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

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

Incident ID	nAPP2320536236
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party DKL Energy - Cottonwood, LLC	OGRID
Contact Name Cassie Whitefield	Contact Telephone 870-310-9078
Contact email cassie.whitefield@deleklogistics.com	Incident # *(assigned by OCD)*
Contact mailing address	

Location of Release Source

Latitude 32.5787194 Longitude -103.6645806
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Matador Pony Express East	Site Type
Date Release Discovered 7/16/2023	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
B	16	20S	33E	Lea

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☑ Produced Water	Volume Released (bbls) 60	Volume Recovered (bbls) 56
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☑ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release Unauthorized release from a riser		

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Page 2

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2320536236
District RP	
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Was this a major release as defined by 19.15.29.7(A) NMAC? ☑ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Volume of release is greater than 25 bbls

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Cassie Whitfield notified Mike Bratcher (OCD) by phone on July 16, 2023 and left voicemail.

Initial Response

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

☑ The source of the release has been stopped.
☑ The impacted area has been secured to protect human health and the environment.
☑ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☑ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: Cassie Whitefield Title: Sr. EHS Manager

Signature: _____ Date: _____

email: cassie.whitefield@deleklogistics.com Telephone: 870-310-9078

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2320536236
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	UNK (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☑ 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)?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☑ 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?	☐ Yes ☑ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☑ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☑ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☑ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☑ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☑ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☑ 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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2320536236
District RP	
Facility ID	
Application ID	

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

Printed Name: Cassie Whitefield Title: Sr. EHS Manager

Signature: _____ Date: _____

email: cassie.whitefield@deleklogistics.com Telephone: 870-310-9078

OCD Only

Received by: _____ Date: _____

Incident ID	nAPP2320536236
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: Cassie Whitefield Title: Sr. EHS Manager

Signature: _____ Date: _____

email: cassie.whitefield@deleklogistics.com Telephone: 870-310-9078

OCD Only

Received by: _____ Date: _____

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: _____

2135 S. Loop 250,
Midland, Texas 79703
United States
www.ghd.com

Our ref: 12618492

February 15, 2024

State of New Mexico Energy, Minerals and Resource Oil Conservation Division
District I
1625 N. French Dr.
Hobbs, NM 88240

Re: Site Closure Report
Delek Logistics Partners, L.P.
Matador Pony Express East Site
Incident ID: nAPP2320536236
B-16-20S-33E, Lea County, New Mexico

1. Introduction

GHD Services, Inc. (GHD), on behalf of DKL Energy – Cottonwood, LLC, which is owned and operated by Delek logistics Partners, L.P. (Delek), submits this Site Closure Report to the State of New Mexico Energy, Minerals and Resource Oil Conservation Division (OCD) District I Office. This report provides documentation of remediation activities and analyses in the produced water impacted area at the Matador Pony Express East Site (Site). The Site is located in Unit Letter B Section 16 of Township 20 South and Range 33 East in Lea County, New Mexico. The GPS coordinates for the release site are 32.5787194º N Latitude and 103.6645806º W Longitude. The surface owner of the land where the release occurred is New Mexico State Trust Land. Figure 1 depicts the Site location. The Site and other details are depicted on Figure 2 and Figure 3.

2. Background and Regulatory Notification Information

The release is subject to the jurisdiction of the OCD District I Office in Hobbs, New Mexico. Notice was given to the OCD via Notification of Release (NOR) Submission, Action 243583. A C-141 Release Notification for this release was submitted to the OCD and assigned with Incident Number nAPP2320536236. The C-141 stated 60 barrels (bbls) of produced water were released from a riser. The cause of the release was equipment failure. Approximately 56 bbls of produced water were recovered. The Release Notification, Site Characterization, Remediation, and Closure portions of Form C-141 are attached to the front of this report.

3. Site Characterization and Closure Criteria

According to the Site characterization evaluation and 19.15.29.12.C(4)(a)(i), the Site is located within an area of low karst potential. No usable groundwater data was available within one-half mile of the Site. No other receptors (i.e. water wells, playas, wetlands, waterways, lakebeds, or ordinance boundaries) were located within each regulatory specified distance and/or boundary from the Site. Also based on our review, the Site is

not located in a mapped floodplain. Documentation of the Site characterization and receptor review are included as Attachment A. Based on the results of the site characterization, the closure criteria are listed below:

General Site Characterization and Groundwater Information:

Site Characterization	Average Groundwater Depth (ft)
No Receptors Found	Unknown, treated as less than fifty (50) feet

Closure Criteria for Soils Impacted by a Release (NMAC 19.15.29.12)

Regulatory Standard	Benzene (mg/kg)	BTEX (mg/kg)	TPH (GRO+DRO) (mg/kg)	TPH (GRO+DRO+MRO) (mg/kg)	Chloride (mg/kg)
19.15.29.13 Restoration, Reclamation and Re-Vegetation (Impacted Area 0-4 feet)	10	50	--	100	600
19.15.29.12 NMAC Table I Closure Criteria for Soils Impacted by a Release	10	50	--	100	600

4. Soil Delineation Assessment Summary and Findings

In order to assess the horizontal and vertical extent of impacted soils at the Site, GHD mobilized to the Site on July 17 and July 31, 2023. A total of 19 hand auger soil borings were installed to various depths based on field screening; however, final depths ranged from two (2) to five (5) feet below ground surface (bgs) (H-1 through H-4 and DS-1 through DS-15). A total of thirty-eight (38) soil samples (two from each hand auger soil boring) were collected from various depths. Soil samples were placed in laboratory-provided containers, which were immediately labelled, sealed, and stored/transported in a cooler containing ice to a laboratory certified by the National Environmental Laboratory Program (NELAP) for analysis. All soil samples were submitted to Eurofins in Carlsbad, New Mexico, and analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA SW846 Method 8021B, total petroleum hydrocarbons (TPH) by EPA SW46 Method 8015B Modified, and chloride by EPA Method 300.

Analytical results indicated eight (8) of the soil samples exhibited TPH and/or chloride concentrations above Table I Closure Criteria. Analytical results are summarized in Table 1 and in the laboratory analytical reports included in Attachment B. Soil sampling locations are depicted on Figure 2.

In order to further delineate the vertical extent of soil impacts, GHD and Delek personnel mobilized to the Site on July 26, 2023, to install delineation test pits. Test pit installation continued through July 28, 2023. A total of twenty-three (23) test pits were installed to various depths based on field screening; however final depths ranged from two (2) to ten (10) feet bgs. A total of forty-six (46) soil samples (two from each test pit) were collected from various depths. Samples were placed in laboratory-provided containers, which were immediately labelled, sealed, and stored/transported in a cooler containing ice to a laboratory certified by the NELAP for analysis. All samples were submitted to Eurofins in Carlsbad, New Mexico, and analyzed for BTEX by EPA SW846 Method 8021B, TPH by EPA SW846 Method 8015B Modified, and chloride by EPA Method 300.

Analytical results indicated twenty-three (23) of the soil samples exhibited chloride concentrations above Table I Closure Criteria. Analytical results are summarized in Table 1 and in the laboratory analytical reports included in Attachment B. Sampling locations are depicted on Figure 2.

5. Excavation, Confirmation Sampling, and Waste Management

GHD and Delek personnel performed remedial excavation activities on the affected area of the Site between July 28, 2023 and September 26, 2023. Final depths ranged from one-quarter (0.25) to thirteen (13) feet bgs. A total of 256 bottom hole and twenty-five (25) sidewall composite confirmation soil samples were collected. Composite confirmation soil samples represented areas no greater than 200 square feet. With each round of soil sampling, bottom hole areas with soil samples that exceeded Table I Closure Criteria were further excavated in one-half (0.5) to two (2) feet intervals and resampled. Sidewall locations with soil samples that exceeded Table I Closure Criteria were also further excavated and resampled. Soil samples were placed in laboratory-provided containers, which were immediately labelled, sealed, and stored/transported in a cooler containing ice to a laboratory certified by the NELAP for analysis. Soil samples collected on July 28, 2023, were submitted to Eurofins in Carlsbad, New Mexico, and analyzed for BTEX by EPA SW846 Method 8021B, TPH by EPA SW846 Method 8015B Modified, and chloride by EPA Method 300. All other soil samples were submitted to Hall Environmental Analysis Laboratory (HEAL) in Albuquerque, New Mexico, and analyzed for BTEX by EPA SW846 Method 8021B, TPH by EPA SW46 Method 8015B Modified, and chloride by EPA Method 300.

Analytical results indicated five of the final soil samples exhibited TPH and/or chloride concentrations above Table I Closure Criteria (BH-167, BH-169, BH-170, BH-185, and SW-28). The areas represented by these samples contain equipment, above ground, and below ground product lines. Due to the sensitive nature of these areas no further excavation was conducted. Analytical results are included in Table 2 and in the laboratory analytical reports included as Attachment B. Sample locations are shown on Figure 3.

Waste management activities were performed in coordination with Delek directives. Delek obtained regulatory approval via the successful processing of Form C-138 Request for Approval to Accept Solid Waste. The waste was approved for acceptance at the OCD-permitted (NM1-006), R360 Halfway facility located at 6601 Hobbs Hwy US62 / 180 Mile Marker 66 Carlsbad, NM 88220. Approximately 5,389 yards of impacted soils were removed from the remedial excavation and disposed of. The approved C-138 and waste manifests are available upon request but are not attached due to the size of the file. A summary of soil disposal is included in Table 3. A photographic log is included as Attachment C. Sampling notifications are included as Attachment D.

6. nAPP2320536236 Deferral and Closure Request

The excavation was backfilled with non-impacted virgin soil transported to the Site from a locally sourced pit. Site Characterization, soil delineation, and remediation activities for Incident nAPP2320536236 have been performed in accordance with applicable NMOCD guidance and regulations. GHD, on behalf of Delek, requests deferral of the remediation of TPH and chloride impacted soils immediately surrounding equipment and lines represented by soil samples BH-167, BH-169, BH-170, BH-185, and SW-28 due to equipment structural stability concerns. These areas will be remediated when the oil and gas production equipment is removed from the Site during Site decommissioning. Based upon supporting documentation provided in this report, GHD, on behalf of Delek Logistics Partners, L.P., respectfully requests closure of nAPP2320536236.

If you have any questions or comments concerning this Site Closure Report, please do not hesitate to contact our Midland office at (432) 686-0086.

