab Sample ID: 890-3038-5

Date Collected: 09/23/22 06:14

Matrix: Solid

Date Received: 09/23/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	36284	10/06/22 15:09	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36323	10/07/22 12:11	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36375	10/07/22 10:22	AJ	EET MID
Total/NA	Analysis	8015 NM		1			35484	09/27/22 09:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	35422	09/26/22 15:10	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35341	09/26/22 23:10	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	35376	09/26/22 10:30	SMC	EET MID
Soluble	Analysis	300.0		10			35521	09/28/22 03:48	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: Lake Wood

Job ID: 890-3038-1
SDG: KH227015

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	T104704400-22-24	06-30-23

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: Lake Wood

Job ID: 890-3038-1
SDG: KH227015

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	MCAWW	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

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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: Lake Wood

Job ID: 890-3038-1
SDG: KH227015

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3038-1	SS01	Solid	09/23/22 06:04	09/23/22 09:40	0.5
890-3038-2	SS02	Solid	09/23/22 06:06	09/23/22 09:40	
890-3038-3	SS03	Solid	09/23/22 06:08	09/23/22 09:40	
890-3038-4	SS04	Solid	09/23/22 06:10	09/23/22 09:40	
890-3038-5	BH01	Solid	09/23/22 06:14	09/23/22 09:40	1 - 2

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CHAIN OF CUSTODY RECORD

TerraconLaboratory:
Address:

Office Location

4518 W. Pierce St Carlsbad NM, 88220

Phone:

Project Manager

Mike Adams

Contact:

Sampler's Name

Travis Casey

SRS #:

Sampler's Signature

[Signature]

Project Number

KH227015

Project Name

Lake Wood

No. Type of Containers

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	4 oz Glass	2 oz Glass	250 ml Poly	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)
5	4-23	0604		X	SS01	0.5	X				X	X	X
1	1	0606			SS02								
1	1	0608			SS03								
1	1	0610			SS04								
1	1	0614			BR01	1.2							

Lab Sample ID

ANALYSIS REQUEST

LAB USE ONLY/DUE DATE:

TEMP OF COOLER
WHEN RECEIVE

890-3038 Chain of Custody



Page 1 of 1

TURNAROUND TIME	Normal	48-Hour Rush	24-Hour Rush	TRRP Laboratory Review Checklist	Yes	No	
Relinquished by (Signature)	<i>[Signature]</i>	Date: 4-23	Time: 9:23	Received by (Signature)	<i>[Signature]</i>	Date: 4-23	Time: 9:46
Relinquished by (Signature)		Date:	Time:	Received by (Signature)		Date:	Time:
Relinquished by (Signature)		Date:	Time:	Received by (Signature)		Date:	Time:
Relinquished by (Signature)		Date:	Time:	Received by (Signature)		Date:	Time:

☐ Yes ☐ No

e-mail results to:

joseph.cusmer@terracon.com

travis.casey@terracon.com

mike.adams@terracon.com

Matrix: WW-Wastewater W-Water S-Soil L-Liq A-Air Bag C-Charcoal tube SL-Sludge
 Container: VOA-40 ml vial A/G-Amber Gla 250 ml = Glass wide P/O-Plastic or other

Lubbock Office ■ 5827 50th Street, Suite 1 ■ Lubbock, Texas 79424 ■ 806-300-0140

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-3038-1

SDG Number: KH227015

Login Number: 3038

List Number: 1

Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-3038-1

SDG Number: KH227015

Login Number: 3038

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 09/26/22 09:09 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 1/3/2023 9:03:17 AM

JOB DESCRIPTION

Lakewood AQE
SDG NUMBER Eddy

JOB NUMBER

890-3704-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

Eurofins Carlsbad**Job Notes**

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
1/3/2023 9:03:17 AM

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

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

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: Lakewood AQE

Laboratory Job ID: 890-3704-1
SDG: Eddy

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Definitions/Glossary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Qualifiers

GC VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD 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.

GC Semi VOA

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

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Job ID: 890-3704-1**Laboratory: Eurofins Carlsbad****Narrative****Job Narrative
890-3704-1****Receipt**

The samples were received on 12/21/2022 3:41 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 2.4°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: FS06 (890-3704-1), FS07 (890-3704-2), FS08 (890-3704-3), FS09 (890-3704-4), FS10 (890-3704-5), FS11 (890-3704-6), FS12 (890-3704-7), FS13 (890-3704-8), FS14 (890-3704-9), FS15 (890-3704-10), FS16 (890-3704-11), FS17 (890-3704-12), E-SW01 (890-3704-13), FS04 (890-3704-14), FS05 (890-3704-15), FS18 (890-3704-16) and FS20 (890-3704-17).

GC VOA

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-42814 and analytical batch 880-42922 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS06 (890-3704-1), FS07 (890-3704-2), FS08 (890-3704-3), FS09 (890-3704-4), FS10 (890-3704-5), FS11 (890-3704-6), FS12 (890-3704-7), FS13 (890-3704-8), FS14 (890-3704-9), FS15 (890-3704-10), FS16 (890-3704-11), FS17 (890-3704-12), E-SW01 (890-3704-13), FS04 (890-3704-14), FS05 (890-3704-15), FS18 (890-3704-16), FS20 (890-3704-17), (CCV 880-42922/51), (CCV 880-42922/64), (LCS 880-42814/1-A), (LCSD 880-42814/2-A), (MB 880-42814/5-A), (890-3704-A-1-D MS) and (890-3704-A-1-E MSD). Evidence of matrix interferences is not obvious.

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

GC Semi VOA

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.

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Client Sample ID: FS06

Lab Sample ID: 890-3704-1

Date Collected: 12/21/22 09:50

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 4'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *- *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 02:17	1
Toluene	<0.00200	U *- *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 02:17	1
Ethylbenzene	<0.00200	U *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 02:17	1
m-Xylene & p-Xylene	<0.00401	U *1	0.00401		mg/Kg		12/28/22 14:51	12/31/22 02:17	1
o-Xylene	<0.00200	U *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 02:17	1
Xylenes, Total	<0.00401	U *1	0.00401		mg/Kg		12/28/22 14:51	12/31/22 02:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	187	S1+	70 - 130	12/28/22 14:51	12/31/22 02:17	1
1,4-Difluorobenzene (Surr)	72		70 - 130	12/28/22 14:51	12/31/22 02:17	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			01/03/23 09:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/30/22 12:37	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		12/29/22 08:27	12/29/22 12:48	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 12:48	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 12:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130	12/29/22 08:27	12/29/22 12:48	1
o-Terphenyl	124		70 - 130	12/29/22 08:27	12/29/22 12:48	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	376		24.9		mg/Kg			12/29/22 09:04	5

Client Sample ID: FS07

Lab Sample ID: 890-3704-2

Date Collected: 12/21/22 10:50

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 3'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *- *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 02:43	1
Toluene	<0.00200	U *- *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 02:43	1
Ethylbenzene	<0.00200	U *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 02:43	1
m-Xylene & p-Xylene	<0.00401	U *1	0.00401		mg/Kg		12/28/22 14:51	12/31/22 02:43	1
o-Xylene	<0.00200	U *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 02:43	1
Xylenes, Total	<0.00401	U *1	0.00401		mg/Kg		12/28/22 14:51	12/31/22 02:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	215	S1+	70 - 130	12/28/22 14:51	12/31/22 02:43	1

Eurofins Carlsbad

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Client Sample ID: FS07

Lab Sample ID: 890-3704-2

Date Collected: 12/21/22 10:50

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 3'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	70		70 - 130	12/28/22 14:51	12/31/22 02:43	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			01/03/23 09:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/30/22 12:37	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		12/29/22 08:27	12/29/22 13:49	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 13:49	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 13:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130				12/29/22 08:27	12/29/22 13:49	1
o-Terphenyl	118		70 - 130				12/29/22 08:27	12/29/22 13:49	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	223		24.9		mg/Kg			12/29/22 09:18	5

Client Sample ID: FS08

Lab Sample ID: 890-3704-3

Date Collected: 12/21/22 10:55

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 3'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U *1	0.00202		mg/Kg		12/28/22 14:51	12/31/22 03:11	1
Toluene	<0.00202	U *1	0.00202		mg/Kg		12/28/22 14:51	12/31/22 03:11	1
Ethylbenzene	<0.00202	U *1	0.00202		mg/Kg		12/28/22 14:51	12/31/22 03:11	1
m-Xylene & p-Xylene	<0.00403	U *1	0.00403		mg/Kg		12/28/22 14:51	12/31/22 03:11	1
o-Xylene	<0.00202	U *1	0.00202		mg/Kg		12/28/22 14:51	12/31/22 03:11	1
Xylenes, Total	<0.00403	U *1	0.00403		mg/Kg		12/28/22 14:51	12/31/22 03:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	197	S1+	70 - 130	12/28/22 14:51	12/31/22 03:11	1
1,4-Difluorobenzene (Surr)	73		70 - 130	12/28/22 14:51	12/31/22 03:11	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			01/03/23 09:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/30/22 12:37	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Client Sample ID: FS08

Lab Sample ID: 890-3704-3

Date Collected: 12/21/22 10:55

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 3'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 14:10	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 14:10	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 14:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130				12/29/22 08:27	12/29/22 14:10	1
o-Terphenyl	129		70 - 130				12/29/22 08:27	12/29/22 14:10	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	340		5.02		mg/Kg			12/29/22 09:23	1

Client Sample ID: FS09

Lab Sample ID: 890-3704-4

Date Collected: 12/21/22 11:00

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 3'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *1	0.00199		mg/Kg		12/28/22 14:51	12/31/22 03:38	1
Toluene	<0.00199	U *1	0.00199		mg/Kg		12/28/22 14:51	12/31/22 03:38	1
Ethylbenzene	<0.00199	U *1	0.00199		mg/Kg		12/28/22 14:51	12/31/22 03:38	1
m-Xylene & p-Xylene	<0.00398	U *1	0.00398		mg/Kg		12/28/22 14:51	12/31/22 03:38	1
o-Xylene	<0.00199	U *1	0.00199		mg/Kg		12/28/22 14:51	12/31/22 03:38	1
Xylenes, Total	<0.00398	U *1	0.00398		mg/Kg		12/28/22 14:51	12/31/22 03:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	218	S1+	70 - 130				12/28/22 14:51	12/31/22 03:38	1
1,4-Difluorobenzene (Surr)	70		70 - 130				12/28/22 14:51	12/31/22 03:38	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			01/03/23 09:45	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			12/30/22 12:37	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		12/29/22 08:27	12/29/22 14:31	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		12/29/22 08:27	12/29/22 14:31	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		12/29/22 08:27	12/29/22 14:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130				12/29/22 08:27	12/29/22 14:31	1
o-Terphenyl	130		70 - 130				12/29/22 08:27	12/29/22 14:31	1

Eurofins Carlsbad

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Client Sample ID: FS09

Lab Sample ID: 890-3704-4

Date Collected: 12/21/22 11:00

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 3'

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	454		25.1		mg/Kg			12/29/22 09:27	5

Client Sample ID: FS10

Lab Sample ID: 890-3704-5

Date Collected: 12/21/22 11:05

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 3'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *- *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 04:05	1
Toluene	<0.00200	U *- *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 04:05	1
Ethylbenzene	<0.00200	U *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 04:05	1
m-Xylene & p-Xylene	<0.00399	U *1	0.00399		mg/Kg		12/28/22 14:51	12/31/22 04:05	1
o-Xylene	<0.00200	U *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 04:05	1
Xylenes, Total	<0.00399	U *1	0.00399		mg/Kg		12/28/22 14:51	12/31/22 04:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	187	S1+	70 - 130				12/28/22 14:51	12/31/22 04:05	1
1,4-Difluorobenzene (Surr)	75		70 - 130				12/28/22 14:51	12/31/22 04:05	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			01/03/23 09:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/30/22 12:37	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		12/29/22 08:27	12/29/22 14:52	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 14:52	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 14:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	116		70 - 130				12/29/22 08:27	12/29/22 14:52	1
o-Terphenyl	143	S1+	70 - 130				12/29/22 08:27	12/29/22 14:52	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	193		4.98		mg/Kg			12/29/22 09:32	1

Eurofins Carlsbad

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Client Sample ID: FS11

Lab Sample ID: 890-3704-6

Date Collected: 12/21/22 11:10

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 3'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *- *1	0.00199		mg/Kg		12/28/22 14:51	12/31/22 04:31	1
Toluene	<0.00199	U *- *1	0.00199		mg/Kg		12/28/22 14:51	12/31/22 04:31	1
Ethylbenzene	<0.00199	U *1	0.00199		mg/Kg		12/28/22 14:51	12/31/22 04:31	1
m-Xylene & p-Xylene	<0.00398	U *1	0.00398		mg/Kg		12/28/22 14:51	12/31/22 04:31	1
o-Xylene	<0.00199	U *1	0.00199		mg/Kg		12/28/22 14:51	12/31/22 04:31	1
Xylenes, Total	<0.00398	U *1	0.00398		mg/Kg		12/28/22 14:51	12/31/22 04:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	221	S1+	70 - 130	12/28/22 14:51	12/31/22 04:31	1
1,4-Difluorobenzene (Surr)	70		70 - 130	12/28/22 14:51	12/31/22 04:31	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			01/03/23 09:45	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			12/30/22 12:37	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		12/29/22 08:27	12/29/22 15:13	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		12/29/22 08:27	12/29/22 15:13	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		12/29/22 08:27	12/29/22 15:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130	12/29/22 08:27	12/29/22 15:13	1
o-Terphenyl	117		70 - 130	12/29/22 08:27	12/29/22 15:13	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	352		25.2		mg/Kg			12/29/22 09:46	5

Client Sample ID: FS12

Lab Sample ID: 890-3704-7

Date Collected: 12/21/22 11:15

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 3'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *- *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 04:57	1
Toluene	<0.00200	U *- *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 04:57	1
Ethylbenzene	<0.00200	U *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 04:57	1
m-Xylene & p-Xylene	<0.00399	U *1	0.00399		mg/Kg		12/28/22 14:51	12/31/22 04:57	1
o-Xylene	<0.00200	U *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 04:57	1
Xylenes, Total	<0.00399	U *1	0.00399		mg/Kg		12/28/22 14:51	12/31/22 04:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	193	S1+	70 - 130	12/28/22 14:51	12/31/22 04:57	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Client Sample ID: FS12

Lab Sample ID: 890-3704-7

Date Collected: 12/21/22 11:15

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 3'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	6	S1-	70 - 130	12/28/22 14:51	12/31/22 04:57	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			01/03/23 09:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/30/22 12:37	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		12/29/22 08:27	12/29/22 15:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 15:33	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 15:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 130				12/29/22 08:27	12/29/22 15:33	1
o-Terphenyl	125		70 - 130				12/29/22 08:27	12/29/22 15:33	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	288		4.96		mg/Kg			12/29/22 09:51	1