Sincerely,

GHD

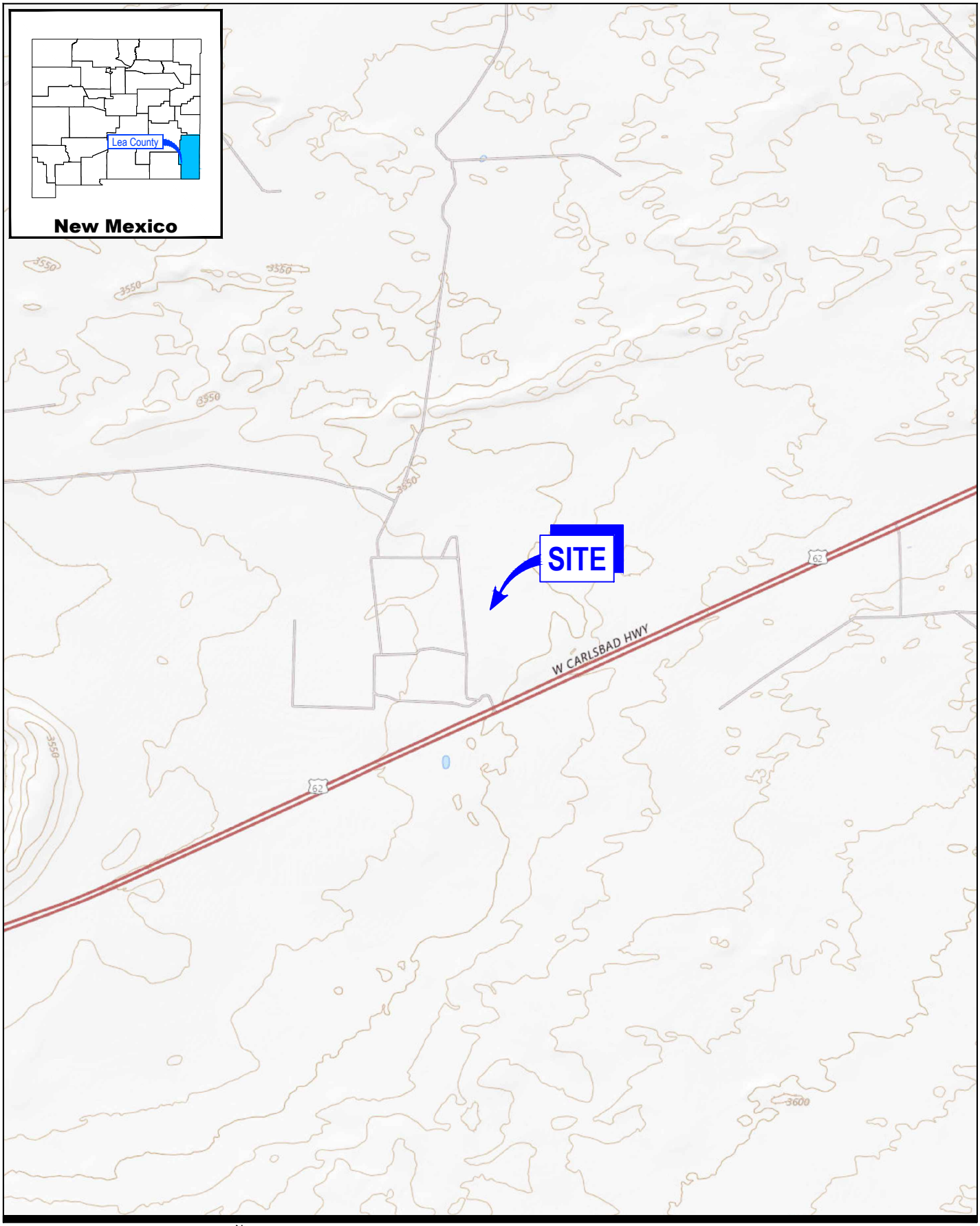
Nate Reece
Environmental Scientist

J.T. Murrey
Senior Project Director

Encl. Figure 1 – Site Location Map
Figure 2 – Delineation Sampling Locations Map
Figure 3 – Confirmation Sampling Locations Map
Table 1 – Summary of Soil Analytical Data – Assessment Activities
Table 2 – Summary of Soil Analytical Data – Confirmation Samples
Table 3 – Daily Soil Disposal Summary
Attachment A – Site Characterization Documentation
Attachment B – Laboratory Analytical Reports and Chain-of-Custody Documentation
Attachment C – Photographic Log
Attachment D – Sampling Notifications

cc: Cassie Whitefield, Delek

Figures



0 1000 2000 ft

Coordinate System:
NAD 1983 (2011) StatePlane-
New Mexico East (US Feet)

N

GHD

DELEK LOGISTICS PARTNERS, L.P.
LEA COUNTY, NEW MEXICO
MATADOR PONY EXPRESS EAST
PRODUCED WATER RELEASE

SITE LOCATION MAP

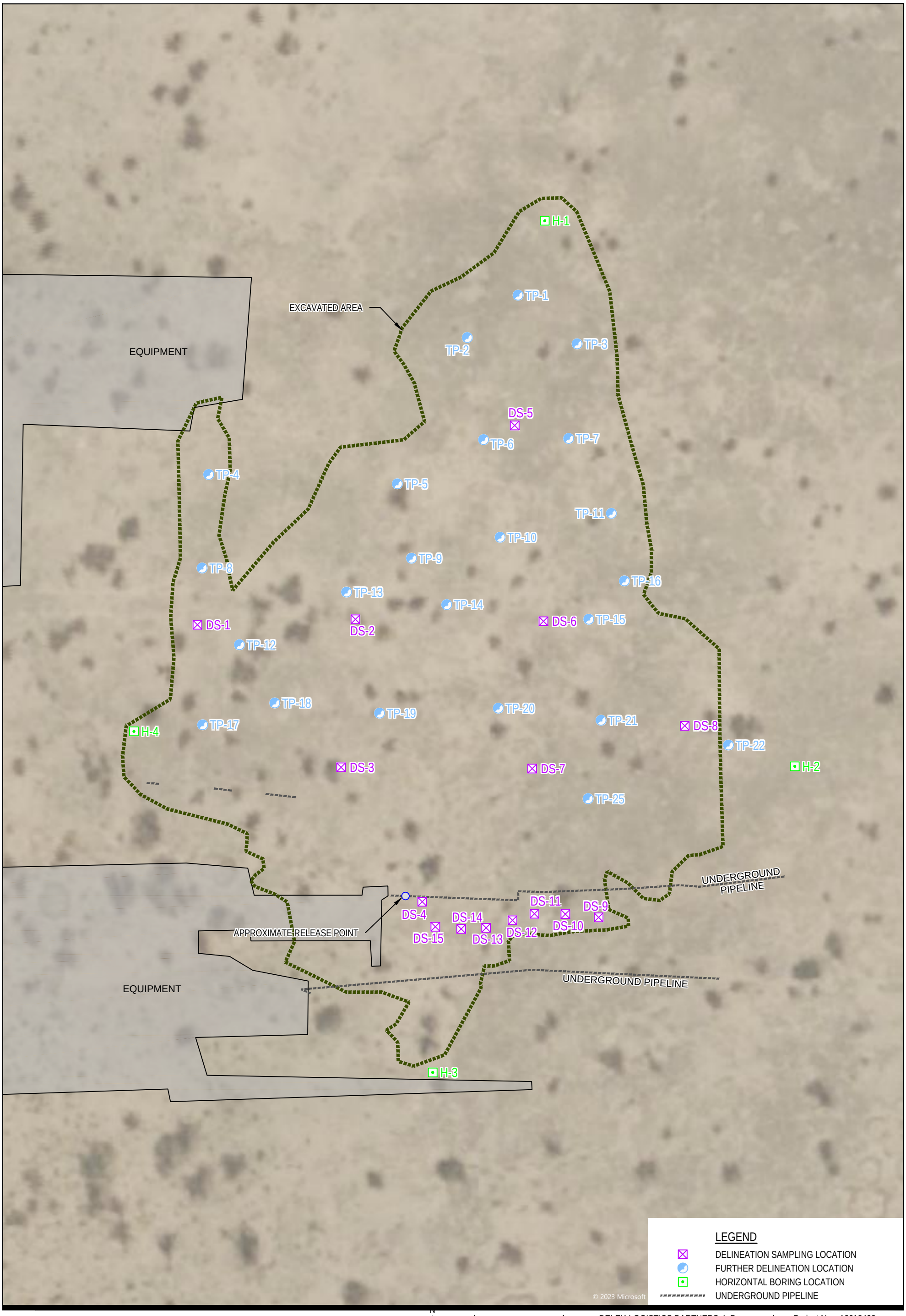
Project No. **12618492**
Date **December 2023**

FIGURE 1

Filename: \\ghdnet\ghd\US\Houston\Projects\562\12618492\Digital_Design\ACAD\Figures\RPT001\12618492-GHD-00-00-RPT-EN-D101_DL-001.dwg
Plot date: December 05, 2023 12:20:10

Data Source: USGS 7.5 Minute Quad "Laguna Gatuna, New Mexico"
Lat/Long: 32.5789° North, 103.6645° West

Released to Imaging: 3/12/2025 11:29:45 AM



NOTE:

SEE TABLE 1 FOR FULL ANALYTICAL RESULTS/DETAILS.

0 15 30 ft

Coordinate System:
NAD 1983 (2011) StatePlane-
New Mexico East (US Feet)

N

GHD

DELEK LOGISTICS PARTNERS, L.P.
LEA COUNTY, NEW MEXICO
MATADOR PONY EXPRESS EAST
PRODUCED WATER RELEASE

DELINEATION SAMPLING LOCATIONS MAP

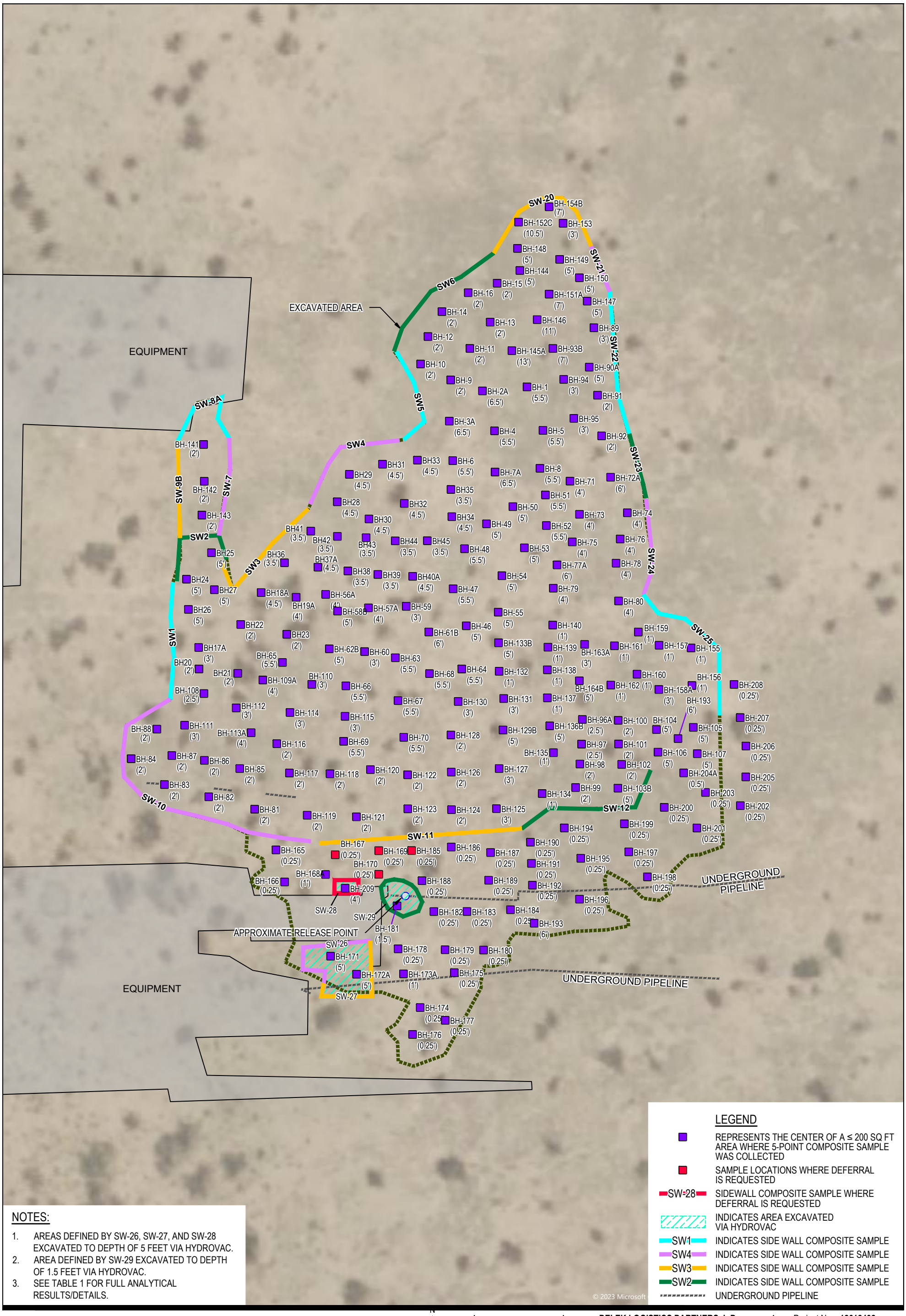
Project No. 12618492
Date September 2023

FIGURE 1

Filename: N:\US\Houston\Projects\562\12618492\Digital_Design\ACAD\Figures\RPT001\12618492-GHD-00-00-RPT-EN-D101_DL-001.dwg

Source: Microsoft Product Screen Shot(s) Reprinted with permission from Microsoft Corporation, Accessed: 2023

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Tables

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Received by OCD: 12/4/2024 10:43:20 AM

Table 1
Summary of Soil Analytical Data - Assessment Activities
Delek Matador Pony Express East
Delek Logistics Parter, L.P.
nAPP2320536236
Lea County, New Mexico