Client Sample ID: FS13

Lab Sample ID: 890-3704-8

Date Collected: 12/21/22 11:20

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 1.5'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *1	0.00201		mg/Kg		12/28/22 14:51	12/31/22 05:24	1
Toluene	<0.00201	U *1	0.00201		mg/Kg		12/28/22 14:51	12/31/22 05:24	1
Ethylbenzene	<0.00201	U *1	0.00201		mg/Kg		12/28/22 14:51	12/31/22 05:24	1
m-Xylene & p-Xylene	<0.00402	U *1	0.00402		mg/Kg		12/28/22 14:51	12/31/22 05:24	1
o-Xylene	<0.00201	U *1	0.00201		mg/Kg		12/28/22 14:51	12/31/22 05:24	1
Xylenes, Total	<0.00402	U *1	0.00402		mg/Kg		12/28/22 14:51	12/31/22 05:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	182	S1+	70 - 130	12/28/22 14:51	12/31/22 05:24	1
1,4-Difluorobenzene (Surr)	67	S1-	70 - 130	12/28/22 14:51	12/31/22 05:24	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			01/03/23 09:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/30/22 12:37	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Client Sample ID: FS13

Lab Sample ID: 890-3704-8

Date Collected: 12/21/22 11:20

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 1.5'

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	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 15:54	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 15:54	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 15:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130				12/29/22 08:27	12/29/22 15:54	1
o-Terphenyl	142	S1+	70 - 130				12/29/22 08:27	12/29/22 15:54	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	421		25.0		mg/Kg			12/29/22 09:56	5

Client Sample ID: FS14

Lab Sample ID: 890-3704-9

Date Collected: 12/21/22 11:25

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 1.5'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U * - *1	0.00202		mg/Kg		12/28/22 14:51	12/31/22 05:49	1
Toluene	<0.00202	U * - *1	0.00202		mg/Kg		12/28/22 14:51	12/31/22 05:49	1
Ethylbenzene	<0.00202	U *1	0.00202		mg/Kg		12/28/22 14:51	12/31/22 05:49	1
m-Xylene & p-Xylene	<0.00404	U *1	0.00404		mg/Kg		12/28/22 14:51	12/31/22 05:49	1
o-Xylene	<0.00202	U *1	0.00202		mg/Kg		12/28/22 14:51	12/31/22 05:49	1
Xylenes, Total	<0.00404	U *1	0.00404		mg/Kg		12/28/22 14:51	12/31/22 05:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	215	S1+	70 - 130				12/28/22 14:51	12/31/22 05:49	1
1,4-Difluorobenzene (Surr)	67	S1-	70 - 130				12/28/22 14:51	12/31/22 05:49	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			01/03/23 09:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			12/30/22 12:37	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		12/29/22 08:27	12/29/22 16:15	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/29/22 08:27	12/29/22 16:15	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/29/22 08:27	12/29/22 16:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130				12/29/22 08:27	12/29/22 16:15	1
o-Terphenyl	125		70 - 130				12/29/22 08:27	12/29/22 16:15	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Client Sample ID: FS14

Lab Sample ID: 890-3704-9

Date Collected: 12/21/22 11:25

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 1.5'

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	484		25.2		mg/Kg			12/29/22 10:00	5

Client Sample ID: FS15

Lab Sample ID: 890-3704-10

Date Collected: 12/21/22 11:30

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 1.5'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *1	0.00199		mg/Kg		12/28/22 14:51	12/31/22 06:15	1
Toluene	<0.00199	U *1	0.00199		mg/Kg		12/28/22 14:51	12/31/22 06:15	1
Ethylbenzene	<0.00199	U *1	0.00199		mg/Kg		12/28/22 14:51	12/31/22 06:15	1
m-Xylene & p-Xylene	<0.00398	U *1	0.00398		mg/Kg		12/28/22 14:51	12/31/22 06:15	1
o-Xylene	<0.00199	U *1	0.00199		mg/Kg		12/28/22 14:51	12/31/22 06:15	1
Xylenes, Total	<0.00398	U *1	0.00398		mg/Kg		12/28/22 14:51	12/31/22 06:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	214	S1+	70 - 130				12/28/22 14:51	12/31/22 06:15	1
1,4-Difluorobenzene (Surr)	74		70 - 130				12/28/22 14:51	12/31/22 06:15	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			01/03/23 09:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/30/22 12:37	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		12/29/22 08:27	12/29/22 16:36	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 16:36	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 16:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130				12/29/22 08:27	12/29/22 16:36	1
o-Terphenyl	125		70 - 130				12/29/22 08:27	12/29/22 16:36	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	149		24.8		mg/Kg			12/29/22 10:05	5

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Client Sample ID: FS16

Lab Sample ID: 890-3704-11

Date Collected: 12/21/22 11:35

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 1.5'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *- *1	0.00199		mg/Kg		12/28/22 14:51	12/31/22 08:02	1
Toluene	<0.00199	U *- *1	0.00199		mg/Kg		12/28/22 14:51	12/31/22 08:02	1
Ethylbenzene	<0.00199	U *1	0.00199		mg/Kg		12/28/22 14:51	12/31/22 08:02	1
m-Xylene & p-Xylene	<0.00398	U *1	0.00398		mg/Kg		12/28/22 14:51	12/31/22 08:02	1
o-Xylene	<0.00199	U *1	0.00199		mg/Kg		12/28/22 14:51	12/31/22 08:02	1
Xylenes, Total	<0.00398	U *1	0.00398		mg/Kg		12/28/22 14:51	12/31/22 08:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	186	S1+	70 - 130	12/28/22 14:51	12/31/22 08:02	1
1,4-Difluorobenzene (Surr)	62	S1-	70 - 130	12/28/22 14:51	12/31/22 08:02	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			01/03/23 09:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			12/30/22 12:37	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		12/29/22 08:27	12/29/22 17:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/29/22 08:27	12/29/22 17:17	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/29/22 08:27	12/29/22 17:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130	12/29/22 08:27	12/29/22 17:17	1
o-Terphenyl	126		70 - 130	12/29/22 08:27	12/29/22 17:17	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	434		25.1		mg/Kg			12/29/22 10:10	5

Client Sample ID: FS17

Lab Sample ID: 890-3704-12

Date Collected: 12/21/22 11:40

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 1.5'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *- *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 08:29	1
Toluene	<0.00200	U *- *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 08:29	1
Ethylbenzene	<0.00200	U *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 08:29	1
m-Xylene & p-Xylene	<0.00399	U *1	0.00399		mg/Kg		12/28/22 14:51	12/31/22 08:29	1
o-Xylene	<0.00200	U *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 08:29	1
Xylenes, Total	<0.00399	U *1	0.00399		mg/Kg		12/28/22 14:51	12/31/22 08:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	234	S1+	70 - 130	12/28/22 14:51	12/31/22 08:29	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Client Sample ID: FS17

Lab Sample ID: 890-3704-12

Date Collected: 12/21/22 11:40

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 1.5'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	73		70 - 130	12/28/22 14:51	12/31/22 08:29	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			01/03/23 09:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			12/30/22 12:37	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		12/29/22 08:27	12/29/22 17:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/29/22 08:27	12/29/22 17:37	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/29/22 08:27	12/29/22 17:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130				12/29/22 08:27	12/29/22 17:37	1
o-Terphenyl	130		70 - 130				12/29/22 08:27	12/29/22 17:37	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	699		49.8		mg/Kg			12/29/22 10:24	10

Client Sample ID: E-SW01

Lab Sample ID: 890-3704-13

Date Collected: 12/21/22 12:30

Matrix: Solid

Date Received: 12/21/22 15:41

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 *- *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 08:57	1
Toluene	<0.00200	U *- *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 08:57	1
Ethylbenzene	<0.00200	U *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 08:57	1
m-Xylene & p-Xylene	<0.00401	U *1	0.00401		mg/Kg		12/28/22 14:51	12/31/22 08:57	1
o-Xylene	<0.00200	U *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 08:57	1
Xylenes, Total	<0.00401	U *1	0.00401		mg/Kg		12/28/22 14:51	12/31/22 08:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	197	S1+	70 - 130	12/28/22 14:51	12/31/22 08:57	1
1,4-Difluorobenzene (Surr)	71		70 - 130	12/28/22 14:51	12/31/22 08:57	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			01/03/23 09:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/30/22 12:37	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Client Sample ID: E-SW01

Lab Sample ID: 890-3704-13

Date Collected: 12/21/22 12:30

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 0-4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 17:58	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 17:58	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 17:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130				12/29/22 08:27	12/29/22 17:58	1
o-Terphenyl	116		70 - 130				12/29/22 08:27	12/29/22 17:58	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	777		5.00		mg/Kg			12/29/22 10:29	1

Client Sample ID: FS04

Lab Sample ID: 890-3704-14

Date Collected: 12/21/22 14:30

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 4'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *- *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 09:24	1
Toluene	<0.00200	U *- *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 09:24	1
Ethylbenzene	<0.00200	U *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 09:24	1
m-Xylene & p-Xylene	<0.00401	U *1	0.00401		mg/Kg		12/28/22 14:51	12/31/22 09:24	1
o-Xylene	<0.00200	U *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 09:24	1
Xylenes, Total	<0.00401	U *1	0.00401		mg/Kg		12/28/22 14:51	12/31/22 09:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	211	S1+	70 - 130				12/28/22 14:51	12/31/22 09:24	1
1,4-Difluorobenzene (Surr)	76		70 - 130				12/28/22 14:51	12/31/22 09:24	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			01/03/23 09:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			12/30/22 12:37	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		12/29/22 08:27	12/29/22 18:19	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/29/22 08:27	12/29/22 18:19	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/29/22 08:27	12/29/22 18:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130				12/29/22 08:27	12/29/22 18:19	1
o-Terphenyl	121		70 - 130				12/29/22 08:27	12/29/22 18:19	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Client Sample ID: FS04

Lab Sample ID: 890-3704-14

Date Collected: 12/21/22 14:30

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 4'

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	485		25.0		mg/Kg			12/29/22 10:43	5

Client Sample ID: FS05

Lab Sample ID: 890-3704-15

Date Collected: 12/21/22 14:35

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 4'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U * *1	0.00202		mg/Kg		12/28/22 14:51	12/31/22 09:52	1
Toluene	<0.00202	U * *1	0.00202		mg/Kg		12/28/22 14:51	12/31/22 09:52	1
Ethylbenzene	<0.00202	U *1	0.00202		mg/Kg		12/28/22 14:51	12/31/22 09:52	1
m-Xylene & p-Xylene	<0.00403	U *1	0.00403		mg/Kg		12/28/22 14:51	12/31/22 09:52	1
o-Xylene	<0.00202	U *1	0.00202		mg/Kg		12/28/22 14:51	12/31/22 09:52	1
Xylenes, Total	<0.00403	U *1	0.00403		mg/Kg		12/28/22 14:51	12/31/22 09:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	215	S1+	70 - 130				12/28/22 14:51	12/31/22 09:52	1
1,4-Difluorobenzene (Surr)	71		70 - 130				12/28/22 14:51	12/31/22 09:52	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			01/03/23 09:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/30/22 12:37	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		12/29/22 08:27	12/29/22 18:40	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 18:40	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 18:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130				12/29/22 08:27	12/29/22 18:40	1
o-Terphenyl	123		70 - 130				12/29/22 08:27	12/29/22 18:40	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	426		24.9		mg/Kg			12/29/22 10:47	5

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Client Sample ID: FS18

Lab Sample ID: 890-3704-16

Date Collected: 12/21/22 14:57

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *- *1	0.00199		mg/Kg		12/28/22 14:51	12/31/22 10:20	1
Toluene	<0.00199	U *- *1	0.00199		mg/Kg		12/28/22 14:51	12/31/22 10:20	1
Ethylbenzene	<0.00199	U *1	0.00199		mg/Kg		12/28/22 14:51	12/31/22 10:20	1
m-Xylene & p-Xylene	<0.00398	U *1	0.00398		mg/Kg		12/28/22 14:51	12/31/22 10:20	1
o-Xylene	<0.00199	U *1	0.00199		mg/Kg		12/28/22 14:51	12/31/22 10:20	1
Xylenes, Total	<0.00398	U *1	0.00398		mg/Kg		12/28/22 14:51	12/31/22 10:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	203	S1+	70 - 130	12/28/22 14:51	12/31/22 10:20	1
1,4-Difluorobenzene (Surr)	74		70 - 130	12/28/22 14:51	12/31/22 10:20	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			01/03/23 09:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			12/30/22 12:37	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		12/29/22 08:27	12/29/22 19:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/29/22 08:27	12/29/22 19:00	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/29/22 08:27	12/29/22 19:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130	12/29/22 08:27	12/29/22 19:00	1
o-Terphenyl	131	S1+	70 - 130	12/29/22 08:27	12/29/22 19:00	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	384		24.8		mg/Kg			12/29/22 10:52	5

Client Sample ID: FS20

Lab Sample ID: 890-3704-17

Date Collected: 12/21/22 15:05

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *- *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 10:47	1
Toluene	<0.00200	U *- *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 10:47	1
Ethylbenzene	<0.00200	U *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 10:47	1
m-Xylene & p-Xylene	<0.00399	U *1	0.00399		mg/Kg		12/28/22 14:51	12/31/22 10:47	1
o-Xylene	<0.00200	U *1	0.00200		mg/Kg		12/28/22 14:51	12/31/22 10:47	1
Xylenes, Total	<0.00399	U *1	0.00399		mg/Kg		12/28/22 14:51	12/31/22 10:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	217	S1+	70 - 130	12/28/22 14:51	12/31/22 10:47	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Client Sample ID: FS20

Lab Sample ID: 890-3704-17

Date Collected: 12/21/22 15:05

Matrix: Solid

Date Received: 12/21/22 15:41

Sample Depth: 2'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	76		70 - 130	12/28/22 14:51	12/31/22 10:47	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			01/03/23 09:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			12/30/22 12:37	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		12/29/22 08:27	12/29/22 19:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/29/22 08:27	12/29/22 19:21	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/29/22 08:27	12/29/22 19:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130				12/29/22 08:27	12/29/22 19:21	1
o-Terphenyl	126		70 - 130				12/29/22 08:27	12/29/22 19:21	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	850		25.1		mg/Kg			12/29/22 10:57	5

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-3704-1	FS06	187 S1+	72
890-3704-1 MS	FS06	210 S1+	66 S1-
890-3704-1 MSD	FS06	200 S1+	73
890-3704-2	FS07	215 S1+	70
890-3704-3	FS08	197 S1+	73
890-3704-4	FS09	218 S1+	70
890-3704-5	FS10	187 S1+	75
890-3704-6	FS11	221 S1+	70
890-3704-7	FS12	193 S1+	6 S1-
890-3704-8	FS13	182 S1+	67 S1-
890-3704-9	FS14	215 S1+	67 S1-
890-3704-10	FS15	214 S1+	74
890-3704-11	FS16	186 S1+	62 S1-
890-3704-12	FS17	234 S1+	73
890-3704-13	E-SW01	197 S1+	71
890-3704-14	FS04	211 S1+	76
890-3704-15	FS05	215 S1+	71
890-3704-16	FS18	203 S1+	74
890-3704-17	FS20	217 S1+	76
LCS 880-42814/1-A	Lab Control Sample	210 S1+	84
LCSD 880-42814/2-A	Lab Control Sample Dup	177 S1+	69 S1-
MB 880-42759/5-A	Method Blank	133 S1+	68 S1-
MB 880-42814/5-A	Method Blank	142 S1+	68 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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-3704-1	FS06	102	124
890-3704-1 MS	FS06	108	114
890-3704-1 MSD	FS06	114	120
890-3704-2	FS07	97	118
890-3704-3	FS08	106	129
890-3704-4	FS09	105	130
890-3704-5	FS10	116	143 S1+
890-3704-6	FS11	96	117
890-3704-7	FS12	104	125
890-3704-8	FS13	114	142 S1+
890-3704-9	FS14	102	125
890-3704-10	FS15	103	125
890-3704-11	FS16	102	126
890-3704-12	FS17	103	130
890-3704-13	E-SW01	95	116
890-3704-14	FS04	98	121

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Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

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)
890-3704-15	FS05	100	123
890-3704-16	FS18	113	131 S1+
890-3704-17	FS20	101	126
LCS 880-42833/2-A	Lab Control Sample	110	135 S1+
LCSD 880-42833/3-A	Lab Control Sample Dup	106	130
MB 880-42833/1-A	Method Blank	113	143 S1+
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-42759/5-A

Matrix: Solid

Analysis Batch: 42922

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 42759

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/27/22 16:57	12/30/22 11:33	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/27/22 16:57	12/30/22 11:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/27/22 16:57	12/30/22 11:33	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/27/22 16:57	12/30/22 11:33	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/27/22 16:57	12/30/22 11:33	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/27/22 16:57	12/30/22 11:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	133	S1+	70 - 130	12/27/22 16:57	12/30/22 11:33	1
1,4-Difluorobenzene (Surr)	68	S1-	70 - 130	12/27/22 16:57	12/30/22 11:33	1

Lab Sample ID: MB 880-42814/5-A

Matrix: Solid

Analysis Batch: 42922

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 42814

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/28/22 14:51	12/31/22 01:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/28/22 14:51	12/31/22 01:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/28/22 14:51	12/31/22 01:50	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/28/22 14:51	12/31/22 01:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/28/22 14:51	12/31/22 01:50	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/28/22 14:51	12/31/22 01:50	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	142	S1+	70 - 130	12/28/22 14:51	12/31/22 01:50	1
1,4-Difluorobenzene (Surr)	68	S1-	70 - 130	12/28/22 14:51	12/31/22 01:50	1

Lab Sample ID: LCS 880-42814/1-A

Matrix: Solid

Analysis Batch: 42922

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 42814

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1222		mg/Kg		122	70 - 130
Toluene	0.100	0.1041		mg/Kg		104	70 - 130
Ethylbenzene	0.100	0.1187		mg/Kg		119	70 - 130
m-Xylene & p-Xylene	0.200	0.2383		mg/Kg		119	70 - 130
o-Xylene	0.100	0.1218		mg/Kg		122	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	210	S1+	70 - 130
1,4-Difluorobenzene (Surr)	84		70 - 130

Lab Sample ID: LCSD 880-42814/2-A

Matrix: Solid

Analysis Batch: 42922

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 42814

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.06553	*- *1	mg/Kg		66	70 - 130	60	35

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

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

Lab Sample ID: LCSD 880-42814/2-A

Matrix: Solid

Analysis Batch: 42922

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 42814

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene	0.100	0.06581	*- *1	mg/Kg		66	70 - 130	45	35
Ethylbenzene	0.100	0.07591	*1	mg/Kg		76	70 - 130	44	35
m-Xylene & p-Xylene	0.200	0.1604	*1	mg/Kg		80	70 - 130	39	35
o-Xylene	0.100	0.08218	*1	mg/Kg		82	70 - 130	39	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	177	S1+	70 - 130
1,4-Difluorobenzene (Surr)	69	S1-	70 - 130

Lab Sample ID: 890-3704-1 MS

Matrix: Solid

Analysis Batch: 42922

Client Sample ID: FS06

Prep Type: Total/NA

Prep Batch: 42814

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U *- *1	0.0998	0.08676		mg/Kg		87	70 - 130
Toluene	<0.00200	U *- *1	0.0998	0.08652		mg/Kg		87	70 - 130
Ethylbenzene	<0.00200	U *1	0.0998	0.1004		mg/Kg		101	70 - 130
m-Xylene & p-Xylene	<0.00401	U *1	0.200	0.2001		mg/Kg		100	70 - 130
o-Xylene	<0.00200	U *1	0.0998	0.1037		mg/Kg		104	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	210	S1+	70 - 130
1,4-Difluorobenzene (Surr)	66	S1-	70 - 130

Lab Sample ID: 890-3704-1 MSD

Matrix: Solid

Analysis Batch: 42922

Client Sample ID: FS06

Prep Type: Total/NA

Prep Batch: 42814

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U *- *1	0.0996	0.08425		mg/Kg		85	70 - 130	3	35
Toluene	<0.00200	U *- *1	0.0996	0.07695		mg/Kg		77	70 - 130	12	35
Ethylbenzene	<0.00200	U *1	0.0996	0.09016		mg/Kg		91	70 - 130	11	35
m-Xylene & p-Xylene	<0.00401	U *1	0.199	0.1822		mg/Kg		91	70 - 130	9	35
o-Xylene	<0.00200	U *1	0.0996	0.09431		mg/Kg		95	70 - 130	10	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	200	S1+	70 - 130
1,4-Difluorobenzene (Surr)	73		70 - 130

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

Lab Sample ID: MB 880-42833/1-A

Matrix: Solid

Analysis Batch: 42842

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 42833

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		12/29/22 08:27	12/29/22 11:45	1

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

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

Lab Sample ID: MB 880-42833/1-A

Matrix: Solid

Analysis Batch: 42842

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 42833

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/29/22 08:27	12/29/22 11:45	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/29/22 08:27	12/29/22 11:45	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130				12/29/22 08:27	12/29/22 11:45	1
o-Terphenyl	143	S1+	70 - 130				12/29/22 08:27	12/29/22 11:45	1

Lab Sample ID: LCS 880-42833/2-A

Matrix: Solid

Analysis Batch: 42842

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 42833

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	879.8		mg/Kg		88	70 - 130
Diesel Range Organics (Over C10-C28)	1000	966.9		mg/Kg		97	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	110		70 - 130				
o-Terphenyl	135	S1+	70 - 130				

Lab Sample ID: LCSD 880-42833/3-A

Matrix: Solid

Analysis Batch: 42842

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 42833

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	845.0		mg/Kg		85	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	1000	933.2		mg/Kg		93	70 - 130	4	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	106		70 - 130						
o-Terphenyl	130		70 - 130						

Lab Sample ID: 890-3704-1 MS

Matrix: Solid

Analysis Batch: 42842

Client Sample ID: FS06

Prep Type: Total/NA

Prep Batch: 42833

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1150		mg/Kg		112	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1062		mg/Kg		103	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane	108		70 - 130						
o-Terphenyl	114		70 - 130						

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

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

Lab Sample ID: 890-3704-1 MSD

Matrix: Solid

Analysis Batch: 42842

Client Sample ID: FS06

Prep Type: Total/NA

Prep Batch: 42833

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1264		mg/Kg		123	70 - 130	9	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1122		mg/Kg		109	70 - 130	5	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	114		70 - 130								
o-Terphenyl	120		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-42720/1-A

Matrix: Solid

Analysis Batch: 42832

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			12/29/22 08:50	1

Lab Sample ID: LCS 880-42720/2-A

Matrix: Solid

Analysis Batch: 42832

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	254.0		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-42720/3-A

Matrix: Solid

Analysis Batch: 42832

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	254.2		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-3704-1 MS

Matrix: Solid

Analysis Batch: 42832

Client Sample ID: FS06

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	376		1250	1714		mg/Kg		107	90 - 110

Lab Sample ID: 890-3704-1 MSD

Matrix: Solid

Analysis Batch: 42832

Client Sample ID: FS06

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	376		1250	1718		mg/Kg		108	90 - 110	0	20

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-3704-11 MS										Client Sample ID: FS16		
Matrix: Solid										Prep Type: Soluble		
Analysis Batch: 42832												
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits			
Chloride	434		1260	1720		mg/Kg		102	90 - 110			

Lab Sample ID: 890-3704-11 MSD										Client Sample ID: FS16		
Matrix: Solid										Prep Type: Soluble		
Analysis Batch: 42832												
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit	
Chloride	434		1260	1716		mg/Kg		102	90 - 110	0	20	

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

GC VOA

Prep Batch: 42759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-42759/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 42814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3704-1	FS06	Total/NA	Solid	5035	
890-3704-2	FS07	Total/NA	Solid	5035	
890-3704-3	FS08	Total/NA	Solid	5035	
890-3704-4	FS09	Total/NA	Solid	5035	
890-3704-5	FS10	Total/NA	Solid	5035	
890-3704-6	FS11	Total/NA	Solid	5035	
890-3704-7	FS12	Total/NA	Solid	5035	
890-3704-8	FS13	Total/NA	Solid	5035	
890-3704-9	FS14	Total/NA	Solid	5035	
890-3704-10	FS15	Total/NA	Solid	5035	
890-3704-11	FS16	Total/NA	Solid	5035	
890-3704-12	FS17	Total/NA	Solid	5035	
890-3704-13	E-SW01	Total/NA	Solid	5035	
890-3704-14	FS04	Total/NA	Solid	5035	
890-3704-15	FS05	Total/NA	Solid	5035	
890-3704-16	FS18	Total/NA	Solid	5035	
890-3704-17	FS20	Total/NA	Solid	5035	
MB 880-42814/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-42814/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-42814/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3704-1 MS	FS06	Total/NA	Solid	5035	
890-3704-1 MSD	FS06	Total/NA	Solid	5035	

Analysis Batch: 42922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3704-1	FS06	Total/NA	Solid	8021B	42814
890-3704-2	FS07	Total/NA	Solid	8021B	42814
890-3704-3	FS08	Total/NA	Solid	8021B	42814
890-3704-4	FS09	Total/NA	Solid	8021B	42814
890-3704-5	FS10	Total/NA	Solid	8021B	42814
890-3704-6	FS11	Total/NA	Solid	8021B	42814
890-3704-7	FS12	Total/NA	Solid	8021B	42814
890-3704-8	FS13	Total/NA	Solid	8021B	42814
890-3704-9	FS14	Total/NA	Solid	8021B	42814
890-3704-10	FS15	Total/NA	Solid	8021B	42814
890-3704-11	FS16	Total/NA	Solid	8021B	42814
890-3704-12	FS17	Total/NA	Solid	8021B	42814
890-3704-13	E-SW01	Total/NA	Solid	8021B	42814
890-3704-14	FS04	Total/NA	Solid	8021B	42814
890-3704-15	FS05	Total/NA	Solid	8021B	42814
890-3704-16	FS18	Total/NA	Solid	8021B	42814
890-3704-17	FS20	Total/NA	Solid	8021B	42814
MB 880-42759/5-A	Method Blank	Total/NA	Solid	8021B	42759
MB 880-42814/5-A	Method Blank	Total/NA	Solid	8021B	42814
LCS 880-42814/1-A	Lab Control Sample	Total/NA	Solid	8021B	42814
LCSD 880-42814/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	42814
890-3704-1 MS	FS06	Total/NA	Solid	8021B	42814

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QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

GC VOA (Continued)

Analysis Batch: 42922 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3704-1 MSD	FS06	Total/NA	Solid	8021B	42814

Analysis Batch: 43011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3704-1	FS06	Total/NA	Solid	Total BTEX	
890-3704-2	FS07	Total/NA	Solid	Total BTEX	
890-3704-3	FS08	Total/NA	Solid	Total BTEX	
890-3704-4	FS09	Total/NA	Solid	Total BTEX	
890-3704-5	FS10	Total/NA	Solid	Total BTEX	
890-3704-6	FS11	Total/NA	Solid	Total BTEX	
890-3704-7	FS12	Total/NA	Solid	Total BTEX	
890-3704-8	FS13	Total/NA	Solid	Total BTEX	
890-3704-9	FS14	Total/NA	Solid	Total BTEX	
890-3704-10	FS15	Total/NA	Solid	Total BTEX	
890-3704-11	FS16	Total/NA	Solid	Total BTEX	
890-3704-12	FS17	Total/NA	Solid	Total BTEX	
890-3704-13	E-SW01	Total/NA	Solid	Total BTEX	
890-3704-14	FS04	Total/NA	Solid	Total BTEX	
890-3704-15	FS05	Total/NA	Solid	Total BTEX	
890-3704-16	FS18	Total/NA	Solid	Total BTEX	
890-3704-17	FS20	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 42833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3704-1	FS06	Total/NA	Solid	8015NM Prep	
890-3704-2	FS07	Total/NA	Solid	8015NM Prep	
890-3704-3	FS08	Total/NA	Solid	8015NM Prep	
890-3704-4	FS09	Total/NA	Solid	8015NM Prep	
890-3704-5	FS10	Total/NA	Solid	8015NM Prep	
890-3704-6	FS11	Total/NA	Solid	8015NM Prep	
890-3704-7	FS12	Total/NA	Solid	8015NM Prep	
890-3704-8	FS13	Total/NA	Solid	8015NM Prep	
890-3704-9	FS14	Total/NA	Solid	8015NM Prep	
890-3704-10	FS15	Total/NA	Solid	8015NM Prep	
890-3704-11	FS16	Total/NA	Solid	8015NM Prep	
890-3704-12	FS17	Total/NA	Solid	8015NM Prep	
890-3704-13	E-SW01	Total/NA	Solid	8015NM Prep	
890-3704-14	FS04	Total/NA	Solid	8015NM Prep	
890-3704-15	FS05	Total/NA	Solid	8015NM Prep	
890-3704-16	FS18	Total/NA	Solid	8015NM Prep	
890-3704-17	FS20	Total/NA	Solid	8015NM Prep	
MB 880-42833/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-42833/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-42833/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3704-1 MS	FS06	Total/NA	Solid	8015NM Prep	
890-3704-1 MSD	FS06	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