Sample ID	Sample Date	Depth (ft bgs)	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	Total Petroleum Hydrocarbons (TPH)					Chloride
								GRO (C6-C10)	DRO (>C10-C28)	GRO+DRO	ORO (>C28-C36)	Total GRO/DRO/MRO	
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Table I Closure Criteria for Soil <50 ft Depth to Groundwater 19.15.29 NMAC			**10**	**---**	**---**	**---**	**50**	**---**	**---**	**---**	**---**	**100**	**600**
Initial Assessment Samples													
H-1 (SURFACE)	7/17/23	0	<0.00202	<0.00202	<0.00202	<0.00404 *+	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	**76.3**
H-1 (2 FT)	7/17/23	2	<0.00198	<0.00198	**0.00264**	**0.00459 *+**	**0.00723**	<50.2	**137**	**137**	<50.2	**137**	**372**
H-2 (SURFACE)	7/17/23	0	<0.00202	<0.00202	<0.00202	<0.00403 *+	<0.00403	<50.2	<50.2	<50.2	<50.2	<50.2	**81.2**
H-2 (2 FT)	7/17/23	2	<0.00201	<0.00201	<0.00201	<0.00402 *+	<0.00402	<50.4	<50.4	<50.4	<50.4	<50.4	**59.7**
H-3 (SURFACE)	7/17/23	0	<0.00200	<0.00200	<0.00200	<0.00401 *+	<0.00401	<50.5	<50.5	<50.5	<50.5	<50.5	**161**
H-3 (2 FT)	7/17/23	2	<0.00199	<0.00199	<0.00199	<0.00398 *+	<0.00398	<50.4	<50.4	<50.4	<50.4	<50.4	**70.6**
H-4 (SURFACE)	7/17/23	0	<0.00198	<0.00198	<0.00198	<0.00397 *+	<0.00397	<50.5	**323**	**323**	<50.5	**323**	**415**
H-4 (2 FT)	7/17/23	2	<0.00201	<0.00201	<0.00201	<0.00402 *+	<0.00402	<50.1	**80.7**	**80.7**	<50.1	**80.7**	**59.7**
DS-1 (2.5 FT)	7/17/23	2.5	<0.00198	<0.00198	<0.00198	<0.00396 *+	<0.00396	<49.8	<49.8	<49.8	<49.8	<49.8	**473**
DS-1 (4 FT)	7/17/23	4	<0.00200	<0.00200	<0.00200	<0.00399 *+	<0.00399	<50.2	<50.2	<50.2	<50.2	<50.2	**656**
DS-2 (2 FT)	7/17/23	2	<0.00200	<0.00200	<0.00200	<0.00400 *+	<0.00400	<49.6	<49.6	<49.6	<49.6	<49.6	**737 F1**
DS-2 (4 FT)	7/17/23	4	<0.00199	<0.00199	<0.00199	<0.00398 *+	<0.00398	<49.6	<49.6	<49.6	<49.6	<49.6	**580**
DS-3 (1 FT)	7/17/23	1	<0.00202	<0.00202	<0.00202	<0.00403 *+	<0.00403	<49.5	<49.5	<49.5	<49.5	<49.5	**125**
DS-3 (2.5 FT)	7/17/23	2.5	<0.00200	<0.00200	<0.00200	<0.00401 *+	<0.00401	<50.1	<50.1	<50.1	<50.1	<50.1	**103**
DS-4 (1 FT)	7/17/23	1	<0.00199	<0.00199	<0.00199	<0.00398 *+	<0.00398	<50.5	**154**	**154**	<50.5	**154**	**107**
DS-4 (4 FT)	7/17/23	4	<0.00200	<0.00200	<0.00200	<0.00399 *+	<0.00399	<50.4	<50.4	<50.4	<50.4	<50.4	**89.1**
DS-5 (2.5 FT)	7/17/23	2.5	<0.00201	<0.00201	<0.00201	<0.00402 *+	<0.00402	<50.4 F1	<50.4 F1	<50.4 F1	<50.4	<50.4	**768**
DS-5 (4 FT)	7/17/23	4	<0.00202	<0.00202	<0.00202	<0.00404 *+	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	**924**
DS-6 (2.5 FT)	7/17/23	2.5	<0.00202	<0.00202	<0.00202	<0.00403 *+	<0.00403	<49.5	<49.5	<49.5	<49.5	<49.5	**86.3**
DS-6 (5 FT)	7/17/23	5	<0.00198	<0.00198	<0.00198	<0.00396 *+	<0.00396	<49.6	<49.6	<49.6	<49.6	<49.6	**124**
DS-7 (2.5 FT)	7/17/23	2.5	<0.00202	<0.00202	<0.00202	<0.00403	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	**343**
DS-7 (5 FT)	7/17/23	5	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	**281**

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Table 1
Summary of Soil Analytical Data - Assessment Activities
Delek Matador Pony Express East
Delek Logistics Parter, L.P.
nAPP2320536236
Lea County, New Mexico

Sample ID	Sample Date	Depth (ft bgs)	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	Total Petroleum Hydrocarbons (TPH)					Chloride
								GRO (C6-C10)	DRO (>C10-C28)	GRO+DRO	ORO (>C28-C36)	Total GRO/DRO/MRO	
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Table I Closure Criteria for Soil <50 ft Depth to Groundwater 19.15.29 NMAC			**10**	**---**	**---**	**---**	**50**	**---**	**---**	**---**	**---**	**100**	**600**
DS-8 (2.5 FT)	7/17/23	2.5	<0.00200	<0.00200	<0.00200	<0.00401	<0.00401	<50.1	<50.1	<50.1	<50.1	<50.1	**495**
DS-8 (5 FT)	7/17/23	5	**0.00522**	**0.0417**	**0.0245**	**0.0589**	**0.130**	<50.4	**968**	**968**	<50.4	**968**	**1700**
DS9-1	7/31/23	1	<0.022	<0.044	<0.044	<0.089	<0.089	<4.4	<9.2	<9.2	<46	<46	**76**
DS9-4	7/31/23	4	<0.032	<0.064	<0.064	<0.13	<0.13	<6.4	<9.6	<9.6	<48	<48	<60
DS10-1	7/31/23	1	<0.025	<0.050	**0.011**	**0.019**	**0.03**	**1.5**	<9.4	**1.5**	<47	**1.5**	**93**
DS10-4	7/31/23	4	<0.024	<0.047	<0.047	<0.094	<0.094	<4.7	<9.4	<9.4	<47	<47	<60
DS11-1	7/31/23	1	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	<9.3	<9.3	<47	<47	**72**
DS11-4	7/31/23	4	<0.028	**0.014**	**0.014**	**0.024**	**0.052**	**2.2**	<8.6	**2.2**	<43	**2.2**	**89**
DS12-3	7/31/23	3	<0.022	<0.044	<0.044	<0.088	<0.088	<4.4	<9.2	<9.2	<46	<46	**470**
DS12-4	7/31/23	4	<0.021	<0.042	<0.042	<0.084	<0.084	<4.2	<9.6	<9.6	<48	<48	**530**
DS13-1	7/31/23	1	<0.021	<0.042	<0.042	<0.084	<0.084	<4.2	<9.8	<9.8	<49	<49	**86**
DS13-4	7/31/23	4	<0.018	<0.037	<0.037	<0.074	<0.074	<3.7	<8.4	<8.4	<42	<42	**130**
DS14-3	7/31/23	3	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<8.9	<8.9	<44	<44	**280**
DS14-4	7/31/23	4	<0.021	<0.041	<0.041	<0.082	<0.082	<4.1	<9.3	<9.3	<46	<46	**340**
DS15-3	7/31/23	3	<0.027	<0.054	<0.054	<0.11	<0.11	<5.4	<9.8	<9.8	<49	<49	**200**
DS15-4	7/31/23	4	<0.026	<0.053	<0.053	<0.11	<0.11	<5.3	<9.0	<9.0	<45	<45	**350**
Test Pit Samples													
TP1-1	7/24/23	1	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	**4170 F1**
TP1-10	7/24/23	10	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	**1080**
TP2-1	7/24/23	1	<0.00202	<0.00202	<0.00202	<0.00403	<0.00403	<49.6	<49.6	<49.6	<49.6	<49.6	**1050**
TP2-4	7/24/23	4	<0.00200	<0.00200	<0.00200	<0.00401	<0.00401	<49.5	<49.5	<49.5	<49.5	<49.5	**450**
TP3-1	7/24/23	1	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	**548**
TP3-4	7/24/23	4	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	<50.5	<50.5	<50.5	<50.5	<50.5	**588**

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Table 1
Summary of Soil Analytical Data - Assessment Activities
Delek Matador Pony Express East
Delek Logistics Parter, L.P.
nAPP2320536236
Lea County, New Mexico

Sample ID	Sample Date	Depth (ft bgs)	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	Total Petroleum Hydrocarbons (TPH)					Chloride
								GRO (C6-C10)	DRO (>C10-C28)	GRO+DRO	ORO (>C28-C36)	Total GRO/DRO/MRO	
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Table I Closure Criteria for Soil <50 ft Depth to Groundwater 19.15.29 NMAC			**10**	**---**	**---**	**---**	**50**	**---**	**---**	**---**	**---**	**100**	**600**
TP4-2	7/25/23	2	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	<49.5 *-	<49.5	<49.5	<49.5	<49.5	**356**
TP4-3	7/25/23	3	<0.00198	<0.00198	<0.00198	<0.00396	<0.00396	<50.4 *-	<50.4	<50.4	<50.4	<50.4	**591 F1**
TP5-3	7/25/23	3	<0.00200	<0.00200	<0.00200	<0.00401	<0.00401	<49.5 *-	<49.5	<49.5	<49.5	<49.5	**782**
TP5-4	7/25/23	4	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<50.0 *-	<50.0	<50.0	<50.0	<50.0	**703**
TP6-1	7/24/23	1	<0.00202	<0.00202	<0.00202	<0.00404	<0.00404	<50.4	<50.4	<50.4	<50.4	<50.4	**1260**
TP6-4	7/24/23	4	<0.00200	<0.00200	<0.00200	<0.00401	<0.00401	<50.2	<50.2	<50.2	<50.2	<50.2	**728**
TP7-3	7/25/23	3	<0.00198	<0.00198	<0.00198	<0.00397	<0.00397	<49.8 *-	<49.8	<49.8	<49.8	<49.8	**548**
TP7-6	7/25/23	6	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	<49.8 *-	<49.8	<49.8	<49.8	<49.8	**552**
TP8-2	7/25/23	2	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	<49.7 *-	<49.7	<49.7	<49.7	<49.7	**1080**
TP8-4	7/25/23	4	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	<49.6 *-	<49.6	<49.6	<49.6	<49.6	**691**
TP9-3	7/25/23	3	<0.00198	<0.00198	<0.00198	<0.00397	<0.00397	<54.9 *-	<54.9	<54.9	<54.9	<54.9	**977**
TP9-4	7/25/23	4	<0.00200	<0.00200	<0.00200	<0.00401	<0.00401	<50.4 *-	<50.4	<50.4	<50.4	<50.4	**185**
TP10-3	7/25/23	3	<0.00198	<0.00198	<0.00198	<0.00396	<0.00396	<49.5 *-	<49.5	<49.5	<49.5	<49.5	**982**
TP10-6	7/25/23	6	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	<50.3 *-	<50.3	<50.3	<50.3	<50.3	**683**
TP11-3	7/25/23	3	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	<49.8 *-	**75.8**	**75.8**	<49.8	**75.8**	**998**
TP11-4	7/25/23	4	<0.00200	<0.00200	<0.00200	<0.00400	<0.00400	<50.1 *-	<50.1	<50.1	<50.1	<50.1	**239**
TP12-1	7/25/23	1	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	<49.7 *-	<49.7	<49.7	<49.7	<49.7	**870**
TP12-4	7/25/23	4	<0.00202	<0.00202	<0.00202	<0.00403	<0.00403	<50.0 *-	<50.0	<50.0	<50.0	<50.0	**527**
TP13-1	7/26/23	1	<0.00200	<0.00200	<0.00200	<0.00399 *+	<0.00399	<49.5	<49.5	<49.5	<49.5	<49.5	**72.2**
TP13-2	7/26/23	2	<0.00198	<0.00198	<0.00198	<0.00396 *+	<0.00396	<49.6	<49.6	<49.6	<49.6	<49.6	**94.7**
TP14-3	7/26/23	3	<0.00202	<0.00202	<0.00202	<0.00403 *+	<0.00403	<49.8	<49.8	<49.8	<49.8	<49.8	**1050**
TP14-6	7/26/23	6	<0.00199	<0.00199	<0.00199	<0.00398 *+	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	**887**
TP15-1	7/25/23	1	<0.00200	<0.00200	<0.00200	<0.00400	<0.00400	<50.0 *-	<50.0	<50.0	<50.0	<50.0	**518**

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Table 1
Summary of Soil Analytical Data - Assessment Activities
Delek Matador Pony Express East
Delek Logistics Parter, L.P.
nAPP2320536236
Lea County, New Mexico