GC Semi VOA

Analysis Batch: 42842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3704-1	FS06	Total/NA	Solid	8015B NM	42833
890-3704-2	FS07	Total/NA	Solid	8015B NM	42833
890-3704-3	FS08	Total/NA	Solid	8015B NM	42833
890-3704-4	FS09	Total/NA	Solid	8015B NM	42833
890-3704-5	FS10	Total/NA	Solid	8015B NM	42833
890-3704-6	FS11	Total/NA	Solid	8015B NM	42833
890-3704-7	FS12	Total/NA	Solid	8015B NM	42833
890-3704-8	FS13	Total/NA	Solid	8015B NM	42833
890-3704-9	FS14	Total/NA	Solid	8015B NM	42833
890-3704-10	FS15	Total/NA	Solid	8015B NM	42833
890-3704-11	FS16	Total/NA	Solid	8015B NM	42833
890-3704-12	FS17	Total/NA	Solid	8015B NM	42833
890-3704-13	E-SW01	Total/NA	Solid	8015B NM	42833
890-3704-14	FS04	Total/NA	Solid	8015B NM	42833
890-3704-15	FS05	Total/NA	Solid	8015B NM	42833
890-3704-16	FS18	Total/NA	Solid	8015B NM	42833
890-3704-17	FS20	Total/NA	Solid	8015B NM	42833
MB 880-42833/1-A	Method Blank	Total/NA	Solid	8015B NM	42833
LCS 880-42833/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	42833
LCSD 880-42833/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	42833
890-3704-1 MS	FS06	Total/NA	Solid	8015B NM	42833
890-3704-1 MSD	FS06	Total/NA	Solid	8015B NM	42833

Analysis Batch: 42950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3704-1	FS06	Total/NA	Solid	8015 NM	
890-3704-2	FS07	Total/NA	Solid	8015 NM	
890-3704-3	FS08	Total/NA	Solid	8015 NM	
890-3704-4	FS09	Total/NA	Solid	8015 NM	
890-3704-5	FS10	Total/NA	Solid	8015 NM	
890-3704-6	FS11	Total/NA	Solid	8015 NM	
890-3704-7	FS12	Total/NA	Solid	8015 NM	
890-3704-8	FS13	Total/NA	Solid	8015 NM	
890-3704-9	FS14	Total/NA	Solid	8015 NM	
890-3704-10	FS15	Total/NA	Solid	8015 NM	
890-3704-11	FS16	Total/NA	Solid	8015 NM	
890-3704-12	FS17	Total/NA	Solid	8015 NM	
890-3704-13	E-SW01	Total/NA	Solid	8015 NM	
890-3704-14	FS04	Total/NA	Solid	8015 NM	
890-3704-15	FS05	Total/NA	Solid	8015 NM	
890-3704-16	FS18	Total/NA	Solid	8015 NM	
890-3704-17	FS20	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 42720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3704-1	FS06	Soluble	Solid	DI Leach	
890-3704-2	FS07	Soluble	Solid	DI Leach	
890-3704-3	FS08	Soluble	Solid	DI Leach	
890-3704-4	FS09	Soluble	Solid	DI Leach	

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QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

HPLC/IC (Continued)

Leach Batch: 42720 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3704-5	FS10	Soluble	Solid	DI Leach	
890-3704-6	FS11	Soluble	Solid	DI Leach	
890-3704-7	FS12	Soluble	Solid	DI Leach	
890-3704-8	FS13	Soluble	Solid	DI Leach	
890-3704-9	FS14	Soluble	Solid	DI Leach	
890-3704-10	FS15	Soluble	Solid	DI Leach	
890-3704-11	FS16	Soluble	Solid	DI Leach	
890-3704-12	FS17	Soluble	Solid	DI Leach	
890-3704-13	E-SW01	Soluble	Solid	DI Leach	
890-3704-14	FS04	Soluble	Solid	DI Leach	
890-3704-15	FS05	Soluble	Solid	DI Leach	
890-3704-16	FS18	Soluble	Solid	DI Leach	
890-3704-17	FS20	Soluble	Solid	DI Leach	
MB 880-42720/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-42720/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-42720/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3704-1 MS	FS06	Soluble	Solid	DI Leach	
890-3704-1 MSD	FS06	Soluble	Solid	DI Leach	
890-3704-11 MS	FS16	Soluble	Solid	DI Leach	
890-3704-11 MSD	FS16	Soluble	Solid	DI Leach	

Analysis Batch: 42832

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3704-1	FS06	Soluble	Solid	300.0	42720
890-3704-2	FS07	Soluble	Solid	300.0	42720
890-3704-3	FS08	Soluble	Solid	300.0	42720
890-3704-4	FS09	Soluble	Solid	300.0	42720
890-3704-5	FS10	Soluble	Solid	300.0	42720
890-3704-6	FS11	Soluble	Solid	300.0	42720
890-3704-7	FS12	Soluble	Solid	300.0	42720
890-3704-8	FS13	Soluble	Solid	300.0	42720
890-3704-9	FS14	Soluble	Solid	300.0	42720
890-3704-10	FS15	Soluble	Solid	300.0	42720
890-3704-11	FS16	Soluble	Solid	300.0	42720
890-3704-12	FS17	Soluble	Solid	300.0	42720
890-3704-13	E-SW01	Soluble	Solid	300.0	42720
890-3704-14	FS04	Soluble	Solid	300.0	42720
890-3704-15	FS05	Soluble	Solid	300.0	42720
890-3704-16	FS18	Soluble	Solid	300.0	42720
890-3704-17	FS20	Soluble	Solid	300.0	42720
MB 880-42720/1-A	Method Blank	Soluble	Solid	300.0	42720
LCS 880-42720/2-A	Lab Control Sample	Soluble	Solid	300.0	42720
LCSD 880-42720/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	42720
890-3704-1 MS	FS06	Soluble	Solid	300.0	42720
890-3704-1 MSD	FS06	Soluble	Solid	300.0	42720
890-3704-11 MS	FS16	Soluble	Solid	300.0	42720
890-3704-11 MSD	FS16	Soluble	Solid	300.0	42720

Eurofins Carlsbad

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Client Sample ID: FS06

Lab Sample ID: 890-3704-1

Date Collected: 12/21/22 09:50

Matrix: Solid

Date Received: 12/21/22 15:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	42814	12/28/22 14:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42922	12/31/22 02:17	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43011	01/03/23 09:45	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42950	12/30/22 12:37	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	42833	12/29/22 08:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42842	12/29/22 12:48	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	42720	12/27/22 13:35	KS	EET MID
Soluble	Analysis	300.0		5			42832	12/29/22 09:04	CH	EET MID

Client Sample ID: FS07

Lab Sample ID: 890-3704-2

Date Collected: 12/21/22 10:50

Matrix: Solid

Date Received: 12/21/22 15:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	42814	12/28/22 14:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42922	12/31/22 02:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43011	01/03/23 09:45	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42950	12/30/22 12:37	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	42833	12/29/22 08:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42842	12/29/22 13:49	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	42720	12/27/22 13:35	KS	EET MID
Soluble	Analysis	300.0		5			42832	12/29/22 09:18	CH	EET MID

Client Sample ID: FS08

Lab Sample ID: 890-3704-3

Date Collected: 12/21/22 10:55

Matrix: Solid

Date Received: 12/21/22 15:41

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	42814	12/28/22 14:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42922	12/31/22 03:11	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43011	01/03/23 09:45	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42950	12/30/22 12:37	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	42833	12/29/22 08:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42842	12/29/22 14:10	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	42720	12/27/22 13:35	KS	EET MID
Soluble	Analysis	300.0		1			42832	12/29/22 09:23	CH	EET MID

Client Sample ID: FS09

Lab Sample ID: 890-3704-4

Date Collected: 12/21/22 11:00

Matrix: Solid

Date Received: 12/21/22 15:41

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	42814	12/28/22 14:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42922	12/31/22 03:38	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43011	01/03/23 09:45	AJ	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Client Sample ID: FS09

Lab Sample ID: 890-3704-4

Date Collected: 12/21/22 11:00

Matrix: Solid

Date Received: 12/21/22 15:41

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			42950	12/30/22 12:37	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	42833	12/29/22 08:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42842	12/29/22 14:31	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	42720	12/27/22 13:35	KS	EET MID
Soluble	Analysis	300.0		5			42832	12/29/22 09:27	CH	EET MID

Client Sample ID: FS10

Lab Sample ID: 890-3704-5

Date Collected: 12/21/22 11:05

Matrix: Solid

Date Received: 12/21/22 15:41

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	42814	12/28/22 14:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42922	12/31/22 04:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43011	01/03/23 09:45	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42950	12/30/22 12:37	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	42833	12/29/22 08:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42842	12/29/22 14:52	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	42720	12/27/22 13:35	KS	EET MID
Soluble	Analysis	300.0		1			42832	12/29/22 09:32	CH	EET MID

Client Sample ID: FS11

Lab Sample ID: 890-3704-6

Date Collected: 12/21/22 11:10

Matrix: Solid

Date Received: 12/21/22 15:41

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	42814	12/28/22 14:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42922	12/31/22 04:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43011	01/03/23 09:45	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42950	12/30/22 12:37	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	42833	12/29/22 08:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42842	12/29/22 15:13	AJ	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	42720	12/27/22 13:35	KS	EET MID
Soluble	Analysis	300.0		5			42832	12/29/22 09:46	CH	EET MID

Client Sample ID: FS12

Lab Sample ID: 890-3704-7

Date Collected: 12/21/22 11:15

Matrix: Solid

Date Received: 12/21/22 15:41

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	42814	12/28/22 14:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42922	12/31/22 04:57	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43011	01/03/23 09:45	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42950	12/30/22 12:37	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	42833	12/29/22 08:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42842	12/29/22 15:33	AJ	EET MID

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Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Client Sample ID: FS12**Lab Sample ID: 890-3704-7****Date Collected: 12/21/22 11:15****Matrix: Solid****Date Received: 12/21/22 15:41**

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	42720	12/27/22 13:35	KS	EET MID
Soluble	Analysis	300.0		1			42832	12/29/22 09:51	CH	EET MID

Client Sample ID: FS13**Lab Sample ID: 890-3704-8****Date Collected: 12/21/22 11:20****Matrix: Solid****Date Received: 12/21/22 15:41**

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	42814	12/28/22 14:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42922	12/31/22 05:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43011	01/03/23 09:45	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42950	12/30/22 12:37	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	42833	12/29/22 08:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42842	12/29/22 15:54	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	42720	12/27/22 13:35	KS	EET MID
Soluble	Analysis	300.0		5			42832	12/29/22 09:56	CH	EET MID

Client Sample ID: FS14**Lab Sample ID: 890-3704-9****Date Collected: 12/21/22 11:25****Matrix: Solid****Date Received: 12/21/22 15:41**

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	42814	12/28/22 14:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42922	12/31/22 05:49	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43011	01/03/23 09:45	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42950	12/30/22 12:37	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	42833	12/29/22 08:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42842	12/29/22 16:15	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	42720	12/27/22 13:35	KS	EET MID
Soluble	Analysis	300.0		5			42832	12/29/22 10:00	CH	EET MID

Client Sample ID: FS15**Lab Sample ID: 890-3704-10****Date Collected: 12/21/22 11:30****Matrix: Solid****Date Received: 12/21/22 15:41**

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	42814	12/28/22 14:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42922	12/31/22 06:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43011	01/03/23 09:45	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42950	12/30/22 12:37	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	42833	12/29/22 08:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42842	12/29/22 16:36	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	42720	12/27/22 13:35	KS	EET MID
Soluble	Analysis	300.0		5			42832	12/29/22 10:05	CH	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Client Sample ID: FS16

Lab Sample ID: 890-3704-11

Date Collected: 12/21/22 11:35

Matrix: Solid

Date Received: 12/21/22 15:41

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	42814	12/28/22 14:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42922	12/31/22 08:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43011	01/03/23 09:45	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42950	12/30/22 12:37	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	42833	12/29/22 08:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42842	12/29/22 17:17	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	42720	12/27/22 13:35	KS	EET MID
Soluble	Analysis	300.0		5	0 mL	1.0 mL	42832	12/29/22 10:10	CH	EET MID

Client Sample ID: FS17

Lab Sample ID: 890-3704-12

Date Collected: 12/21/22 11:40

Matrix: Solid

Date Received: 12/21/22 15:41

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	42814	12/28/22 14:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42922	12/31/22 08:29	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43011	01/03/23 09:45	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42950	12/30/22 12:37	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	42833	12/29/22 08:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42842	12/29/22 17:37	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	42720	12/27/22 13:35	KS	EET MID
Soluble	Analysis	300.0		10			42832	12/29/22 10:24	CH	EET MID

Client Sample ID: E-SW01

Lab Sample ID: 890-3704-13

Date Collected: 12/21/22 12:30

Matrix: Solid

Date Received: 12/21/22 15:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	42814	12/28/22 14:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42922	12/31/22 08:57	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43011	01/03/23 09:45	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42950	12/30/22 12:37	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	42833	12/29/22 08:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42842	12/29/22 17:58	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	42720	12/27/22 13:35	KS	EET MID
Soluble	Analysis	300.0		1			42832	12/29/22 10:29	CH	EET MID

Client Sample ID: FS04

Lab Sample ID: 890-3704-14

Date Collected: 12/21/22 14:30

Matrix: Solid

Date Received: 12/21/22 15:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	42814	12/28/22 14:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42922	12/31/22 09:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43011	01/03/23 09:45	AJ	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Client Sample ID: FS04

Lab Sample ID: 890-3704-14

Date Collected: 12/21/22 14:30

Matrix: Solid

Date Received: 12/21/22 15:41

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			42950	12/30/22 12:37	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	42833	12/29/22 08:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42842	12/29/22 18:19	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	42720	12/27/22 13:35	KS	EET MID
Soluble	Analysis	300.0		5			42832	12/29/22 10:43	CH	EET MID

Client Sample ID: FS05

Lab Sample ID: 890-3704-15

Date Collected: 12/21/22 14:35

Matrix: Solid

Date Received: 12/21/22 15:41

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	42814	12/28/22 14:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42922	12/31/22 09:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43011	01/03/23 09:45	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42950	12/30/22 12:37	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	42833	12/29/22 08:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42842	12/29/22 18:40	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	42720	12/27/22 13:35	KS	EET MID
Soluble	Analysis	300.0		5			42832	12/29/22 10:47	CH	EET MID

Client Sample ID: FS18

Lab Sample ID: 890-3704-16

Date Collected: 12/21/22 14:57

Matrix: Solid

Date Received: 12/21/22 15:41

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	42814	12/28/22 14:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42922	12/31/22 10:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43011	01/03/23 09:45	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42950	12/30/22 12:37	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	42833	12/29/22 08:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42842	12/29/22 19:00	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	42720	12/27/22 13:35	KS	EET MID
Soluble	Analysis	300.0		5			42832	12/29/22 10:52	CH	EET MID

Client Sample ID: FS20

Lab Sample ID: 890-3704-17

Date Collected: 12/21/22 15:05

Matrix: Solid

Date Received: 12/21/22 15:41

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	42814	12/28/22 14:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42922	12/31/22 10:47	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43011	01/03/23 09:45	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42950	12/30/22 12:37	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	42833	12/29/22 08:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42842	12/29/22 19:21	AJ	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Client Sample ID: FS20
Date Collected: 12/21/22 15:05
Date Received: 12/21/22 15:41

Lab Sample ID: 890-3704-17
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			4.98 g	50 mL	42720	12/27/22 13:35	KS	EET MID
Soluble	Analysis	300.0		5			42832	12/29/22 10:57	CH	EET MID

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

- 1
- 2
- 3
- 4
- 5
- 6
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- 13
- 14

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

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	T104704400-22-25	06-30-23

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: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

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	MCAWW	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

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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: Lakewood AQE

Job ID: 890-3704-1
SDG: Eddy

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3704-1	FS06	Solid	12/21/22 09:50	12/21/22 15:41	4'
890-3704-2	FS07	Solid	12/21/22 10:50	12/21/22 15:41	3'
890-3704-3	FS08	Solid	12/21/22 10:55	12/21/22 15:41	3'
890-3704-4	FS09	Solid	12/21/22 11:00	12/21/22 15:41	3'
890-3704-5	FS10	Solid	12/21/22 11:05	12/21/22 15:41	3'
890-3704-6	FS11	Solid	12/21/22 11:10	12/21/22 15:41	3'
890-3704-7	FS12	Solid	12/21/22 11:15	12/21/22 15:41	3'
890-3704-8	FS13	Solid	12/21/22 11:20	12/21/22 15:41	1.5'
890-3704-9	FS14	Solid	12/21/22 11:25	12/21/22 15:41	1.5'
890-3704-10	FS15	Solid	12/21/22 11:30	12/21/22 15:41	1.5'
890-3704-11	FS16	Solid	12/21/22 11:35	12/21/22 15:41	1.5'
890-3704-12	FS17	Solid	12/21/22 11:40	12/21/22 15:41	1.5'
890-3704-13	E-SW01	Solid	12/21/22 12:30	12/21/22 15:41	0-4
890-3704-14	FS04	Solid	12/21/22 14:30	12/21/22 15:41	4'
890-3704-15	FS05	Solid	12/21/22 14:35	12/21/22 15:41	4'
890-3704-16	FS18	Solid	12/21/22 14:57	12/21/22 15:41	2'
890-3704-17	FS20	Solid	12/21/22 15:05	12/21/22 15:41	2'



Environment Testing Xenco

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

Chain of Custody

Work Order No: _____

www.xenco.com Page 1 of 2

Project Manager:	<i>Joe Cuescater</i>	Bill to: (if different)	
Company Name:	<i>Terracore</i>	Company Name:	
Address:	<i>4518 W Pierce St</i>	Address:	
City, State ZIP:	<i>Carlsbad NM 88220</i>	City, State ZIP:	
Phone:		Email:	<i>becky.sue.williams@terracore.com</i>

Work Order Comments	
Program: <input type="checkbox"/> UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>	
State of Project:	
Reporting: Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>	
Deliverables: <input type="checkbox"/> EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:	

Project Name:	<i>Kakumad AOE</i>	Turn Around	<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush	Pri. Code	
Project Number:	<i>KH227015</i>				
Project Location:	<i>Eddy</i>	Due Date:			
Sampler's Name:	<i>Becky Williams</i>	TAT starts the day received by the lab, if received by 4:30pm			
PO #:					
SAMPLE RECEIPT		Temp Blank:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Wet Ice:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Samples Received Inact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Thermometer ID:	<i>TAM-002</i>		
Cooler Custody Seals:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Correction Factor:	<i>-0.2</i>		
Sample Custody Seals:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Temperature Reading:	<i>2.14</i>		
Total Containers:		Corrected Temperature:	<i>2.4</i>		
Parameters					
<i>chloride EPA 300</i>					
<i>BTEX (8024B)</i>					
<i>PPH (8015)</i>					
ANALYSIS REQUEST					
Preservative Codes					
None: NO DI Water: H ₂ O					
Cool: Cool MeOH: Me					
HCL: HCl HNO: H ₂ SO ₄ : H ₂					
H ₂ SO ₄ : H ₂					
H ₃ PO ₄ : HP					
NaHSO ₄ : NABIS					
Na ₂ S ₂ O ₃ : NaSO ₃					
Zn Acetate+NaOH: Zn					
NaOH+Ascorbic Acid: SARC					



890-3704 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Sample Comments
FS06	S	12/21	9:50	4'	C	1	
FS07	S		10:50	3'	G	1	
FS08	S		10:55	3'	G	1	
FS09	S		11:00	3'	G	1	
FS10	S		11:05	3'	G	1	
FS11	S		11:10	3'	G	1	
FS12	S		11:15	3'	G	1	
FS13	S		11:20	1.5'	G	1	
FS14	S		11:25	1.5'	G	1	
FS15	S		11:30	1.5'	G	1	

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>Becky Williams</i>	<i>Becky Williams</i>	12/21/20			



Environment Testing
Xenco

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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 2 of 2

Project Manager:	Joe Guesner	Bill to: (if different)	
Company Name:	Terracore	Company Name:	
Address:	4518 W. Pique	Address:	
City, State ZIP:	Carlsbad NM 88220	City, State ZIP:	
Phone:		Email:	becky.sue.miller@terracore.com

Program:	UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:	
Reporting:	Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables:	EDO <input type="checkbox"/> ADAPT <input type="checkbox"/> Other: _____

Project Name:	Takewood AAE	Turn Around	<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush	Prior. Code	
Project Number:	KH227015	Due Date:			
Project Location:	Eddy Miller	TAT starts the day received by the lab, if received by 4:30pm			
Sampler's Name:	Becky Miller				
PO #:					
SAMPLE RECEIPT	Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:			
Cooler Custody Seals:	Yes No	Correction Factor:			
Sample Custody Seals:	Yes No	Temperature Reading:			
Total Containers:		Corrected Temperature:			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters													
							ANALYSIS REQUEST													
ES 16	S	12/21	11:35	1.5	G	1	chloride EPA 300													
ES 17	S		11:40	1.5	G	1	ISPEX (8024B)													
E-SWD1	S		12:30	0-4'	C	1	PPH (8015)													
ES04	S		2:30	4'	G	1														
ES05	S		2:35	4'	G	1														
ES18	S		2:57	2'	C	1														
ES20	S		3:05	2'	C	1														

Total 2007 / 6010	2008 / 6020:	8BCRA	13PPM	Texas 11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO ₂	Na	Sr	Ti	Sn	U	V	Zn
Circle Method(s) and Metal(s) to be analyzed		TCLP / SPLP 6010	:	8BCRA	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
Becky Miller	Amanda Stup	12/22/21			

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Eurofins Carlsbad

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

Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab)		Sampler	Lab PM	Carrier Tracking No(s)	COC No:						
Client Contact: Shipping/Receiving		Phone	Kramer Jessica		890-1078 1						
Company: Eurofins Environment Testing South Cent		E-Mail	Jessica.Kramer@el.eurofins.com	State of Origin	Page 1 of 2						
Address: 1211 W Florida Ave		Date Date Requested	NE/LAP - Texas	Accreditations Required (See note):	Job #: 890-3704-1						
City: Midland		TAT Requested (days)	Analysis Requested								
State, Zip: TX 79701		PO #:	8021B/6035FP_Calc (MOD) BTEX								
Phone: 432-704-5440(Tel)		WO #:	Total_BTEX_GCV								
Email:		Project #:	8015MOD_NM/8016NM_S_Prep (MOD) Full TPH								
Project Name: Lakewood AGE		SSOW#:	8015MOD_Calc								
Site:			300_ORGFM_28D/DI_LEACH Chloride								
			Total Number of containers								
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=solid, O=soil, BI=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Preservation Codes		Special Instructions/Note:	
FS06 (890-3704-1)	12/21/22	09 50	Mountain	Solid		X	X	X	X	1	
FS07 (890-3704-2)	12/21/22	10 50	Mountain	Solid		X	X	X	X	1	
FS08 (890-3704-3)	12/21/22	10 55	Mountain	Solid		X	X	X	X	1	
FS09 (890-3704-4)	12/21/22	11 00	Mountain	Solid		X	X	X	X	1	
FS10 (890-3704-5)	12/21/22	11 05	Mountain	Solid		X	X	X	X	1	
FS11 (890-3704-6)	12/21/22	11 10	Mountain	Solid		X	X	X	X	1	
FS12 (890-3704-7)	12/21/22	11 15	Mountain	Solid		X	X	X	X	1	
FS13 (890-3704-8)	12/21/22	11 20	Mountain	Solid		X	X	X	X	1	
FS14 (890-3704-9)	12/21/22	11 25	Mountain	Solid		X	X	X	X	1	
<p>Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/estimates/mark being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central LLC.</p>											
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Unconfirmed						<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Deliverable Requested I II III IV Other (specify)						Special Instructions/QC Requirements					
Empty Kit Relinquished by						Method of Shipment:					
Relinquished by		Date/Time	Company	Time	Received by	Date/Time	Company				
Relinquished by		Date/Time	Company	Time	Received by	Date/Time	Company				
Relinquished by		Date/Time	Company	Time	Received by	Date/Time	Company				
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks							

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-3704-1

SDG Number: Eddy

Login Number: 3704

List Number: 1

Creator: Stutzman, Amanda

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: 890-3704-1

SDG Number: Eddy

Login Number: 3704

List Number: 2

Creator: Teel, Brianna

List Source: Eurofins Midland

List Creation: 12/28/22 02:01 PM

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



Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Joseph Guesnier
Terracon Consulting Eng & Scientists
5847 50th St
Lubbock, Texas 79424
Generated 1/4/2023 8:58:06 AM

JOB DESCRIPTION

Lakewood AQE
SDG NUMBER Eddy

JOB NUMBER

890-3707-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

Eurofins Carlsbad**Job Notes**

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
1/4/2023 8:58:06 AM

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

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

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: Lakewood AQE

Laboratory Job ID: 890-3707-1
SDG: Eddy

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Definitions/Glossary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3707-1
SDG: Eddy

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3707-1
SDG: Eddy

Job ID: 890-3707-1**Laboratory: Eurofins Carlsbad****Narrative****Job Narrative
890-3707-1****Receipt**

The samples were received on 12/22/2022 12:53 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 5.6°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: FS01 (890-3707-1), FS02 (890-3707-2) and FS03 (890-3707-3).

GC VOA

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

GC Semi VOA

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.

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3707-1
SDG: Eddy

Client Sample ID: FS01

Lab Sample ID: 890-3707-1

Date Collected: 12/22/22 10:40

Matrix: Solid

Date Received: 12/22/22 12:53

Sample Depth: 4'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/30/22 11:33	01/03/23 18:26	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/30/22 11:33	01/03/23 18:26	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/30/22 11:33	01/03/23 18:26	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		12/30/22 11:33	01/03/23 18:26	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/30/22 11:33	01/03/23 18:26	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		12/30/22 11:33	01/03/23 18:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	12/30/22 11:33	01/03/23 18:26	1
1,4-Difluorobenzene (Surr)	108		70 - 130	12/30/22 11:33	01/03/23 18:26	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			01/04/23 09:17	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/30/22 12:37	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		12/29/22 08:27	12/29/22 19:41	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 19:41	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 19:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130	12/29/22 08:27	12/29/22 19:41	1
o-Terphenyl	125		70 - 130	12/29/22 08:27	12/29/22 19:41	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	469		5.05		mg/Kg			12/29/22 11:01	1

Client Sample ID: FS02

Lab Sample ID: 890-3707-2

Date Collected: 12/22/22 10:50

Matrix: Solid

Date Received: 12/22/22 12:53

Sample Depth: 4'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/30/22 11:33	01/03/23 18:46	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/30/22 11:33	01/03/23 18:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/30/22 11:33	01/03/23 18:46	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		12/30/22 11:33	01/03/23 18:46	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/30/22 11:33	01/03/23 18:46	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		12/30/22 11:33	01/03/23 18:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	12/30/22 11:33	01/03/23 18:46	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3707-1
SDG: Eddy

Client Sample ID: FS02

Lab Sample ID: 890-3707-2

Date Collected: 12/22/22 10:50

Matrix: Solid

Date Received: 12/22/22 12:53

Sample Depth: 4'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	110		70 - 130	12/30/22 11:33	01/03/23 18:46	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			01/04/23 09:17	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/30/22 12:37	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		12/29/22 08:27	12/29/22 20:01	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 20:01	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/29/22 08:27	12/29/22 20:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130				12/29/22 08:27	12/29/22 20:01	1
o-Terphenyl	123		70 - 130				12/29/22 08:27	12/29/22 20:01	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	571		5.04		mg/Kg			12/29/22 11:06	1

Client Sample ID: FS03

Lab Sample ID: 890-3707-3

Date Collected: 12/22/22 11:00

Matrix: Solid

Date Received: 12/22/22 12:53

Sample Depth: 4'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		12/30/22 11:33	01/03/23 19:06	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/30/22 11:33	01/03/23 19:06	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/30/22 11:33	01/03/23 19:06	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/30/22 11:33	01/03/23 19:06	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/30/22 11:33	01/03/23 19:06	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/30/22 11:33	01/03/23 19:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	12/30/22 11:33	01/03/23 19:06	1
1,4-Difluorobenzene (Surr)	109		70 - 130	12/30/22 11:33	01/03/23 19:06	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			01/04/23 09:17	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			12/30/22 12:37	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3707-1
SDG: Eddy

Client Sample ID: FS03
Date Collected: 12/22/22 11:00
Date Received: 12/22/22 12:53
Sample Depth: 4'

Lab Sample ID: 890-3707-3
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		12/29/22 08:27	12/29/22 20:21	1	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/29/22 08:27	12/29/22 20:21	1	
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/29/22 08:27	12/29/22 20:21	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
1-Chlorooctane	113		70 - 130				12/29/22 08:27	12/29/22 20:21	1	
o-Terphenyl	145	S1+	70 - 130				12/29/22 08:27	12/29/22 20:21	1	

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	187		5.02		mg/Kg			12/29/22 11:11	1	

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3707-1
SDG: Eddy

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)
890-3707-1	FS01	107	108
890-3707-2	FS02	104	110
890-3707-3	FS03	103	109
LCS 880-42941/1-A	Lab Control Sample	93	107
LCSD 880-42941/2-A	Lab Control Sample Dup	97	109
MB 880-42941/5-A	Method Blank	97	107
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)
890-3707-1	FS01	103	125
890-3707-2	FS02	101	123
890-3707-3	FS03	113	145 S1+
LCS 880-42833/2-A	Lab Control Sample	110	135 S1+
LCSD 880-42833/3-A	Lab Control Sample Dup	106	130
MB 880-42833/1-A	Method Blank	113	143 S1+
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3707-1
SDG: Eddy

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-42941/5-A

Matrix: Solid

Analysis Batch: 43042

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 42941

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/30/22 11:33	01/03/23 12:23	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/30/22 11:33	01/03/23 12:23	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/30/22 11:33	01/03/23 12:23	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/30/22 11:33	01/03/23 12:23	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/30/22 11:33	01/03/23 12:23	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/30/22 11:33	01/03/23 12:23	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	12/30/22 11:33	01/03/23 12:23	1
1,4-Difluorobenzene (Surr)	107		70 - 130	12/30/22 11:33	01/03/23 12:23	1

Lab Sample ID: LCS 880-42941/1-A

Matrix: Solid

Analysis Batch: 43042

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 42941

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09341		mg/Kg		93	70 - 130
Toluene	0.100	0.08875		mg/Kg		89	70 - 130
Ethylbenzene	0.100	0.08816		mg/Kg		88	70 - 130
m-Xylene & p-Xylene	0.200	0.1815		mg/Kg		91	70 - 130
o-Xylene	0.100	0.08693		mg/Kg		87	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