Sample ID	Sample Date	Depth (ft bgs)	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	Total Petroleum Hydrocarbons (TPH)					Chloride
								GRO (C6-C10)	DRO (>C10-C28)	GRO+DRO	ORO (>C28-C36)	Total GRO/DRO/MRO	
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Table I Closure Criteria for Soil <50 ft Depth to Groundwater 19.15.29 NMAC			**10**	**---**	**---**	**---**	**50**	**---**	**---**	**---**	**---**	**100**	**600**
TP15-2	7/25/23	2	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<49.6 *-	<49.6	<49.6	<49.6	<49.6	**192**
TP16-1	7/26/23	1	<0.00198	<0.00198	<0.00198 *+	<0.00397	<0.00397	<49.8	<49.8	<49.8	<49.8	<49.8	**574**
TP16-3	7/26/23	3	<0.00198	<0.00198	<0.00198 *+	<0.00396	<0.00396	<50.4	<50.4	<50.4	<50.4	<50.4	**697**
TP17-1	7/26/23	1	<0.00201	<0.00201	<0.00201	<0.00402 *+	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	**659**
TP17-2	7/26/23	2	<0.00200	<0.00200	<0.00200	<0.00401 *+	<0.00401	<49.6	<49.6	<49.6	<49.6	<49.6	**85.3**
TP18-1	7/26/23	1	<0.00202	<0.00202	<0.00202	<0.00403 *+	<0.00403	<50.5	<50.5	<50.5	<50.5	<50.5	**157**
TP18-2	7/26/23	2	<0.00200	<0.00200	<0.00200	<0.00399 *+	<0.00399	<50.4	<50.4	<50.4	<50.4	<50.4	**88.3**
TP19-3	7/26/23	3	<0.00200	<0.00200	<0.00200 *+	<0.00399	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	**643**
TP19-5	7/26/23	5	<0.00201	<0.00201	<0.00201 *+	<0.00402	<0.00402	<50.3	<50.3	<50.3	<50.3	<50.3	**643**
TP20-2	7/26/23	2	<0.00200	<0.00200	<0.00200 *+	<0.00401	<0.00401	<50.3	<50.3	<50.3	<50.3	<50.3	**250**
TP20-4	7/26/23	4	<0.00199	<0.00199	<0.00199 *+	<0.00398	<0.00398	<50.1	<50.1	<50.1	<50.1	<50.1	**433**
TP21-1	7/25/23	1	<0.00202	<0.00202	<0.00202	<0.00404	<0.00404	<49.9 *-	<49.9	<49.9	<49.9	<49.9	**1230**
TP21-4	7/25/23	4	<0.00200	<0.00200	<0.00200	<0.00401	<0.00401	<49.6 *-	<49.6	<49.6	<49.6	<49.6	**584 F1**
TP22-1	7/26/23	1	<0.00199	<0.00199	<0.00199 *+	<0.00398	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	**63.7**
TP22-2	7/26/23	2	<0.00198	<0.00198	<0.00198 *+	<0.00396	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	**63.5**
TP25-1	7/26/23	1	<0.00201	<0.00201	<0.00201 *+	<0.00402	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	**808**
TP25-2	7/26/23	2	<0.00202	<0.00202	<0.00202 *+	<0.00403	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	**79.9**

1. Values reported in mg/kg
2. < = Value Less than Reporting Limit (RL)
3. Bold Indicates Analyte Detected
4. BTEX analyses by EPA Method SW 8021B.
5. TPH analyses by EPA Method SW 8015 Mod.
6. GRO/DRO/MRO = Gasoline/Diesel/Motor Oil
7. Yellow shaded cells indicate analytical samples that exceed the NMAC 19.15.29.12 Table I Closure Criteria for the site.
8. J - the target analytes was positively identified below the quantitation limit and above the detection limit.
9. --- = not defined

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Table 2
Summary of Soil Analytical Data - Confirmation Samples
Delek Matador Pony Express East
Delek Logistics Parter, L.P.
nAPP2320536236
Lea County, New Mexico

Sample ID	Sample Date	Depth (ft bgs)	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	Total Petroleum Hydrocarbons (TPH)					Chloride
								GRO (C6-C10)	DRO (>C10-C28)	GRO+DRO	ORO (>C28-C36)	Total GRO/DRO/MRO	
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Table I Closure Criteria for Soil <50 ft Depth to Groundwater 19.15.29 NMAC			**10**	**---**	**---**	**---**	**50**	**---**	**---**	**---**	**---**	**100**	**600**
Bottom Hole Confirmation Samples													
BH-1	7/28/23	5.5	<0.00198	<0.00198	<0.00198	<0.00397	<0.00397	<50.3	<50.3	<50.3	<50.3	<50.3	**563 F1**
~~BH-2~~	~~7/28/23~~	~~5.5~~	~~<0.00202~~	~~<0.00202~~	~~<0.00202~~	~~<0.00403~~	~~<0.00403~~	~~<49.6~~	~~<49.6~~	~~<49.6~~	~~<49.6~~	~~<49.6~~	~~**606**~~
BH-2A	8/22/23	6.5	<0.021	<0.043	<0.043	<0.085	<0.085	<4.3	<10	<10	<50	<50	**460**
~~BH-3~~	~~7/28/23~~	~~5.5~~	~~<0.00201~~	~~<0.00201~~	~~<0.00201~~	~~<0.00402~~	~~<0.00402~~	~~<49.7~~	~~<49.7~~	~~<49.7~~	~~<49.7~~	~~<49.7~~	~~**732**~~
BH-3A	8/22/23	6.5	<0.018	<0.036	<0.036	<0.073	<0.073	<3.6	<9.7	<9.7	<48	<48	**520**
BH-4	7/28/23	5.5	<0.00200	<0.00200	<0.00200	<0.00401	<0.00401	<49.6	<49.6	<49.6	<49.6	<49.6	**558**
BH-5	7/28/23	5.5	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<50.5	<50.5	<50.5	<50.5	<50.5	**420**
BH-6	7/28/23	5.5	<0.00198	<0.00198	<0.00198	<0.00396	<0.00396	<50.2	<50.2	<50.2	<50.2	<50.2	**517**
~~BH-7~~	~~7/28/23~~	~~5.5~~	~~<0.00200~~	~~<0.00200~~	~~<0.00200~~	~~<0.00400~~	~~<0.00400~~	~~<50.3~~	~~<50.3~~	~~<50.3~~	~~<50.3~~	~~<50.3~~	~~**837**~~
BH-7A	8/22/23	6.5	<0.020	<0.039	<0.039	<0.078	<0.078	<3.9	<9.6	<9.6	<48	<48	**440**
BH-8	7/28/23	5.5	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	**541**
BH-9	7/28/23	2	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	<50.5	<50.5	<50.5	<50.5	<50.5	**367**
BH-10	7/28/23	2	<0.00198	<0.00198	<0.00198	<0.00396	<0.00396	<50.5	<50.5	<50.5	<50.5	<50.5	**184**
BH-11	7/28/23	2	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<50.1	<50.1	<50.1	<50.1	<50.1	**300**
BH-12	7/28/23	2	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<49.7	<49.7	<49.7	<49.7	<49.7	**207**
BH-13	7/28/23	2	<0.00202	<0.00202	<0.00202	<0.00404	<0.00404	<49.6	<49.6	<49.6	<49.6	<49.6	**333**
BH-14	7/28/23	2	<0.00200	<0.00200	<0.00200	<0.00401	<0.00401	<49.6	<49.6	<49.6	<49.6	<49.6	**130**
BH-15	7/28/23	2	<0.00198	<0.00198	<0.00198	<0.00397	<0.00397	<49.8	<49.8	<49.8	<49.8	<49.8	**525**
BH-16	7/28/23	2	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<50.4	<50.4	<50.4	<50.4	<50.4	**103**
~~BH17~~	~~8/1/23~~	~~2~~	~~<0.019~~	~~<0.037~~	~~<0.037~~	~~<0.074~~	~~<0.074~~	~~<3.7~~	~~**21**~~	~~**21**~~	~~<48~~	~~**21**~~	~~**880**~~
BH-17A	8/22/23	3	<0.018	<0.037	<0.037	<0.074	<0.074	<3.7	<8.9	<8.9	<44	<44	**320**
~~BH18~~	~~8/1/23~~	~~3.5~~	~~<0.019~~	~~<0.038~~	~~<0.038~~	~~<0.076~~	~~<0.076~~	~~<3.8~~	~~**33**~~	~~**33**~~	~~<44~~	~~**33**~~	~~**1300**~~
BH-18A	8/22/23	4.5	<0.018	<0.037	<0.037	<0.073	<0.073	<3.7	<9.1	<9.1	<46	<46	**320**

Table 2
Summary of Soil Analytical Data - Confirmation Samples
Delek Matador Pony Express East
Delek Logistics Parter, L.P.
nAPP2320536236
Lea County, New Mexico

Sample ID	Sample Date	Depth (ft bgs)	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	Total Petroleum Hydrocarbons (TPH)					Chloride
								GRO (C6-C10)	DRO (>C10-C28)	GRO+DRO	ORO (>C28-C36)	Total GRO/DRO/MRO	
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Table I Closure Criteria for Soil <50 ft Depth to Groundwater 19.15.29 NMAC			**10**	**---**	**---**	**---**	**50**	**---**	**---**	**---**	**---**	**100**	**600**
~~BH19~~	~~8/1/23~~	~~3.5~~	~~<0.021~~	~~<0.042~~	~~<0.042~~	~~<0.084~~	~~<0.084~~	~~<4.2~~	~~**21**~~	~~**21**~~	~~<44~~	~~**21**~~	~~**610**~~
BH-19A	8/24/23	4	<0.022	<0.044	<0.044	<0.089	<0.089	<4.4	<9.9	<9.9	<50	<50	**220**
BH20	8/1/23	2	<0.021	<0.041	<0.041	<0.082	<0.082	<4.1	**8.8**	**8.8**	<45	**8.8**	**260**
BH21	8/1/23	2	<0.022	<0.044	<0.044	<0.088	<0.088	<4.4	**8.2**	**8.2**	<44	**8.2**	**430**
BH22	8/1/23	2	<0.020	<0.040	<0.040	<0.080	<0.080	<4.0	**8.5**	**8.5**	<46	**8.5**	**600**
BH23	8/1/23	2	<0.021	<0.042	<0.042	<0.085	<0.085	<4.2	<9.2	<9.2	<46	<46	**530**
BH24	8/1/23	5	<0.020	<0.041	<0.041	<0.081	<0.081	<4.1	<9.1	<9.1	<45	<45	**540**
BH25	8/1/23	5	<0.020	<0.039	<0.039	<0.079	<0.079	<3.9	<9.5	<9.5	<47	<47	**550**
BH26	8/1/23	5	<0.020	<0.041	<0.041	**0.016**	**0.016**	<4.1	<8.5	<8.5	<42	<42	**560**
BH27	8/1/23	5	<0.022	<0.044	<0.044	<0.087	<0.087	**1.4**	**11**	**12.4**	<48	**12.4**	**470**
BH28	8/1/23	4.5	<0.023	<0.046	<0.046	<0.092	<0.092	<4.6	<9.1	<9.1	<45	<45	**510**
BH29	8/1/23	4.5	<0.020	<0.039	<0.039	<0.079	<0.079	<3.9	<9.9	<9.9	<49	<49	**420**
BH30	8/1/23	4.5	<0.021	<0.041	<0.041	<0.082	<0.082	<4.1	<9.1	<9.1	<45	<45	**570**
BH31	8/1/23	4.5	<0.018	<0.036	<0.036	<0.072	<0.072	<3.6	<8.7	<8.7	<44	<44	**510**
BH32	8/1/23	4.5	<0.022	<0.045	<0.045	<0.090	<0.090	<4.5	<8.8	<8.8	<44	<44	**490**
BH33	8/1/23	4.5	<0.021	<0.042	<0.042	<0.084	<0.084	<4.2	<8.7	<8.7	<43	<43	**400**
BH34	8/1/23	4.5	<0.022	<0.044	<0.044	<0.088	<0.088	<4.4	<9.3	<9.3	<46	<46	**260**
BH35	8/1/23	3.5	<0.021	<0.043	<0.043	<0.085	<0.085	<4.3	<9.1	<9.1	<45	<45	**440**
BH36	8/1/23	3.5	<0.023	<0.047	<0.047	<0.093	<0.093	<4.7	<8.6	<8.6	<43	<43	**280**
~~BH37~~	~~8/1/23~~	~~3.5~~	~~<0.022~~	~~<0.044~~	~~<0.044~~	~~<0.088~~	~~<0.088~~	~~<4.4~~	~~<9.1~~	~~<9.1~~	~~<46~~	~~<46~~	~~**810**~~
BH-37A	8/22/23	4.5	<0.020	<0.039	<0.039	<0.079	<0.079	<3.9	<9.2	<9.2	<46	<46	**390**
BH38	8/1/23	3.5	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	**8.9**	**8.9**	<49	**8.9**	**290**
BH39	8/1/23	3.5	<0.020	<0.040	<0.040	<0.081	<0.081	<4.0	<9.4	<9.4	<47	<47	**590**
~~BH40~~	~~8/1/23~~	~~3.5~~	~~<0.020~~	~~<0.040~~	~~<0.040~~	~~<0.081~~	~~<0.081~~	~~<4.0~~	~~**17**~~	~~**17**~~	~~<44~~	~~**17**~~	~~**910**~~