Lab Sample ID: LCSD 880-42941/2-A

Matrix: Solid

Analysis Batch: 43042

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 42941

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09507		mg/Kg		95	70 - 130	2	35
Toluene	0.100	0.09079		mg/Kg		91	70 - 130	2	35
Ethylbenzene	0.100	0.08995		mg/Kg		90	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.1856		mg/Kg		93	70 - 130	2	35
o-Xylene	0.100	0.08867		mg/Kg		89	70 - 130	2	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3707-1
SDG: Eddy

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

Lab Sample ID: MB 880-42833/1-A

Matrix: Solid

Analysis Batch: 42842

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 42833

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		12/29/22 08:27	12/29/22 11:45	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/29/22 08:27	12/29/22 11:45	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/29/22 08:27	12/29/22 11:45	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130				12/29/22 08:27	12/29/22 11:45	1
o-Terphenyl	143	S1+	70 - 130				12/29/22 08:27	12/29/22 11:45	1

Lab Sample ID: LCS 880-42833/2-A

Matrix: Solid

Analysis Batch: 42842

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 42833

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	879.8		mg/Kg		88	70 - 130
Diesel Range Organics (Over C10-C28)	1000	966.9		mg/Kg		97	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	110		70 - 130				
o-Terphenyl	135	S1+	70 - 130				

Lab Sample ID: LCSD 880-42833/3-A

Matrix: Solid

Analysis Batch: 42842

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 42833

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	845.0		mg/Kg		85	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	1000	933.2		mg/Kg		93	70 - 130	4	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	106		70 - 130						
o-Terphenyl	130		70 - 130						

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-42720/1-A

Matrix: Solid

Analysis Batch: 42832

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			12/29/22 08:50	1

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3707-1
SDG: Eddy

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-42720/2-A					Client Sample ID: Lab Control Sample						
Matrix: Solid					Prep Type: Soluble						
Analysis Batch: 42832											
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	254.0		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-42720/3-A					Client Sample ID: Lab Control Sample Dup						
Matrix: Solid					Prep Type: Soluble						
Analysis Batch: 42832											
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	254.2		mg/Kg		102	90 - 110	0	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3707-1
SDG: Eddy

GC VOA

Prep Batch: 42941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3707-1	FS01	Total/NA	Solid	5035	
890-3707-2	FS02	Total/NA	Solid	5035	
890-3707-3	FS03	Total/NA	Solid	5035	
MB 880-42941/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-42941/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-42941/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 43042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3707-1	FS01	Total/NA	Solid	8021B	42941
890-3707-2	FS02	Total/NA	Solid	8021B	42941
890-3707-3	FS03	Total/NA	Solid	8021B	42941
MB 880-42941/5-A	Method Blank	Total/NA	Solid	8021B	42941
LCS 880-42941/1-A	Lab Control Sample	Total/NA	Solid	8021B	42941
LCSD 880-42941/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	42941

Analysis Batch: 43121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3707-1	FS01	Total/NA	Solid	Total BTEX	
890-3707-2	FS02	Total/NA	Solid	Total BTEX	
890-3707-3	FS03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 42833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3707-1	FS01	Total/NA	Solid	8015NM Prep	
890-3707-2	FS02	Total/NA	Solid	8015NM Prep	
890-3707-3	FS03	Total/NA	Solid	8015NM Prep	
MB 880-42833/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-42833/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-42833/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 42842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3707-1	FS01	Total/NA	Solid	8015B NM	42833
890-3707-2	FS02	Total/NA	Solid	8015B NM	42833
890-3707-3	FS03	Total/NA	Solid	8015B NM	42833
MB 880-42833/1-A	Method Blank	Total/NA	Solid	8015B NM	42833
LCS 880-42833/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	42833
LCSD 880-42833/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	42833

Analysis Batch: 42951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3707-1	FS01	Total/NA	Solid	8015 NM	
890-3707-2	FS02	Total/NA	Solid	8015 NM	
890-3707-3	FS03	Total/NA	Solid	8015 NM	

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QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3707-1
SDG: Eddy

HPLC/IC

Leach Batch: 42720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3707-1	FS01	Soluble	Solid	DI Leach	
890-3707-2	FS02	Soluble	Solid	DI Leach	
890-3707-3	FS03	Soluble	Solid	DI Leach	
MB 880-42720/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-42720/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-42720/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 42832

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3707-1	FS01	Soluble	Solid	300.0	42720
890-3707-2	FS02	Soluble	Solid	300.0	42720
890-3707-3	FS03	Soluble	Solid	300.0	42720
MB 880-42720/1-A	Method Blank	Soluble	Solid	300.0	42720
LCS 880-42720/2-A	Lab Control Sample	Soluble	Solid	300.0	42720
LCSD 880-42720/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	42720

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3707-1
SDG: Eddy

Client Sample ID: FS01

Lab Sample ID: 890-3707-1

Date Collected: 12/22/22 10:40

Matrix: Solid

Date Received: 12/22/22 12:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	42941	12/30/22 11:33	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43042	01/03/23 18:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43121	01/04/23 09:17	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42951	12/30/22 12:37	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	42833	12/29/22 08:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42842	12/29/22 19:41	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	42720	12/27/22 13:35	KS	EET MID
Soluble	Analysis	300.0		1			42832	12/29/22 11:01	CH	EET MID

Client Sample ID: FS02

Lab Sample ID: 890-3707-2

Date Collected: 12/22/22 10:50

Matrix: Solid

Date Received: 12/22/22 12:53

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	42941	12/30/22 11:33	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43042	01/03/23 18:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43121	01/04/23 09:17	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42951	12/30/22 12:37	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	42833	12/29/22 08:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42842	12/29/22 20:01	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	42720	12/27/22 13:35	KS	EET MID
Soluble	Analysis	300.0		1			42832	12/29/22 11:06	CH	EET MID

Client Sample ID: FS03

Lab Sample ID: 890-3707-3

Date Collected: 12/22/22 11:00

Matrix: Solid

Date Received: 12/22/22 12:53

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	42941	12/30/22 11:33	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43042	01/03/23 19:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43121	01/04/23 09:17	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42951	12/30/22 12:37	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	42833	12/29/22 08:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42842	12/29/22 20:21	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	42720	12/27/22 13:35	KS	EET MID
Soluble	Analysis	300.0		1			42832	12/29/22 11:11	CH	EET MID

Laboratory References:

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

Eurofins Carlsbad

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3707-1
SDG: Eddy

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	T104704400-22-25	06-30-23

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: Lakewood AQE

Job ID: 890-3707-1
SDG: Eddy

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	MCAWW	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

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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: Lakewood AQE

Job ID: 890-3707-1
SDG: Eddy

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3707-1	FS01	Solid	12/22/22 10:40	12/22/22 12:53	4'
890-3707-2	FS02	Solid	12/22/22 10:50	12/22/22 12:53	4'
890-3707-3	FS03	Solid	12/22/22 11:00	12/22/22 12:53	4'

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

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



Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Tec Gonzalez	Bill to: (if different)	
Company Name:	Tecacore	Company Name:	
Address:	4518 W Piche	Address:	
City, State ZIP:	Carlsbad NM 88220	City, State ZIP:	
Phone:		Email:	buckley.miller@tecacore.com

Project Name:	Waterwood AOE	Turn Around		Pres. Code	
Project Number:	KH22-7015	<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush			
Project Location:	Edley	Due Date:			
Sampler's Name:	Buckley Miller	TAT starts the day received by the lab, if received by 4:30pm			
P.O. #:					
SAMPLE RECEIPT	Temp Blank: <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Wet Ice: <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Parameters		
Samples Received Intact:	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Thermometer ID:	TMM-001		
Cooler Custody Seals:	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Correction Factor:	-0.2		
Sample Custody Seals:	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Temperature Reading:	5.8		
Total Containers:		Corrected Temperature:	5.6		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	ANALYSIS REQUEST	Preservative Codes	Sample Comments
FS01	S	12/22	10:40	4'	C	1			
FS02	S		10:50	4'	C	1			
FS03	S		11:00	4'	C	1			



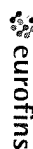
Total 200.7 / 6010	2008 / 6020:	8RCRA 13PPM Texas 11	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Ti Sn U V Zn		
Circle Method(s) and Metal(s) to be analyzed	TCLP / SPLP 6010 : 8RCRA	Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	Hg: 1631 / 245.1 / 7470 / 7471		
Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Buckley Miller		12-22-22 12:53			
3					
5					

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.

Eurofins Carlsbad

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

Chain of Custody Record



Environment Testing

[illegible]

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-3707-1

SDG Number: Eddy

Login Number: 3707

List Number: 1

Creator: Stutzman, Amanda

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: 890-3707-1

SDG Number: Eddy

Login Number: 3707

List Number: 2

Creator: Teel, Brianna

List Source: Eurofins Midland

List Creation: 12/28/22 02:01 PM

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



Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Joseph Guesnier
Terracon Consulting Eng & Scientists
5847 50th St
Lubbock, Texas 79424
Generated 1/4/2023 8:59:20 AM

JOB DESCRIPTION

Lakewood AQE
SDG NUMBER KH227015

JOB NUMBER

890-3718-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

Eurofins Carlsbad**Job Notes**

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
1/4/2023 8:59:20 AM

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

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

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: Lakewood AQE

Laboratory Job ID: 890-3718-1
SDG: KH227015

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Definitions/Glossary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3718-1
SDG: KH227015

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3718-1
SDG: KH227015

Job ID: 890-3718-1**Laboratory: Eurofins Carlsbad****Narrative****Job Narrative
890-3718-1****Receipt**

The sample was received on 12/27/2022 3:19 PM. Unless otherwise noted below, the sample 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: W-SW 01 (890-3718-1).

GC VOA

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: (CCV 880-42937/32), (CCV 880-42937/48), (CCV 880-42937/59) and (LCSD 880-42996/3-A). Evidence of matrix interferences is not obvious.

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

HPLC/IC

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

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3718-1
SDG: KH227015

Client Sample ID: W-SW 01

Lab Sample ID: 890-3718-1

Date Collected: 12/27/22 12:50

Matrix: Solid

Date Received: 12/27/22 15:19

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		12/30/22 11:33	01/03/23 20:28	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/30/22 11:33	01/03/23 20:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/30/22 11:33	01/03/23 20:28	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		12/30/22 11:33	01/03/23 20:28	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/30/22 11:33	01/03/23 20:28	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		12/30/22 11:33	01/03/23 20:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	12/30/22 11:33	01/03/23 20:28	1
1,4-Difluorobenzene (Surr)	111		70 - 130	12/30/22 11:33	01/03/23 20:28	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			01/04/23 09:17	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			01/03/23 10:37	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		12/30/22 15:05	12/31/22 09:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/30/22 15:05	12/31/22 09:00	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/30/22 15:05	12/31/22 09:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130	12/30/22 15:05	12/31/22 09:00	1
o-Terphenyl	88		70 - 130	12/30/22 15:05	12/31/22 09:00	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	369		24.8		mg/Kg			12/31/22 03:48	5

Eurofins Carlsbad

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3718-1
SDG: KH227015

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)
890-3718-1	W-SW 01	107	111
LCS 880-42941/1-A	Lab Control Sample	93	107
LCSD 880-42941/2-A	Lab Control Sample Dup	97	109
MB 880-42941/5-A	Method Blank	97	107
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)
890-3718-1	W-SW 01	88	88
LCS 880-42996/2-A	Lab Control Sample	106	118
LCSD 880-42996/3-A	Lab Control Sample Dup	119	132 S1+
MB 880-42996/1-A	Method Blank	115	127
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3718-1
SDG: KH227015

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-42941/5-A

Matrix: Solid

Analysis Batch: 43042

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 42941

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/30/22 11:33	01/03/23 12:23	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/30/22 11:33	01/03/23 12:23	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/30/22 11:33	01/03/23 12:23	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/30/22 11:33	01/03/23 12:23	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/30/22 11:33	01/03/23 12:23	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/30/22 11:33	01/03/23 12:23	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	12/30/22 11:33	01/03/23 12:23	1
1,4-Difluorobenzene (Surr)	107		70 - 130	12/30/22 11:33	01/03/23 12:23	1

Lab Sample ID: LCS 880-42941/1-A

Matrix: Solid

Analysis Batch: 43042

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 42941

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09341		mg/Kg		93	70 - 130
Toluene	0.100	0.08875		mg/Kg		89	70 - 130
Ethylbenzene	0.100	0.08816		mg/Kg		88	70 - 130
m-Xylene & p-Xylene	0.200	0.1815		mg/Kg		91	70 - 130
o-Xylene	0.100	0.08693		mg/Kg		87	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

Lab Sample ID: LCSD 880-42941/2-A

Matrix: Solid

Analysis Batch: 43042

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 42941

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09507		mg/Kg		95	70 - 130	2	35
Toluene	0.100	0.09079		mg/Kg		91	70 - 130	2	35
Ethylbenzene	0.100	0.08995		mg/Kg		90	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.1856		mg/Kg		93	70 - 130	2	35
o-Xylene	0.100	0.08867		mg/Kg		89	70 - 130	2	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3718-1
SDG: KH227015

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

Lab Sample ID: MB 880-42996/1-A

Matrix: Solid

Analysis Batch: 42937

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 42996

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		12/30/22 15:05	12/31/22 00:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/30/22 15:05	12/31/22 00:12	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/30/22 15:05	12/31/22 00:12	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	115		70 - 130				12/30/22 15:05	12/31/22 00:12	1
o-Terphenyl	127		70 - 130				12/30/22 15:05	12/31/22 00:12	1

Lab Sample ID: LCS 880-42996/2-A

Matrix: Solid

Analysis Batch: 42937

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 42996

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	942.2		mg/Kg		94	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1120		mg/Kg		112	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	106		70 - 130				
o-Terphenyl	118		70 - 130				

Lab Sample ID: LCSD 880-42996/3-A

Matrix: Solid

Analysis Batch: 42937

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 42996

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1025		mg/Kg		103	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	1000	1258		mg/Kg		126	70 - 130	12	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	119		70 - 130						
o-Terphenyl	132	S1+	70 - 130						

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-42868/1-A

Matrix: Solid

Analysis Batch: 42948

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			12/31/22 02:51	1

Eurofins Carlsbad

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3718-1
SDG: KH227015

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-42868/2-A

Client Sample ID: Lab Control Sample

Matrix: Solid

Prep Type: Soluble

Analysis Batch: 42948

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	263.9		mg/Kg		106	90 - 110

Lab Sample ID: LCSD 880-42868/3-A

Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Prep Type: Soluble

Analysis Batch: 42948

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	256.2		mg/Kg		102	90 - 110	3	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3718-1
SDG: KH227015