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Table 2
Summary of Soil Analytical Data - Confirmation Samples
Delek Matador Pony Express East
Delek Logistics Parter, L.P.
nAPP2320536236
Lea County, New Mexico

Sample ID	Sample Date	Depth (ft bgs)	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	Total Petroleum Hydrocarbons (TPH)					Chloride
								GRO (C6-C10)	DRO (>C10-C28)	GRO+DRO	ORO (>C28-C36)	Total GRO/DRO/MRO	
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Table I Closure Criteria for Soil <50 ft Depth to Groundwater 19.15.29 NMAC			10	---	---	---	50	---	---	---	---	100	600
BH-40A	8/22/23	4.5	<0.021	<0.041	<0.041	<0.083	<0.083	<4.1	<9.7	<9.7	<49	<49	**500**
BH41	8/1/23	3.5	<0.023	<0.046	<0.046	<0.093	<0.093	<4.6	<9.4	<9.4	<47	<47	**540**
BH42	8/1/23	3.5	<0.022	<0.044	<0.044	<0.088	<0.088	<4.4	<9.8	<9.8	<49	<49	**470**
BH43	8/1/23	3.5	<0.019	<0.037	<0.037	<0.075	<0.075	<3.7	<10	<10	<50	<50	**420**
BH44	8/1/23	3.5	<0.019	<0.037	<0.037	<0.074	<0.074	<3.7	<9.3	<9.3	<46	<46	**440**
BH45	8/1/23	3.5	<0.022	<0.043	<0.043	<0.087	<0.087	<4.3	<9.2	<9.2	<46	<46	**490**
BH-46	8/18/23	5	<0.019	<0.038	<0.038	<0.076	<0.076	<3.8	<9.6	<9.6	<48	<48	**420**
BH-47	8/18/23	5.5	<0.020	<0.040	<0.040	<0.079	<0.079	<4.0	<9.8	<9.8	<49	<49	**340**
BH-48	8/18/23	5.5	<0.018	<0.036	<0.036	<0.073	<0.073	<3.6	<9.8	<9.8	<49	<49	**350**
BH-49	8/18/23	5	<0.019	<0.039	<0.039	<0.078	<0.078	<3.9	**10**	**10**	<47	**10**	**520**
BH-50	8/18/23	5	<0.021	<0.041	<0.041	<0.082	<0.082	<4.1	<9.6	<9.6	<48	<48	**500**
BH-51	8/18/23	5.5	<0.020	<0.040	<0.040	<0.079	<0.079	<4.0	<9.9	<9.9	<49	<49	**560**
BH-52	8/18/23	5.5	<0.019	<0.037	<0.037	<0.074	<0.074	<3.7	**10**	**10**	<50	**10**	**430**
BH-53	8/18/23	5	<0.019	<0.037	<0.037	<0.075	<0.075	<3.7	<9.9	<9.9	<49	<49	**380**
BH-54	8/18/23	5	<0.020	<0.039	<0.039	<0.079	<0.079	<3.9	<10	<10	<50	<50	**470**
BH-55	8/18/23	5	<0.018	<0.037	<0.037	<0.074	<0.074	<3.7	**13**	**13**	<49	**13**	**480**
~~BH-56~~	~~8/21/23~~	~~3~~	~~<0.020~~	~~<0.041~~	~~<0.041~~	~~<0.082~~	~~<0.082~~	~~<4.1~~	~~<9.8~~	~~<9.8~~	~~<49~~	~~<49~~	~~**630**~~
BH-56A	8/28/23	4	<0.021	<0.043	<0.043	<0.086	<0.086	<4.3	<9.7	<9.7	<48	<48	**390**
~~BH-57~~	~~8/21/23~~	~~3~~	~~<0.021~~	~~<0.042~~	~~<0.042~~	~~<0.084~~	~~<0.084~~	~~<4.2~~	~~<9.9~~	~~<9.9~~	~~<49~~	~~<49~~	~~**790**~~
BH-57A	8/28/23	4	<0.019	<0.038	<0.038	<0.076	<0.076	<3.8	<9.2	<9.2	<46	<46	**370**
~~BH-58~~	~~8/21/23~~	~~3~~	~~<0.021~~	~~<0.041~~	~~<0.041~~	~~<0.082~~	~~<0.082~~	~~<4.1~~	~~<9.7~~	~~<9.7~~	~~<48~~	~~<48~~	~~**630**~~
~~BH-58A~~	~~8/28/23~~	~~4~~	~~<0.019~~	~~<0.038~~	~~<0.038~~	~~<0.075~~	~~<0.075~~	~~<3.8~~	~~<9.0~~	~~<9.0~~	~~<45~~	~~<45~~	~~**730**~~
BH-58B	9/14/23	5	<0.018	<0.037	<0.037	<0.073	<0.073	<3.7	<9.8	<9.8	<49	<49	**310**
BH-59	8/21/23	3	<0.020	<0.040	<0.040	<0.081	<0.081	<4.0	<9.9	<9.9	<50	<50	**540**

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Sample ID	Sample Date	Depth (ft bgs)	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	Total Petroleum Hydrocarbons (TPH)					Chloride
								GRO (C6-C10)	DRO (>C10-C28)	GRO+DRO	ORO (>C28-C36)	Total GRO/DRO/MRO	
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Table I Closure Criteria for Soil <50 ft Depth to Groundwater 19.15.29 NMAC			**10**	**---**	**---**	**---**	**50**	**---**	**---**	**---**	**---**	**100**	**600**
BH-60	8/21/23	3	<0.020	<0.039	<0.039	<0.078	<0.078	<3.9	<9.8	<9.8	<49	<49	**590**
~~BH-61~~	~~8/21/23~~	~~3~~	~~<0.023~~	~~<0.046~~	~~<0.046~~	~~<0.092~~	~~<0.092~~	~~<4.6~~	~~<9.6~~	~~<9.6~~	~~<48~~	~~<48~~	~~**790**~~
~~BH-61A~~	~~8/28/23~~	~~4~~	~~<0.021~~	~~<0.041~~	~~<0.041~~	~~<0.083~~	~~<0.083~~	~~<4.1~~	~~<9.5~~	~~<9.5~~	~~<47~~	~~<47~~	~~**900**~~
BH-61B	9/14/23	6	<0.020	<0.039	<0.039	<0.079	<0.079	<3.9	**36**	**36**	<47	**36**	**600**
~~BH-62~~	~~8/21/23~~	~~5.5~~	~~<0.020~~	~~<0.041~~	~~<0.041~~	~~<0.081~~	~~<0.081~~	~~<4.1~~	~~**12**~~	~~**12**~~	~~<48~~	~~**12**~~	~~**690**~~
~~BH-62A~~	~~8/28/23~~	~~4~~	~~<0.021~~	~~<0.042~~	~~<0.042~~	~~<0.084~~	~~<0.084~~	~~<4.2~~	~~**<9.5**~~	~~**<9.5**~~	~~<47~~	~~**<47**~~	~~**630**~~
BH-62B	9/14/23	5	<0.018	<0.036	<0.036	<0.071	<0.071	<3.6	<9.6	<9.6	<48	<48	**410**
BH-63	8/21/23	5.5	<0.020	<0.039	<0.039	<0.078	<0.078	<3.9	<9.9	<9.9	<50	<50	**570**
BH-64	8/21/23	5.5	<0.020	<0.039	<0.039	<0.078	<0.078	<3.9	<9.6	<9.6	<48	<48	**280**
BH-65	8/21/23	5.5	<0.021	<0.042	<0.042	<0.085	<0.085	<4.2	<9.9	<9.9	<50	<50	**570**
BH-66	8/21/23	5.5	<0.031	<0.061	<0.061	<0.12	<0.12	<6.1	<9.2	<9.2	<46	<46	**500**
BH-67	8/21/23	5.5	<0.021	<0.041	<0.041	<0.082	<0.082	<4.1	<9.3	<9.3	<47	<47	**300**
BH-68	8/21/23	5.5	<0.018	<0.037	<0.037	<0.074	<0.074	<3.7	<9.1	<9.1	<46	<46	**290**
BH-69	8/21/23	5.5	<0.020	<0.040	<0.040	<0.081	<0.081	<4.0	<9.8	<9.8	<49	<49	**420**
BH-70	8/21/23	5.5	<0.019	<0.038	<0.038	<0.076	<0.076	<3.8	<9.8	<9.8	<49	<49	**490**
BH-71	8/21/23	4	<0.022	<0.044	<0.044	<0.088	<0.088	<4.4	<9.0	<9.0	<45	<45	**590**
~~BH-72~~	~~8/21/23~~	~~4~~	~~<0.019~~	~~<0.039~~	~~<0.039~~	~~<0.077~~	~~<0.077~~	~~<3.9~~	~~<8.6~~	~~<8.6~~	~~<43~~	~~<43~~	~~**610**~~
BH-72A	8/25/23	6	<0.023	<0.046	<0.046	<0.092	<0.092	<4.6	<9.7	<9.7	<48	<48	**280**
BH-73	8/21/23	4	<0.020	<0.039	<0.039	<0.079	<0.079	<3.9	<8.5	<8.5	<43	<43	**370**
BH-74	8/21/23	4	<0.019	<0.038	<0.038	<0.076	<0.076	<3.8	<9.6	<9.6	<48	<48	**440**
BH-75	8/21/23	4	<0.021	<0.042	<0.042	<0.084	<0.084	<4.2	<9.4	<9.4	<47	<47	**500**
BH-76	8/21/23	4	<0.020	<0.039	<0.039	<0.079	<0.079	<3.9	<9.8	<9.8	<49	<49	**500**
~~BH-77~~	~~8/21/23~~	~~4~~	~~<0.018~~	~~<0.037~~	~~<0.037~~	~~<0.074~~	~~<0.074~~	~~<3.7~~	~~**320**~~	~~**320**~~	~~**170**~~	~~**490**~~	~~**2200**~~
BH-77A	8/25/23	6	<0.020	<0.040	<0.040	<0.079	<0.079	<4.0	<9.8	<9.8	<49	<49	**560**

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Sample ID	Sample Date	Depth (ft bgs)	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	Total Petroleum Hydrocarbons (TPH)					Chloride
								GRO (C6-C10)	DRO (>C10-C28)	GRO+DRO	ORO (>C28-C36)	Total GRO/DRO/MRO	
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Table I Closure Criteria for Soil <50 ft Depth to Groundwater 19.15.29 NMAC			10	---	---	---	50	---	---	---	---	100	600
BH-78	8/21/23	4	<0.020	<0.039	<0.039	<0.078	<0.078	<3.9	<9.7	<9.7	<48	<48	**590**
BH-79	8/21/23	4	<0.019	<0.038	<0.038	<0.075	<0.075	<3.8	<9.2	<9.2	<46	<46	**260**
BH-80	8/21/23	4	<0.019	<0.039	<0.039	<0.078	<0.078	<3.9	<9.5	<9.5	<47	<47	**280**
BH-81	8/22/23	2	<0.023	<0.046	<0.046	<0.092	<0.092	<4.6	<9.6	<9.6	<48	<48	**130**
BH-82	8/22/23	2	<0.022	<0.044	<0.044	<0.089	<0.089	<4.4	<9.3	<9.3	<47	<47	**230**
BH-83	8/22/23	2	<0.019	<0.039	<0.039	<0.077	<0.077	<3.9	<9.6	<9.6	<48	<48	**130**
BH-84	8/22/23	2	<0.022	<0.043	<0.043	<0.087	<0.087	<4.3	<9.9	<9.9	<50	<50	<60
BH-85	8/22/23	2	<0.021	<0.043	<0.043	<0.085	<0.085	<4.3	<9.0	<9.0	<45	<45	**71**
BH-86	8/22/23	2	<0.019	<0.038	<0.038	<0.077	<0.077	<3.8	<9.2	<9.2	<46	<46	<60
BH-87	8/22/23	2	<0.022	<0.043	<0.043	<0.087	<0.087	<4.3	<8.7	<8.7	<43	<43	**220**
BH-88	8/22/23	2	<0.022	<0.044	<0.044	<0.089	<0.089	<4.4	<9.4	<9.4	<47	<47	**84**
BH-89	8/22/23	3	<0.020	<0.039	<0.039	<0.078	<0.078	<3.9	<10	<10	<50	<50	**600**
~~BH-90~~	~~8/22/23~~	~~3~~	~~<0.019~~	~~<0.038~~	~~<0.038~~	~~<0.076~~	~~<0.076~~	~~<3.8~~	~~<9.5~~	~~<9.5~~	~~<48~~	~~<48~~	~~**690**~~
BH-90A	9/14/23	5	<0.019	<0.039	<0.039	<0.077	<0.077	<3.9	<9.4	<9.4	<47	<47	**560**
BH-91	8/22/23	2	<0.017	<0.035	<0.035	<0.070	<0.070	<3.5	<9.6	<9.6	<48	<48	**430**
BH-92	8/22/23	2	<0.021	<0.043	<0.043	<0.085	<0.085	<4.3	<9.8	<9.8	<49	<49	**470**
~~BH-93~~	~~8/22/23~~	~~3~~	~~<0.020~~	~~<0.039~~	~~<0.039~~	~~<0.079~~	~~<0.079~~	~~<3.9~~	~~<9.6~~	~~<9.6~~	~~<48~~	~~<48~~	~~**770**~~
~~BH-93A~~	~~9/14/23~~	~~5~~	~~<0.020~~	~~<0.041~~	~~<0.041~~	~~<0.082~~	~~<0.082~~	~~<4.1~~	~~<9.3~~	~~<9.3~~	~~<47~~	~~<47~~	~~**640**~~
BH-93B	9/20/23	7	<0.020	<0.040	<0.040	<0.080	<0.080	<4.0	<9.5	<9.5	<48	<48	**400**
BH-94	8/22/23	3	<0.019	<0.038	<0.038	<0.076	<0.076	<3.8	<8.6	<8.6	<43	<43	**520**
BH-95	8/22/23	3	<0.025	<0.051	<0.051	<0.10	<0.10	<5.1	<9.2	<9.2	<46	<46	**490**
~~BH-96~~	~~8/22/23~~	~~2~~	~~<0.021~~	~~<0.043~~	~~<0.043~~	~~<0.086~~	~~<0.086~~	~~<4.3~~	~~<9.8~~	~~<9.8~~	~~<49~~	~~<49~~	~~**1200**~~
BH-96A	8/29/23	2.5	<0.020	<0.039	<0.039	<0.079	<0.079	<3.9	<9.8	<9.8	<49	<49	**400**
BH-97	8/22/23	2.5	<0.022	<0.044	<0.044	<0.088	<0.088	<4.4	<9.8	<9.8	<49	<49	**330**

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Sample ID	Sample Date	Depth (ft bgs)	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	Total Petroleum Hydrocarbons (TPH)					Chloride
								GRO (C6-C10)	DRO (>C10-C28)	GRO+DRO	ORO (>C28-C36)	Total GRO/DRO/MRO	
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Table I Closure Criteria for Soil <50 ft Depth to Groundwater 19.15.29 NMAC			**10**	**---**	**---**	**---**	**50**	**---**	**---**	**---**	**---**	**100**	**600**
BH-98	8/22/23	2	<0.026	<0.051	<0.051	<0.10	<0.10	<5.1	<9.4	<9.4	<47	<47	**190**
BH-99	8/22/23	2	<0.020	<0.039	<0.039	<0.079	<0.079	<3.9	<9.9	<9.9	<49	<49	**370**
BH-100	8/22/23	2	<0.022	<0.044	<0.044	<0.089	<0.089	<4.4	<9.5	<9.5	<48	<48	**430**
BH-101	8/22/23	2	<0.019	<0.038	<0.038	<0.076	<0.076	<3.8	<9.3	<9.3	<47	<47	**400**
BH-102	8/22/23	2	<0.023	<0.046	<0.046	<0.091	<0.091	<4.6	<9.5	<9.5	<47	<47	**260**
~~BH-103~~	~~8/22/23~~	~~2.5~~	~~<0.020~~	~~<0.040~~	~~<0.040~~	~~<0.080~~	~~<0.080~~	~~<4.0~~	~~<10~~	~~<10~~	~~<50~~	~~<50~~	~~**620**~~
~~BH-103A~~	~~8/31/23~~	~~3~~	~~<0.021~~	~~<0.042~~	~~<0.042~~	~~<0.083~~	~~<0.083~~	~~<4.2~~	~~<9.9~~	~~<9.9~~	~~<49~~	~~<49~~	~~**610**~~
BH-103B	9/14/23	5	<0.019	<0.039	<0.039	<0.077	<0.077	<3.9	<9.9	<9.9	<49	<49	**360**
BH-104	8/22/23	5	<0.021	<0.042	<0.042	<0.084	<0.084	<4.2	<9.6	<9.6	<48	<48	**190**
BH-105	8/22/23	5	<0.019	<0.038	<0.038	<0.077	<0.077	<3.8	<9.2	<9.2	<46	<46	**290**
BH-106	8/22/23	5	<0.018	<0.035	<0.035	<0.071	<0.071	<3.5	<9.9	<9.9	<49	<49	**260**
BH-107	8/22/23	5	<0.019	<0.039	<0.039	<0.077	<0.077	<3.9	<9.7	<9.7	<49	<49	**310**
BH-108	8/24/23	2.5	<0.022	<0.044	<0.044	<0.088	<0.088	<4.4	<9.6	<9.6	<48	<48	**160**
~~BH-109~~	~~8/24/23~~	~~2.5~~	~~<0.023~~	~~<0.047~~	~~<0.047~~	~~<0.093~~	~~<0.093~~	~~<4.7~~	~~<9.7~~	~~<9.7~~	~~<49~~	~~<49~~	~~**850**~~
BH-109A	8/31/23	4	<0.019	<0.039	<0.039	<0.078	<0.078	<3.9	<9.2	<9.2	<46	<46	**380**
BH-110	8/24/23	3	<0.023	<0.047	<0.047	<0.094	<0.094	<4.7	<9.5	<9.5	<48	<48	**500**
BH-111	8/24/23	3	<0.022	<0.043	<0.043	<0.086	<0.086	<4.3	<9.3	<9.3	<47	<47	**410**
BH-112	8/24/23	3	<0.020	<0.039	<0.039	<0.079	<0.079	<3.9	<9.9	<9.9	<50	<50	**600**
~~BH-113~~	~~8/24/23~~	~~3~~	~~<0.022~~	~~<0.045~~	~~<0.045~~	~~<0.090~~	~~<0.090~~	~~<4.5~~	~~<9.2~~	~~<9.2~~	~~<46~~	~~<46~~	~~**630**~~
BH-113A	8/31/23	4	<0.019	<0.038	<0.038	<0.075	<0.075	<3.8	<9.2	<9.2	<46	<46	**490**
BH-114	8/24/23	3	<0.032	<0.064	<0.064	<0.13	<0.13	<6.4	<9.8	<9.8	<49	<49	**230**
BH-115	8/24/23	3	<0.021	<0.042	<0.042	<0.083	<0.083	<4.2	<9.6	<9.6	<48	<48	**450**
BH-116	8/23/23	2	<0.022	<0.045	<0.045	<0.089	<0.089	<4.5	<9.9	<9.9	<50	<50	**120**
BH-117	8/23/23	2	<0.022	<0.043	<0.043	<0.086	<0.086	<4.3	<9.1	<9.1	<46	<46	**180**

Table 2
Summary of Soil Analytical Data - Confirmation Samples
Delek Matador Pony Express East
Delek Logistics Parter, L.P.
nAPP2320536236
Lea County, New Mexico

Sample ID	Sample Date	Depth (ft bgs)	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	Total Petroleum Hydrocarbons (TPH)					Chloride
								GRO (C6-C10)	DRO (>C10-C28)	GRO+DRO	ORO (>C28-C36)	Total GRO/DRO/MRO	
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Table I Closure Criteria for Soil <50 ft Depth to Groundwater 19.15.29 NMAC			10	---	---	---	50	---	---	---	---	100	600
BH-118	8/23/23	2	<0.021	<0.041	<0.041	<0.083	<0.083	<4.1	<9.5	<9.5	<48	<48	**330**
BH-119	8/23/23	2	<0.020	<0.040	<0.040	<0.081	<0.081	<4.0	<9.8	<9.8	<49	<49	**310**
BH-120	8/23/23	2	<0.021	<0.043	<0.043	<0.086	<0.086	<4.3	<9.6	<9.6	<48	<48	**300**
BH-121	8/23/23	2	<0.022	<0.045	<0.045	<0.090	<0.090	<4.5	<9.9	<9.9	<49	<49	**90**
BH-122	8/23/23	2	<0.023	<0.045	<0.045	<0.090	<0.090	<4.5	<9.8	<9.8	<49	<49	**97**
BH-123	8/23/23	2	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<10	<10	<50	<50	**230**
BH-124	8/23/23	2	<0.023	<0.045	<0.045	<0.091	<0.091	<4.5	<9.9	<9.9	<49	<49	**160**
BH-125	8/24/23	3	<0.021	<0.041	<0.041	<0.083	<0.083	<4.1	<9.9	<9.9	<50	<50	**100**
BH-126	8/23/23	2	<0.021	<0.043	<0.043	<0.086	<0.086	<4.3	<9.9	<9.9	<49	<49	**91**
BH-127	8/24/23	3	<0.020	<0.040	<0.040	<0.079	<0.079	<4.0	<9.5	<9.5	<48	<48	<60
BH-128	8/23/23	2	<0.021	<0.042	<0.042	<0.085	<0.085	<4.2	10	10	<48	10	**270**
~~BH-129~~	~~8/23/23~~	~~2~~	~~<0.026~~	~~<0.052~~	~~<0.052~~	~~<0.10~~	~~<0.10~~	~~<5.2~~	~~12~~	~~12~~	~~<50~~	~~12~~	~~**680**~~
~~BH-129A~~	~~8/31/23~~	~~4~~	~~<0.022~~	~~<0.045~~	~~<0.045~~	~~<0.089~~	~~<0.089~~	~~<4.5~~	~~<9.9~~	~~<9.9~~	~~<49~~	~~<49~~	~~**1100**~~
BH-129B	9/14/23	5	<0.021	<0.042	<0.042	<0.083	<0.083	<4.2	<9.9	<9.9	<50	<50	**500**
BH-130	8/24/23	3	<0.021	<0.042	<0.042	<0.084	<0.084	<4.2	<9.9	<9.9	<50	<50	**560**
BH-131	8/24/23	3	<0.020	<0.039	<0.039	<0.079	<0.079	<3.9	<9.6	<9.6	<48	<48	**280**
BH-132	8/24/23	1	<0.022	<0.044	<0.044	<0.088	<0.088	<4.4	<9.5	<9.5	<47	<47	**95**
~~BH-133~~	~~8/24/23~~	~~1~~	~~<0.031~~	~~<0.062~~	~~<0.062~~	~~<0.12~~	~~<0.12~~	~~<6.2~~	~~<9.8~~	~~<9.8~~	~~<49~~	~~<49~~	~~**630**~~
~~BH-133A~~	~~8/31/23~~	~~3~~	~~<0.020~~	~~<0.040~~	~~<0.040~~	~~<0.080~~	~~<0.080~~	~~<4.0~~	~~<9.3~~	~~<9.3~~	~~<46~~	~~<46~~	~~**910**~~
BH-133B	9/14/23	5	<0.021	<0.041	<0.041	<0.083	<0.083	<4.1	<9.8	<9.8	<49	<49	**530**
BH-134	8/24/23	1	<0.023	<0.045	<0.045	<0.090	<0.090	<4.5	<9.5	<9.5	<48	<48	**490**
BH-135	8/25/23	1	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<9.5	<9.5	<47	<47	**170**
~~BH-136~~	~~8/25/23~~	~~1~~	~~<0.020~~	~~<0.040~~	~~<0.040~~	~~<0.079~~	~~<0.079~~	~~<4.0~~	~~<9.6~~	~~<9.6~~	~~<48~~	~~<48~~	~~**620**~~
~~BH-136A~~	~~9/14/23~~	~~3~~	~~<0.021~~	~~<0.043~~	~~<0.043~~	~~<0.086~~	~~<0.086~~	~~<4.3~~	~~<9.6~~	~~<9.6~~	~~<48~~	~~<48~~	~~**830**~~