GC VOA

Prep Batch: 42941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3718-1	W-SW 01	Total/NA	Solid	5035	
MB 880-42941/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-42941/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-42941/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 43042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3718-1	W-SW 01	Total/NA	Solid	8021B	42941
MB 880-42941/5-A	Method Blank	Total/NA	Solid	8021B	42941
LCS 880-42941/1-A	Lab Control Sample	Total/NA	Solid	8021B	42941
LCSD 880-42941/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	42941

Analysis Batch: 43125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3718-1	W-SW 01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 42937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3718-1	W-SW 01	Total/NA	Solid	8015B NM	42996
MB 880-42996/1-A	Method Blank	Total/NA	Solid	8015B NM	42996
LCS 880-42996/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	42996
LCSD 880-42996/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	42996

Prep Batch: 42996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3718-1	W-SW 01	Total/NA	Solid	8015NM Prep	
MB 880-42996/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-42996/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-42996/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 43071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3718-1	W-SW 01	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 42868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3718-1	W-SW 01	Soluble	Solid	DI Leach	
MB 880-42868/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-42868/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-42868/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 42948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3718-1	W-SW 01	Soluble	Solid	300.0	42868
MB 880-42868/1-A	Method Blank	Soluble	Solid	300.0	42868
LCS 880-42868/2-A	Lab Control Sample	Soluble	Solid	300.0	42868
LCSD 880-42868/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	42868

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Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3718-1
SDG: KH227015

Client Sample ID: W-SW 01
Date Collected: 12/27/22 12:50
Date Received: 12/27/22 15:19

Lab Sample ID: 890-3718-1
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			4.99 g	5 mL	42941	12/30/22 11:33	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43042	01/03/23 20:28	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43125	01/04/23 09:17	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43071	01/03/23 10:37	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	42996	12/30/22 15:05	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42937	12/31/22 09:00	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	42868	12/29/22 10:52	KS	EET MID
Soluble	Analysis	300.0		5			42948	12/31/22 03:48	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: Lakewood AQE

Job ID: 890-3718-1
SDG: KH227015

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	T104704400-22-25	06-30-23

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: Lakewood AQE

Job ID: 890-3718-1
SDG: KH227015

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	MCAWW	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

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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: Lakewood AQE

Job ID: 890-3718-1
SDG: KH227015

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3718-1	W-SW 01	Solid	12/27/22 12:50	12/27/22 15:19	0 - 4

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



Environment Testing
Xenco

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

Chain of Custody

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Joe Guarnieri		Bill to: (if different)	
Company Name:	Fusacorn Pte		Company Name:	
Address:	4518 W Pierce		Address:	
City, State ZIP:	Carlsbad NM 88220		City, State ZIP:	
Phone:		Email:		

Work Order Comments				
Program:	UST/PST <input type="checkbox"/>	PPP <input type="checkbox"/>	Brownfields <input type="checkbox"/>	RRC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:				
Reporting:	Level II <input type="checkbox"/>	Level III <input type="checkbox"/>	PST/UST <input type="checkbox"/>	TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables:	EDD <input type="checkbox"/>	Adapt <input type="checkbox"/>	Other: _____	

[illegible][illegible]

890-3718 Chain of Custody



Total 200.7 / 6010		200.8 / 6020:		8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Ti Sn U V Zn	
Circle Method(s) and Metal(s) to be analyzed		TC1P / 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	
<p>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.</p>					
Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>Buckley Miller</i>	<i>Joe Giff</i>	18.07.2015			

Printed Date: 08/25/2020 Rev: 2020.2

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-3718-1

SDG Number: KH227015

Login Number: 3718

List Number: 1

Creator: Clifton, Cloe

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: 890-3718-1

SDG Number: KH227015

Login Number: 3718

List Number: 2

Creator: Teel, Brianna

List Source: Eurofins Midland

List Creation: 12/29/22 11:42 AM

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



Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 1/6/2023 12:28:31 PM

JOB DESCRIPTION

Lakewood AQE
SDG NUMBER Eddy

JOB NUMBER

890-3757-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

Eurofins Carlsbad**Job Notes**

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
1/6/2023 12:28:31 PM

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

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

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: Lakewood AQE

Laboratory Job ID: 890-3757-1
SDG: Eddy

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Definitions/Glossary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3757-1
SDG: Eddy

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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/Site: Lakewood AQE

Job ID: 890-3757-1
SDG: Eddy

Job ID: 890-3757-1

Laboratory: Eurofins Carlsbad

Narrative

**Job Narrative
890-3757-1**

Receipt

The samples were received on 1/3/2023 2:20 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 3.4°C

GC VOA

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 sample was outside control limits: E- SW 1.1 (890-3757-1). 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: W-SW02 (890-3757-6). 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.

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-43208 and 880-43208 and analytical batch 880-43279 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.

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3757-1
SDG: Eddy

Client Sample ID: E- SW 1.1

Lab Sample ID: 890-3757-1

Date Collected: 01/03/23 11:53

Matrix: Solid

Date Received: 01/03/23 14:20

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		01/04/23 13:47	01/05/23 12:52	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/04/23 13:47	01/05/23 12:52	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/04/23 13:47	01/05/23 12:52	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/04/23 13:47	01/05/23 12:52	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/04/23 13:47	01/05/23 12:52	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/04/23 13:47	01/05/23 12:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129		70 - 130	01/04/23 13:47	01/05/23 12:52	1
1,4-Difluorobenzene (Surr)	102		70 - 130	01/04/23 13:47	01/05/23 12:52	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			01/05/23 15:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/06/23 13:03	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	<49.9	U	49.9		mg/Kg		01/05/23 11:23	01/05/23 20:51	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/05/23 11:23	01/05/23 20:51	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/05/23 11:23	01/05/23 20:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	138	S1+	70 - 130	01/05/23 11:23	01/05/23 20:51	1
o-Terphenyl	124		70 - 130	01/05/23 11:23	01/05/23 20:51	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	429		4.98		mg/Kg			01/05/23 16:33	1

Client Sample ID: E-SW02

Lab Sample ID: 890-3757-2

Date Collected: 01/03/23 11:55

Matrix: Solid

Date Received: 01/03/23 14:20

Sample Depth: 0 - 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		01/04/23 13:47	01/05/23 13:13	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/04/23 13:47	01/05/23 13:13	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/04/23 13:47	01/05/23 13:13	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/04/23 13:47	01/05/23 13:13	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/04/23 13:47	01/05/23 13:13	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/04/23 13:47	01/05/23 13:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	125		70 - 130	01/04/23 13:47	01/05/23 13:13	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3757-1
SDG: Eddy

Client Sample ID: E-SW02

Lab Sample ID: 890-3757-2

Date Collected: 01/03/23 11:55

Matrix: Solid

Date Received: 01/03/23 14:20

Sample Depth: 0 - 1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	102		70 - 130	01/04/23 13:47	01/05/23 13:13	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			01/05/23 15:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/06/23 13:03	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	<49.9	U	49.9		mg/Kg		01/05/23 11:23	01/05/23 21:55	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/05/23 11:23	01/05/23 21:55	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/05/23 11:23	01/05/23 21:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	123		70 - 130				01/05/23 11:23	01/05/23 21:55	1
o-Terphenyl	112		70 - 130				01/05/23 11:23	01/05/23 21:55	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	478	F1	4.96		mg/Kg			01/05/23 16:38	1

Client Sample ID: N-SW01

Lab Sample ID: 890-3757-3

Date Collected: 01/03/23 12:41

Matrix: Solid

Date Received: 01/03/23 14:20

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		01/04/23 13:47	01/05/23 13:33	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/04/23 13:47	01/05/23 13:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/04/23 13:47	01/05/23 13:33	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		01/04/23 13:47	01/05/23 13:33	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/04/23 13:47	01/05/23 13:33	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		01/04/23 13:47	01/05/23 13:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	123		70 - 130	01/04/23 13:47	01/05/23 13:33	1
1,4-Difluorobenzene (Surr)	102		70 - 130	01/04/23 13:47	01/05/23 13:33	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			01/05/23 15:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/06/23 13:03	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3757-1
SDG: Eddy

Client Sample ID: N-SW01

Lab Sample ID: 890-3757-3

Date Collected: 01/03/23 12:41

Matrix: Solid

Date Received: 01/03/23 14:20

Sample Depth: 0 - 4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/05/23 11:23	01/05/23 22:16	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/05/23 11:23	01/05/23 22:16	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/05/23 11:23	01/05/23 22:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	123		70 - 130				01/05/23 11:23	01/05/23 22:16	1
o-Terphenyl	114		70 - 130				01/05/23 11:23	01/05/23 22:16	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	31.3		5.04		mg/Kg			01/06/23 11:29	1

Client Sample ID: FS 17.1

Lab Sample ID: 890-3757-4

Date Collected: 01/03/23 13:23

Matrix: Solid

Date Received: 01/03/23 14:20

Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/04/23 13:47	01/05/23 13:54	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/04/23 13:47	01/05/23 13:54	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/04/23 13:47	01/05/23 13:54	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		01/04/23 13:47	01/05/23 13:54	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/04/23 13:47	01/05/23 13:54	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		01/04/23 13:47	01/05/23 13:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129		70 - 130				01/04/23 13:47	01/05/23 13:54	1
1,4-Difluorobenzene (Surr)	99		70 - 130				01/04/23 13:47	01/05/23 13:54	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			01/05/23 15:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			01/06/23 13:03	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	<49.8	U	49.8		mg/Kg		01/05/23 11:23	01/05/23 22:38	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		01/05/23 11:23	01/05/23 22:38	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		01/05/23 11:23	01/05/23 22:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	122		70 - 130				01/05/23 11:23	01/05/23 22:38	1
o-Terphenyl	115		70 - 130				01/05/23 11:23	01/05/23 22:38	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3757-1
SDG: Eddy

Client Sample ID: FS 17.1

Lab Sample ID: 890-3757-4

Date Collected: 01/03/23 13:23

Matrix: Solid

Date Received: 01/03/23 14:20

Sample Depth: 1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	432		4.97		mg/Kg			01/05/23 17:09	1

Client Sample ID: FS 20.1

Lab Sample ID: 890-3757-5

Date Collected: 01/03/23 13:25

Matrix: Solid

Date Received: 01/03/23 14:20

Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/04/23 13:47	01/05/23 14:15	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/04/23 13:47	01/05/23 14:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/04/23 13:47	01/05/23 14:15	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		01/04/23 13:47	01/05/23 14:15	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/04/23 13:47	01/05/23 14:15	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		01/04/23 13:47	01/05/23 14:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		70 - 130				01/04/23 13:47	01/05/23 14:15	1
1,4-Difluorobenzene (Surr)	78		70 - 130				01/04/23 13:47	01/05/23 14:15	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			01/05/23 15:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/06/23 13:03	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	<49.9	U	49.9		mg/Kg		01/05/23 11:23	01/05/23 22:59	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/05/23 11:23	01/05/23 22:59	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/05/23 11:23	01/05/23 22:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	121		70 - 130				01/05/23 11:23	01/05/23 22:59	1
o-Terphenyl	112		70 - 130				01/05/23 11:23	01/05/23 22:59	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	394		5.03		mg/Kg			01/05/23 17:24	1

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Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3757-1
SDG: Eddy

Client Sample ID: W-SW02

Lab Sample ID: 890-3757-6

Date Collected: 01/03/23 13:36

Matrix: Solid

Date Received: 01/03/23 14:20

Sample Depth: 0 - 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		01/04/23 13:47	01/05/23 14:36	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/04/23 13:47	01/05/23 14:36	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/04/23 13:47	01/05/23 14:36	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/04/23 13:47	01/05/23 14:36	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/04/23 13:47	01/05/23 14:36	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/04/23 13:47	01/05/23 14:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	126		70 - 130	01/04/23 13:47	01/05/23 14:36	1
1,4-Difluorobenzene (Surr)	104		70 - 130	01/04/23 13:47	01/05/23 14:36	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			01/05/23 15:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/06/23 13:03	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		01/05/23 11:23	01/05/23 23:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/05/23 11:23	01/05/23 23:21	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/05/23 11:23	01/05/23 23:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	131	S1+	70 - 130	01/05/23 11:23	01/05/23 23:21	1
o-Terphenyl	121		70 - 130	01/05/23 11:23	01/05/23 23:21	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	132		25.0		mg/Kg			01/05/23 17:29	5

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Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3757-1
SDG: Eddy

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)
890-3757-1	E- SW 1.1	129	102
890-3757-2	E-SW02	125	102
890-3757-3	N-SW01	123	102
890-3757-4	FS 17.1	129	99
890-3757-5	FS 20.1	85	78
890-3757-6	W-SW02	126	104
LCS 880-43168/1-A	Lab Control Sample	98	87
LCSD 880-43168/2-A	Lab Control Sample Dup	97	96
MB 880-43168/5-A	Method Blank	102	91
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)
890-3757-1	E- SW 1.1	138 S1+	124
890-3757-1 MS	E- SW 1.1	112	85
890-3757-1 MSD	E- SW 1.1	114	88
890-3757-2	E-SW02	123	112
890-3757-3	N-SW01	123	114
890-3757-4	FS 17.1	122	115
890-3757-5	FS 20.1	121	112
890-3757-6	W-SW02	131 S1+	121
LCS 880-43251/2-A	Lab Control Sample	104	98
LCSD 880-43251/3-A	Lab Control Sample Dup	118	110
MB 880-43251/1-A	Method Blank	113	109
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3757-1
SDG: Eddy

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-43168/5-A

Matrix: Solid

Analysis Batch: 43199

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 43168

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/04/23 13:47	01/05/23 11:00	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/04/23 13:47	01/05/23 11:00	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/04/23 13:47	01/05/23 11:00	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/04/23 13:47	01/05/23 11:00	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/04/23 13:47	01/05/23 11:00	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/04/23 13:47	01/05/23 11:00	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	01/04/23 13:47	01/05/23 11:00	1
1,4-Difluorobenzene (Surr)	91		70 - 130	01/04/23 13:47	01/05/23 11:00	1

Lab Sample ID: LCS 880-43168/1-A

Matrix: Solid

Analysis Batch: 43199

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 43168

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1007		mg/Kg		101	70 - 130
Toluene	0.100	0.09983		mg/Kg		100	70 - 130
Ethylbenzene	0.100	0.09393		mg/Kg		94	70 - 130
m-Xylene & p-Xylene	0.200	0.2070		mg/Kg		103	70 - 130
o-Xylene	0.100	0.1016		mg/Kg		102	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	87		70 - 130

Lab Sample ID: LCSD 880-43168/2-A

Matrix: Solid

Analysis Batch: 43199

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 43168

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1044		mg/Kg		104	70 - 130	4	35
Toluene	0.100	0.09994		mg/Kg		100	70 - 130	0	35
Ethylbenzene	0.100	0.09345		mg/Kg		93	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.2051		mg/Kg		103	70 - 130	1	35
o-Xylene	0.100	0.1010		mg/Kg		101	70 - 130	1	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3757-1
SDG: Eddy

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

Lab Sample ID: MB 880-43251/1-A

Matrix: Solid

Analysis Batch: 43191

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 43251

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		01/05/23 11:23	01/05/23 19:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/05/23 11:23	01/05/23 19:47	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/05/23 11:23	01/05/23 19:47	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130				01/05/23 11:23	01/05/23 19:47	1
o-Terphenyl	109		70 - 130				01/05/23 11:23	01/05/23 19:47	1