Table 2
Summary of Soil Analytical Data - Confirmation Samples
Delek Matador Pony Express East
Delek Logistics Parter, L.P.
nAPP2320536236
Lea County, New Mexico

Sample ID	Sample Date	Depth (ft bgs)	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	Total Petroleum Hydrocarbons (TPH)					Chloride
								GRO (C6-C10)	DRO (>C10-C28)	GRO+DRO	ORO (>C28-C36)	Total GRO/DRO/MRO	
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Table I Closure Criteria for Soil <50 ft Depth to Groundwater 19.15.29 NMAC			10	---	---	---	50	---	---	---	---	100	600
BH-136B	9/20/23	5	<0.019	<0.038	<0.038	<0.077	<0.077	<3.8	<9.4	<9.4	<47	<47	**330**
BH-137	8/24/23	1	<0.026	<0.051	<0.051	<0.10	<0.10	<5.1	<9.8	<9.8	<49	<49	**460**
BH-138	8/25/23	1	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.4	<9.4	<47	<47	**480**
BH-139	8/24/23	1	<0.023	<0.047	<0.047	<0.094	<0.094	<4.7	<9.9	<9.9	<50	<50	**440**
BH-140	8/24/23	1	<0.027	<0.055	<0.055	<0.11	<0.11	<5.5	<9.6	<9.6	<48	<48	**270**
BH-141	8/24/23	2	<0.023	<0.045	<0.045	<0.090	<0.090	<4.5	<9.9	<9.9	<49	<49	**580**
BH-142	8/24/23	2	<0.021	<0.042	<0.042	<0.085	<0.085	<4.2	<10	<10	<50	<50	**550**
BH-143	8/24/23	2	<0.026	<0.052	<0.052	<0.10	<0.10	<5.2	<10	<10	<50	<50	**510**
BH-144	8/25/23	5	<0.020	<0.040	<0.040	<0.080	<0.080	<4.0	<9.4	<9.4	<47	<47	**450**
~~BH-145~~	~~8/25/23~~	~~11~~	~~<0.019~~	~~<0.038~~	~~<0.038~~	~~<0.076~~	~~<0.076~~	~~<3.8~~	~~<9.6~~	~~<9.6~~	~~<48~~	~~<48~~	~~**690**~~
BH-145A	9/14/23	13	<0.022	<0.043	<0.043	<0.087	<0.087	<4.3	<9.5	<9.5	<48	<48	**310**
BH-146	8/25/23	11	<0.022	<0.044	<0.044	<0.088	<0.088	<4.4	<9.7	<9.7	<49	<49	**560**
BH-147	8/25/23	5	<0.020	<0.039	<0.039	<0.079	<0.079	<3.9	<9.8	<9.8	<49	<49	**570**
BH-148	8/25/23	5	<0.019	<0.039	<0.039	<0.077	<0.077	<3.9	<9.3	<9.3	<47	<47	**410**
BH-149	8/25/23	5	<0.019	<0.038	<0.038	<0.075	<0.075	<3.8	<9.8	<9.8	<49	<49	**600**
BH-150	8/25/23	5	<0.019	<0.038	<0.038	<0.076	<0.076	<3.8	<9.8	<9.8	<49	<49	**510**
~~BH-151~~	~~8/25/23~~	~~5~~	~~<0.018~~	~~<0.036~~	~~<0.036~~	~~<0.072~~	~~<0.072~~	~~<3.6~~	~~<9.9~~	~~<9.9~~	~~<49~~	~~<49~~	~~**730**~~
BH-151A	9/14/23	7	<0.022	<0.044	<0.044	<0.088	<0.088	<4.4	<9.9	<9.9	<50	<50	**490**
~~BH-152~~	~~8/25/23~~	~~3~~	~~<0.021~~	~~<0.042~~	~~<0.042~~	~~<0.084~~	~~<0.084~~	~~<4.2~~	~~<9.4~~	~~<9.4~~	~~<47~~	~~<47~~	~~**940**~~
~~BH-152A~~	~~9/14/23~~	~~5~~	~~<0.020~~	~~<0.039~~	~~<0.039~~	~~<0.079~~	~~<0.079~~	~~<3.9~~	~~<9.8~~	~~<9.8~~	~~<49~~	~~<49~~	~~**640**~~
~~BH-152B~~	~~9/20/23~~	~~7~~	~~<0.020~~	~~<0.041~~	~~<0.041~~	~~<0.082~~	~~<0.082~~	~~<4.1~~	~~<9.9~~	~~<9.9~~	~~<49~~	~~<49~~	~~**710**~~
BH-152C	9/26/23	10.5	<0.019	<0.039	<0.039	<0.078	<0.078	<3.9	<10	<10	<50	<50	**370**
BH-153	8/25/23	3	<0.022	<0.044	<0.044	<0.088	<0.088	<4.4	<9.9	<9.9	<49	<49	**370**
~~BH-154~~	~~8/25/23~~	~~3~~	~~<0.023~~	~~<0.046~~	~~<0.046~~	~~<0.092~~	~~<0.092~~	~~<4.6~~	~~<9.4~~	~~<9.4~~	~~<47~~	~~<47~~	~~**840**~~

Table 2
Summary of Soil Analytical Data - Confirmation Samples
Delek Matador Pony Express East
Delek Logistics Parter, L.P.
nAPP2320536236
Lea County, New Mexico

Sample ID	Sample Date	Depth (ft bgs)	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	Total Petroleum Hydrocarbons (TPH)					Chloride
								GRO (C6-C10)	DRO (>C10-C28)	GRO+DRO	ORO (>C28-C36)	Total GRO/DRO/MRO	
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Table I Closure Criteria for Soil <50 ft Depth to Groundwater 19.15.29 NMAC			**10**	**---**	**---**	**---**	**50**	**---**	**---**	**---**	**---**	**100**	**600**
~~BH-154A~~	~~9/14/23~~	~~5~~	~~<0.018~~	~~<0.037~~	~~<0.037~~	~~<0.073~~	~~<0.073~~	~~<3.7~~	~~<9.2~~	~~<9.2~~	~~<46~~	~~<46~~	~~**660**~~
BH-154B	9/20/23	7	<0.020	<0.039	<0.039	<0.079	<0.079	<3.9	<9.5	<9.5	<48	<48	**590**
BH-155	8/29/23	1	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.8	<9.8	<49	<49	**190**
BH-156	8/29/23	1	<0.023	<0.045	<0.045	<0.091	<0.091	<4.5	<9.7	<9.7	<48	<48	**90**
BH-157	8/29/23	1	<0.028	<0.057	<0.057	<0.11	<0.11	<5.7	<9.3	<9.3	<47	<47	**400**
~~BH-158~~	~~8/29/23~~	~~1~~	~~<0.026~~	~~<0.051~~	~~<0.051~~	~~<0.10~~	~~<0.10~~	~~<5.1~~	~~<8.6~~	~~<8.6~~	~~<43~~	~~<43~~	~~**760**~~
BH-158A	9/14/23	3	<0.020	<0.041	<0.041	<0.082	<0.082	<4.1	<9.3	<9.3	<46	<46	**490**
BH-159	8/29/23	1	<0.025	<0.051	<0.051	<0.10	<0.10	<5.1	<9.0	<9.0	<45	<45	**190**
BH-160	8/29/23	1	<0.021	<0.043	<0.043	<0.086	<0.086	<4.3	<9.9	<9.9	<50	<50	**250**
BH-161	8/29/23	1	<0.026	<0.052	<0.052	<0.10	<0.10	<5.2	<9.6	<9.6	<48	<48	**490**
BH-162	8/29/23	1	<0.023	<0.046	<0.046	<0.092	<0.092	<4.6	<9.0	<9.0	<45	<45	**390**
~~BH-163~~	~~8/29/23~~	~~1~~	~~<0.025~~	~~<0.049~~	~~<0.049~~	~~<0.098~~	~~<0.098~~	~~<4.9~~	~~<9.4~~	~~<9.4~~	~~<47~~	~~<47~~	~~**940**~~
BH-163A	9/14/23	3	<0.021	<0.041	<0.041	<0.082	<0.082	<4.1	<9.3	<9.3	<46	<46	**590**
~~BH-164~~	~~8/29/23~~	~~1~~	~~<0.022~~	~~<0.043~~	~~<0.043~~	~~<0.087~~	~~<0.087~~	~~<4.3~~	~~<9.4~~	~~<9.4~~	~~<47~~	~~<47~~	~~**740**~~
~~BH-164A~~	~~9/14/23~~	~~3~~	~~<0.021~~	~~<0.042~~	~~<0.042~~	~~<0.084~~	~~<0.084~~	~~<4.2~~	~~<9.5~~	~~<9.5~~	~~<47~~	~~<47~~	~~**860**~~
BH-164B	9/20/23	5	<0.018	<0.036	<0.036	<0.072	<0.072	<3.6	<9.8	<9.8	<49	<49	**230**
BH-165	8/29/23	0.25	<0.016	<0.033	<0.033	<0.066	<0.066	<3.3	27	27	<46	27	**570**
BH-166	8/29/23	0.25	<0.017	<0.033	<0.033	<0.066	<0.066	<3.3	14	14	<47	14	**250**
BH-167*	8/29/23	0.25	<0.018	<0.036	<0.036	<0.072	<0.072	<3.6	50	50	<48	**50**	**1100**
~~BH-168~~	~~8/29/23~~	~~0.25~~	~~<0.018~~	~~<0.036~~	~~<0.036~~	~~<0.073~~	~~<0.073~~	~~<3.6~~	~~55~~	~~55~~	~~<48~~	~~**55**~~	~~**1300**~~
BH-168A	9/19/23	1	<0.020	<0.039	<0.039	<0.079	<0.079	<3.9	<9.9	<9.9	<50	<50	**78**
BH-169*	8/29/23	0.25	<0.018	<0.035	<0.035	<0.070	<0.070	<3.5	53	53	<49	**53**	**1300**
BH-170*	8/29/23	0.25	<0.019	<0.038	<0.038	<0.076	<0.076	<3.8	44	44	<50	44	**1300**
BH-171	8/30/23	5	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<9.4	<9.4	<47	<47	**210**

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Summary of Soil Analytical Data - Confirmation Samples
Delek Matador Pony Express East
Delek Logistics Parter, L.P.
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Lea County, New Mexico