Lab Sample ID: LCS 880-43251/2-A

Matrix: Solid

Analysis Batch: 43191

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 43251

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	978.5		mg/Kg		98	70 - 130
Diesel Range Organics (Over C10-C28)	1000	924.6		mg/Kg		92	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	104		70 - 130				
o-Terphenyl	98		70 - 130				

Lab Sample ID: LCSD 880-43251/3-A

Matrix: Solid

Analysis Batch: 43191

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 43251

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1009		mg/Kg		101	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	1000	999.4		mg/Kg		100	70 - 130	8	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	118		70 - 130						
o-Terphenyl	110		70 - 130						

Lab Sample ID: 890-3757-1 MS

Matrix: Solid

Analysis Batch: 43191

Client Sample ID: E- SW 1.1

Prep Type: Total/NA

Prep Batch: 43251

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	750.7		mg/Kg		70	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	999	885.9		mg/Kg		87	70 - 130

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3757-1
SDG: Eddy

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

Lab Sample ID: 890-3757-1 MS

Matrix: Solid

Analysis Batch: 43191

Client Sample ID: E- SW 1.1

Prep Type: Total/NA

Prep Batch: 43251

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	112		70 - 130
o-Terphenyl	85		70 - 130

Lab Sample ID: 890-3757-1 MSD

Matrix: Solid

Analysis Batch: 43191

Client Sample ID: E- SW 1.1

Prep Type: Total/NA

Prep Batch: 43251

	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	<49.9	U	999	826.1		mg/Kg		78	70 - 130	10	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	913.9		mg/Kg		90	70 - 130	3	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	114		70 - 130								
o-Terphenyl	88		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-43208/1-A

Matrix: Solid

Analysis Batch: 43279

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			01/05/23 15:09	1	

Lab Sample ID: LCS 880-43208/2-A

Matrix: Solid

Analysis Batch: 43279

Client Sample ID: Lab Control Sample

Prep Type: Soluble

	Spike	LCS	LCS					%Rec		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits			
Chloride	250	258.5		mg/Kg		103	90 - 110			

Lab Sample ID: LCSD 880-43208/3-A

Matrix: Solid

Analysis Batch: 43279

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

	Spike	LCSD	LCSD					%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	257.9		mg/Kg		103	90 - 110	0	20	

Lab Sample ID: 890-3757-2 MS

Matrix: Solid

Analysis Batch: 43279

Client Sample ID: E-SW02

Prep Type: Soluble

	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	478	F1	248	738.7		mg/Kg		105	90 - 110		

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3757-1
SDG: Eddy

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-3757-2 MSD					Client Sample ID: E-SW02							
Matrix: Solid					Prep Type: Soluble							
Analysis Batch: 43279												
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit	
Chloride	478	F1	248	773.6	F1	mg/Kg		119	90 - 110	5	20	

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3757-1
SDG: Eddy

GC VOA

Prep Batch: 43168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3757-1	E- SW 1.1	Total/NA	Solid	5035	
890-3757-2	E-SW02	Total/NA	Solid	5035	
890-3757-3	N-SW01	Total/NA	Solid	5035	
890-3757-4	FS 17.1	Total/NA	Solid	5035	
890-3757-5	FS 20.1	Total/NA	Solid	5035	
890-3757-6	W-SW02	Total/NA	Solid	5035	
MB 880-43168/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43168/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43168/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 43199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3757-1	E- SW 1.1	Total/NA	Solid	8021B	43168
890-3757-2	E-SW02	Total/NA	Solid	8021B	43168
890-3757-3	N-SW01	Total/NA	Solid	8021B	43168
890-3757-4	FS 17.1	Total/NA	Solid	8021B	43168
890-3757-5	FS 20.1	Total/NA	Solid	8021B	43168
890-3757-6	W-SW02	Total/NA	Solid	8021B	43168
MB 880-43168/5-A	Method Blank	Total/NA	Solid	8021B	43168
LCS 880-43168/1-A	Lab Control Sample	Total/NA	Solid	8021B	43168
LCSD 880-43168/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43168

Analysis Batch: 43297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3757-1	E- SW 1.1	Total/NA	Solid	Total BTEX	
890-3757-2	E-SW02	Total/NA	Solid	Total BTEX	
890-3757-3	N-SW01	Total/NA	Solid	Total BTEX	
890-3757-4	FS 17.1	Total/NA	Solid	Total BTEX	
890-3757-5	FS 20.1	Total/NA	Solid	Total BTEX	
890-3757-6	W-SW02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 43191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3757-1	E- SW 1.1	Total/NA	Solid	8015B NM	43251
890-3757-2	E-SW02	Total/NA	Solid	8015B NM	43251
890-3757-3	N-SW01	Total/NA	Solid	8015B NM	43251
890-3757-4	FS 17.1	Total/NA	Solid	8015B NM	43251
890-3757-5	FS 20.1	Total/NA	Solid	8015B NM	43251
890-3757-6	W-SW02	Total/NA	Solid	8015B NM	43251
MB 880-43251/1-A	Method Blank	Total/NA	Solid	8015B NM	43251
LCS 880-43251/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43251
LCSD 880-43251/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43251
890-3757-1 MS	E- SW 1.1	Total/NA	Solid	8015B NM	43251
890-3757-1 MSD	E- SW 1.1	Total/NA	Solid	8015B NM	43251

Prep Batch: 43251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3757-1	E- SW 1.1	Total/NA	Solid	8015NM Prep	
890-3757-2	E-SW02	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3757-1
SDG: Eddy

GC Semi VOA (Continued)

Prep Batch: 43251 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3757-3	N-SW01	Total/NA	Solid	8015NM Prep	
890-3757-4	FS 17.1	Total/NA	Solid	8015NM Prep	
890-3757-5	FS 20.1	Total/NA	Solid	8015NM Prep	
890-3757-6	W-SW02	Total/NA	Solid	8015NM Prep	
MB 880-43251/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43251/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43251/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3757-1 MS	E- SW 1.1	Total/NA	Solid	8015NM Prep	
890-3757-1 MSD	E- SW 1.1	Total/NA	Solid	8015NM Prep	

Analysis Batch: 43389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3757-1	E- SW 1.1	Total/NA	Solid	8015 NM	
890-3757-2	E-SW02	Total/NA	Solid	8015 NM	
890-3757-3	N-SW01	Total/NA	Solid	8015 NM	
890-3757-4	FS 17.1	Total/NA	Solid	8015 NM	
890-3757-5	FS 20.1	Total/NA	Solid	8015 NM	
890-3757-6	W-SW02	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 43208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3757-1	E- SW 1.1	Soluble	Solid	DI Leach	
890-3757-2	E-SW02	Soluble	Solid	DI Leach	
890-3757-3	N-SW01	Soluble	Solid	DI Leach	
890-3757-4	FS 17.1	Soluble	Solid	DI Leach	
890-3757-5	FS 20.1	Soluble	Solid	DI Leach	
890-3757-6	W-SW02	Soluble	Solid	DI Leach	
MB 880-43208/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-43208/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-43208/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3757-2 MS	E-SW02	Soluble	Solid	DI Leach	
890-3757-2 MSD	E-SW02	Soluble	Solid	DI Leach	

Analysis Batch: 43279

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3757-1	E- SW 1.1	Soluble	Solid	300.0	43208
890-3757-2	E-SW02	Soluble	Solid	300.0	43208
890-3757-3	N-SW01	Soluble	Solid	300.0	43208
890-3757-4	FS 17.1	Soluble	Solid	300.0	43208
890-3757-5	FS 20.1	Soluble	Solid	300.0	43208
890-3757-6	W-SW02	Soluble	Solid	300.0	43208
MB 880-43208/1-A	Method Blank	Soluble	Solid	300.0	43208
LCS 880-43208/2-A	Lab Control Sample	Soluble	Solid	300.0	43208
LCSD 880-43208/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	43208
890-3757-2 MS	E-SW02	Soluble	Solid	300.0	43208
890-3757-2 MSD	E-SW02	Soluble	Solid	300.0	43208

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Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3757-1
SDG: Eddy

Client Sample ID: E- SW 1.1

Lab Sample ID: 890-3757-1

Date Collected: 01/03/23 11:53

Matrix: Solid

Date Received: 01/03/23 14:20

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	43168	01/04/23 13:47	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43199	01/05/23 12:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43297	01/05/23 15:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			43389	01/06/23 13:03	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	43251	01/05/23 11:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43191	01/05/23 20:51	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	43208	01/05/23 09:40	KS	EET MID
Soluble	Analysis	300.0		1			43279	01/05/23 16:33	CH	EET MID

Client Sample ID: E-SW02

Lab Sample ID: 890-3757-2

Date Collected: 01/03/23 11:55

Matrix: Solid

Date Received: 01/03/23 14:20

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	43168	01/04/23 13:47	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43199	01/05/23 13:13	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43297	01/05/23 15:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			43389	01/06/23 13:03	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43251	01/05/23 11:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43191	01/05/23 21:55	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	43208	01/05/23 09:40	KS	EET MID
Soluble	Analysis	300.0		1			43279	01/05/23 16:38	CH	EET MID

Client Sample ID: N-SW01

Lab Sample ID: 890-3757-3

Date Collected: 01/03/23 12:41

Matrix: Solid

Date Received: 01/03/23 14:20

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	43168	01/04/23 13:47	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43199	01/05/23 13:33	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43297	01/05/23 15:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			43389	01/06/23 13:03	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43251	01/05/23 11:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43191	01/05/23 22:16	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	43208	01/05/23 09:40	KS	EET MID
Soluble	Analysis	300.0		1			43279	01/06/23 11:29	CH	EET MID

Client Sample ID: FS 17.1

Lab Sample ID: 890-3757-4

Date Collected: 01/03/23 13:23

Matrix: Solid

Date Received: 01/03/23 14:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	43168	01/04/23 13:47	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43199	01/05/23 13:54	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43297	01/05/23 15:21	SM	EET MID

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Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3757-1
SDG: Eddy

Client Sample ID: FS 17.1

Lab Sample ID: 890-3757-4

Date Collected: 01/03/23 13:23

Matrix: Solid

Date Received: 01/03/23 14:20

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			43389	01/06/23 13:03	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	43251	01/05/23 11:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43191	01/05/23 22:38	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	43208	01/05/23 09:40	KS	EET MID
Soluble	Analysis	300.0		1			43279	01/05/23 17:09	CH	EET MID

Client Sample ID: FS 20.1

Lab Sample ID: 890-3757-5

Date Collected: 01/03/23 13:25

Matrix: Solid

Date Received: 01/03/23 14:20

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	43168	01/04/23 13:47	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43199	01/05/23 14:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43297	01/05/23 15:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			43389	01/06/23 13:03	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	43251	01/05/23 11:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43191	01/05/23 22:59	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	43208	01/05/23 09:40	KS	EET MID
Soluble	Analysis	300.0		1			43279	01/05/23 17:24	CH	EET MID

Client Sample ID: W-SW02

Lab Sample ID: 890-3757-6

Date Collected: 01/03/23 13:36

Matrix: Solid

Date Received: 01/03/23 14:20

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	43168	01/04/23 13:47	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43199	01/05/23 14:36	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43297	01/05/23 15:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			43389	01/06/23 13:03	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	43251	01/05/23 11:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43191	01/05/23 23:21	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	43208	01/05/23 09:40	KS	EET MID
Soluble	Analysis	300.0		5			43279	01/05/23 17:29	CH	EET MID

Laboratory References:

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

Eurofins Carlsbad

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Lakewood AQE

Job ID: 890-3757-1
SDG: Eddy

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	T104704400-22-25	06-30-23

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: Lakewood AQE

Job ID: 890-3757-1
SDG: Eddy

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	MCAWW	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

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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: Lakewood AQE

Job ID: 890-3757-1
SDG: Eddy

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3757-1	E- SW 1.1	Solid	01/03/23 11:53	01/03/23 14:20	0 - 4
890-3757-2	E-SW02	Solid	01/03/23 11:55	01/03/23 14:20	0 - 1
890-3757-3	N-SW01	Solid	01/03/23 12:41	01/03/23 14:20	0 - 4
890-3757-4	FS 17.1	Solid	01/03/23 13:23	01/03/23 14:20	1
890-3757-5	FS 20.1	Solid	01/03/23 13:25	01/03/23 14:20	1
890-3757-6	W-SW02	Solid	01/03/23 13:36	01/03/23 14:20	0 - 1

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



Environment Testing

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

Chain of Custody

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Joe Guesner		Bill to: (if different)	
Company Name:	Paracore		Company Name:	
Address:	4518 W Pierce St.		Address:	
City, State ZIP:	Carlsbad NM 88220	City, State ZIP:		
Phone:		Email:	luckygus.willie@paracore.com	

Work Order Comments				
Program:	UST/PST <input type="checkbox"/>	PRP <input type="checkbox"/>	Brownfields <input type="checkbox"/>	RRC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:				
Reporting:	Level II <input type="checkbox"/>	Level III <input type="checkbox"/>	PST/UST <input type="checkbox"/>	TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables:	EDD <input type="checkbox"/>	Adapt <input type="checkbox"/>	Other: _____	

[illegible]

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Ch	Y	B	Sample Comments
E-SW 2.1	S	1/3	11:53	0-4'	G	1	X	X	X	
E-SW 02	S		11:55	0-1'		1	X	X	X	
N-SW 02	S		12:41	0-4'		1	X	X	X	
FS 17.1	S		1:23	1'		1	X	X	X	
FS 20.1	S		1:25	1'		1	X	X	X	
W-SW 02	S		1:36	0-1'		1	X	X	X	

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM Texas 11	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂	Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed		TCLP / SPLP 6010 : 8RCRA 5b 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 by the client constitutes a valid purchase order from client company to Eurofins Xeno, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xeno 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 Xeno. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xeno, but not analyzed. These terms will be enforced unless previously repudiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Bucky Miller	See City	1-3-2017			
3					
5					

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-3757-1

SDG Number: Eddy

Login Number: 3757

List Number: 1

Creator: Clifton, Cloe

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: 890-3757-1

SDG Number: Eddy

Login Number: 3757

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 01/05/23 10:46 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, Spur Energy Partners LLC (Spur), as reflected in our proposal.

Additional Scope Limitations

Development of this RAP is based upon information provided by the Client 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 Client. The data, interpretations, findings, and our recommendations are based solely upon reformation executed within the scope of these services.

Reliance

This report has been prepared for the exclusive use of Spur, 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 Spur and Terracon. Any unauthorized distribution or reuse is at Spur sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions, and limitations stated in the proposal and Spur 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 Spur and all relying parties unless otherwise agreed in writing.

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

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

CONDITIONS

Action 185395

CONDITIONS

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 185395
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your closure report and final C-141 for Incident #NAPP2226327719 LAKEWOOD AQE STATE SWD, thank you. This closure is approved.	6/13/2023