Sample ID	Sample Date	Depth (ft bgs)	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	Total Petroleum Hydrocarbons (TPH)					Chloride
								GRO (C6-C10)	DRO (>C10-C28)	GRO+DRO	ORO (>C28-C36)	Total GRO/DRO/MRO	
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Table I Closure Criteria for Soil <50 ft Depth to Groundwater 19.15.29 NMAC			**10**	**---**	**---**	**---**	**50**	**---**	**---**	**---**	**---**	**100**	**600**
~~BH-172~~	~~8/30/23~~	~~0.25~~	~~<0.025~~	~~<0.049~~	~~<0.049~~	~~<0.098~~	~~<0.098~~	~~<4.9~~	~~33~~	~~33~~	~~<49~~	~~33~~	~~**1500**~~
BH-172A	9/19/23	5	<0.021	<0.042	<0.042	<0.085	<0.085	<4.2	<9.5	<9.5	<48	<48	<60
~~BH-173~~	~~8/30/23~~	~~0.25~~	~~<0.018~~	~~<0.036~~	~~<0.036~~	~~<0.071~~	~~<0.071~~	~~<3.6~~	~~28~~	~~28~~	~~<42~~	~~28~~	~~**860**~~
BH-173A	9/19/23	1	<0.019	<0.039	<0.039	<0.078	<0.078	<3.9	**7.9**	**7.9**	<46	**7.9**	**180**
BH-174	8/30/23	0.25	<0.018	<0.036	<0.036	<0.072	<0.072	<3.6	<9.3	<9.3	<46	<46	**150**
BH-175	8/30/23	0.25	<0.019	<0.038	<0.038	<0.077	<0.077	<3.8	<9.1	<9.1	<45	<45	**89**
BH-176	8/30/23	0.25	<0.018	<0.036	<0.036	<0.072	<0.072	<3.6	<9.4	<9.4	<47	<47	**120**
BH-177	8/30/23	0.25	<0.016	<0.032	<0.032	<0.064	<0.064	<3.2	<8.9	<8.9	<45	<45	**68**
BH-178	8/30/23	0.25	<0.019	<0.037	<0.037	<0.074	<0.074	<3.7	<9.0	<9.0	<45	<45	**370**
BH-179	8/30/23	0.25	<0.020	<0.040	<0.040	<0.080	<0.080	<4.0	<9.8	<9.8	<49	<49	**170**
BH-180	8/30/23	0.25	<0.019	<0.039	<0.039	<0.077	<0.077	<3.9	<9.8	<9.8	<49	<49	**180**
BH-181	8/30/23	1.5	<0.018	<0.037	<0.037	<0.074	<0.074	<3.7	<9.7	<9.7	<48	<48	**390**
BH-182	8/30/23	0.25	<0.021	<0.042	<0.042	<0.084	<0.084	<4.2	<8.6	<8.6	<43	<43	**460**
BH-183	8/30/23	0.25	<0.018	<0.036	<0.036	<0.073	<0.073	<3.6	<9.9	<9.9	<49	<49	**180**
BH-184	8/30/23	0.25	<0.026	<0.052	<0.052	<0.10	<0.10	<5.2	8.8	8.8	<48	8.8	**200**
BH-185*	8/30/23	0.25	<0.022	<0.043	<0.043	<0.087	<0.087	<4.3	88	88	64	**152**	**320**
BH-186	8/30/23	0.25	<0.019	<0.038	<0.038	<0.076	<0.076	<3.8	<9.5	<9.5	<47	<47	**130**
BH-187	8/30/23	0.25	<0.024	<0.047	<0.047	<0.094	<0.094	<4.7	<9.1	<9.1	<45	<45	**130**
BH-188	8/30/23	0.25	<0.026	<0.051	<0.051	<0.10	<0.10	<5.1	<9.5	<9.5	<47	<47	**82**
BH-189	8/30/23	0.25	<0.017	<0.034	<0.034	<0.068	<0.068	<3.4	<8.6	<8.6	<43	<43	**190**
BH-190	8/30/23	0.25	<0.018	<0.037	<0.037	<0.074	<0.074	<3.7	<9.0	<9.0	<45	<45	**140**
BH-191	8/30/23	0.25	<0.018	<0.035	<0.035	<0.071	<0.071	<3.5	<9.2	<9.2	<46	<46	**200**
BH-192	8/30/23	0.25	<0.017	<0.034	<0.034	<0.068	<0.068	<3.4	<8.8	<8.8	<44	<44	**170**
BH-193	8/24/23	6	<0.020	<0.040	<0.040	<0.080	<0.080	<4.0	<9.7	<9.7	<48	<48	**200**

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Table 2
Summary of Soil Analytical Data - Confirmation Samples
Delek Matador Pony Express East
Delek Logistics Parter, L.P.
nAPP2320536236
Lea County, New Mexico

Sample ID	Sample Date	Depth (ft bgs)	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	Total Petroleum Hydrocarbons (TPH)					Chloride
								GRO (C6-C10)	DRO (>C10-C28)	GRO+DRO	ORO (>C28-C36)	Total GRO/DRO/MRO	
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Table I Closure Criteria for Soil <50 ft Depth to Groundwater 19.15.29 NMAC			10	---	---	---	50	---	---	---	---	100	600
BH-194	8/30/23	0.25	<0.019	<0.037	<0.037	<0.074	<0.074	<3.7	<8.4	<8.4	<42	<42	**320**
BH-195	8/30/23	0.25	<0.018	<0.035	<0.035	<0.071	<0.071	<3.5	<9.2	<9.2	<46	<46	<60
BH-196	8/30/23	0.25	<0.017	<0.033	<0.033	<0.066	<0.066	<3.3	<9.5	<9.5	<47	<47	**70**
BH-197	8/30/23	0.25	<0.018	<0.035	<0.035	<0.070	<0.070	<3.5	<9.5	<9.5	<48	<48	**71**
BH-198	8/30/23	0.25	<0.020	<0.040	<0.040	<0.081	<0.081	<4.0	<9.2	<9.2	<46	<46	**96**
BH-199	8/30/23	0.25	<0.016	<0.033	<0.033	<0.065	<0.065	<3.3	<8.8	<8.8	<44	<44	**72**
BH-200	8/30/23	0.25	<0.021	<0.043	<0.043	<0.086	<0.086	<4.3	<8.9	<8.9	<45	<45	**85**
BH-201	8/30/23	0.25	<0.020	<0.039	<0.039	<0.079	<0.079	<3.9	<9.1	<9.1	<46	<46	<60
BH-202	8/30/23	0.25	<0.021	<0.041	<0.041	<0.082	<0.082	<4.1	<9.0	<9.0	<45	<45	**110**
BH-203	8/30/23	0.25	<0.021	<0.041	<0.041	<0.083	<0.083	<4.1	<9.4	<9.4	<47	<47	**580**
~~BH-204~~	~~8/30/23~~	~~0.25~~	~~<0.020~~	~~<0.040~~	~~<0.040~~	~~<0.080~~	~~<0.080~~	~~<4.0~~	~~<9.8~~	~~<9.8~~	~~<49~~	~~<49~~	**~~700~~**
BH-204A	9/14/23	0.5	<0.020	<0.040	<0.040	<0.080	<0.080	<4.0	<9.9	<9.9	<50	<50	**600**
BH-205	8/30/23	0.25	<0.021	<0.041	<0.041	<0.083	<0.083	<4.1	<9.8	<9.8	<49	<49	**70**
BH-206	8/30/23	0.25	<0.026	<0.052	<0.052	<0.10	<0.10	<5.2	<10	<10	<50	<50	<60
BH-207	8/30/23	0.25	<0.021	<0.041	<0.041	<0.083	<0.083	<4.1	<9.5	<9.5	<47	<47	**110**
BH-208	8/30/23	0.25	<0.022	<0.044	<0.044	<0.089	<0.089	<4.4	<9.8	<9.8	<49	<49	<60
BH-209	8/31/23	5	<0.022	<0.044	<0.044	<0.087	<0.087	<4.4	15	15	<48	15	**400**
Sidewall Confirmation Samples													
SW1	8/2/23	0-5	<0.022	<0.045	<0.045	<0.089	<0.089	<4.5	<9.7	<9.7	<48	<48	**140**
SW2	8/2/23	0-5	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<9.5	<9.5	<47	<47	**390**
SW3	8/2/23	0-3.5	<0.020	<0.039	<0.039	<0.079	<0.079	<3.9	<9.6	<9.6	<48	<48	**160**
SW4	8/2/23	0-4	<0.023	<0.045	<0.045	<0.090	<0.090	<4.5	<9.5	<9.5	<47	<47	**260**
SW5	8/2/23	0-4	<0.019	<0.038	<0.038	<0.075	<0.075	<3.8	<9.1	<9.1	<46	<46	**81**
SW6	8/2/23	0-2	<0.023	<0.047	<0.047	<0.094	<0.094	<4.7	<10	<10	<50	<50	**120**

Table 2
Summary of Soil Analytical Data - Confirmation Samples
Delek Matador Pony Express East
Delek Logistics Parter, L.P.
nAPP2320536236
Lea County, New Mexico

Sample ID	Sample Date	Depth (ft bgs)	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	Total Petroleum Hydrocarbons (TPH)					Chloride
								GRO (C6-C10)	DRO (>C10-C28)	GRO+DRO	ORO (>C28-C36)	Total GRO/DRO/MRO	
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Table I Closure Criteria for Soil <50 ft Depth to Groundwater 19.15.29 NMAC			**10**	**---**	**---**	**---**	**50**	**---**	**---**	**---**	**---**	**100**	**600**
SW-7	8/24/23	0-2	<0.026	<0.052	<0.052	<0.10	<0.10	<5.2	**8.9**	**8.9**	<48	**8.9**	**600**
~~SW-8~~	~~8/24/23~~	~~0-2~~	~~<0.032~~	~~<0.063~~	~~<0.063~~	~~<0.13~~	~~<0.13~~	~~<6.3~~	~~<9.9~~	~~<9.9~~	~~<49~~	~~<49~~	~~**680**~~
SW-8A	8/31/23	0-3	<0.023	<0.045	<0.045	<0.091	<0.091	<4.5	<9.9	<9.9	<50	<50	**580**
~~SW-9~~	~~8/24/23~~	~~0-2~~	~~<0.023~~	~~<0.046~~	~~<0.046~~	~~<0.092~~	~~<0.092~~	~~<4.6~~	~~<9.6~~	~~<9.6~~	~~<48~~	~~<48~~	~~**2600**~~
~~SW-9A~~	~~8/31/23~~	~~0-2~~	~~<0.021~~	~~<0.042~~	~~<0.042~~	~~<0.085~~	~~<0.085~~	~~<4.2~~	~~<9.4~~	~~<9.4~~	~~<47~~	~~<47~~	~~**670**~~
SW-9B	9/19/23	0-2	<0.021	<0.042	<0.042	<0.084	<0.084	<4.2	<9.4	<9.4	<47	<47	**290**
SW-10	8/28/23	0-2	<0.028	<0.057	<0.057	<0.11	<0.11	<5.7	<9.6	<9.6	<48	<48	**89**
SW-11	8/28/23	0-2	<0.018	<0.036	<0.036	<0.071	<0.071	<3.6	<9.9	<9.9	<50	<50	**80**
SW-12	8/28/23	0-2	<0.018	<0.037	<0.037	<0.074	<0.074	<3.7	<8.8	<8.8	<44	<44	<60
SW-20	8/28/23	0-3	<0.020	<0.041	<0.041	<0.081	<0.081	<4.1	<9.3	<9.3	<47	<47	**110**
SW-21	8/28/23	0-3	<0.020	<0.039	<0.039	<0.079	<0.079	<3.9	<9.4	<9.4	<47	<47	**250**
SW-22	8/28/23	0-3	<0.021	<0.042	<0.042	<0.083	<0.083	<4.2	<9.7	<9.7	<49	<49	**250**
SW-23	8/28/23	0-3	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.3	<9.3	<46	<46	**240**
SW-24	8/28/23	0-3	<0.021	<0.042	<0.042	<0.084	<0.084	<4.2	<9.5	<9.5	<47	<47	**130**
SW-25	8/28/23	0-5	<0.029	<0.058	<0.058	<0.12	<0.12	<5.8	<9.7	<9.7	<49	<49	**420**
SW-26	8/31/23	0-5	<0.023	<0.047	<0.047	<0.093	<0.093	<4.7	12	12	<50	12	**490**
SW-27	8/31/23	0-5	<0.022	<0.045	<0.045	<0.090	<0.090	<4.5	8.6	8.6	<48	8.6	**120**
SW-28*	8/31/23	0-4	<0.020	<0.039	<0.039	<0.079	<0.079	<3.9	68	68	54	**122**	**1500**
SW-29	8/31/23	0-1.5	<0.021	<0.043	<0.043	<0.086	<0.086	<4.3	56	56	44	**100**	**560**

1. Values reported in mg/kg
2. < = Value Less than Reporting Limit (RL)
3. Bold Indicates Analyte Detected
4. BTEX analyses by EPA Method SW 8021B.
5. TPH analyses by EPA Method SW 8015 Mod.
6. GRO/DRO/MRO = Gasoline/Diesel/Motor Oil
7. Yellow shaded cells indicate analytical samples that exceed the NMAC 19.15.29.12 Table I Closure Criteria for the site.
8. J - the target analytes was positively identified below the quantitation limit and above the detection limit.
9. --- = not defined
10. * = Sample locations deferral is requested for.

~~BH-2~~ Sample Point Excavated

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Table 3
Daily Disposal Summary
Matador Pony Express East
nAPP2320536236
Lea County, New Mexico

Date of Disposal	Total Yards Disposed
8/17/2023	2,000
8/18/2023	820
8/21/2023	460
8/22/2023	560
8/23/2023	280
8/24/2023	360
8/25/2023	520
8/28/2023	284
9/14/2023	48
9/15/2023	20
9/18/2023	8
9/20/2023	22
9/27/2023	7
Project Total	**5,389**

Attachment A
Site Characterization Documentation

Nearest Water Well

Delek Logistics

Legend

- 0.50 Mile Radius
- 1.13 Miles
- 1.14 Miles
- 1.18 Miles
- MATADOR PONY EXPRESS EAST (07.16.2023)
- USGS Water Well

33.19' - Drilled 1968

335.10' - Drilled 1955

MATADOR PONY EXPRESS EAST (07.16.2023)

33.17' - Drilled 1996

Google Earth

Image © 2024 Airbus

1 mi

N

Received by OCD: 12/4/2024 10:43:20 AM

Low Karst

Delek Logistics

Legend

Low

MATADOR PONY EXPRESS EAST (07.16.2023)

MATADOR PONY EXPRESS EAST (07.16.2023)

Google Earth

Released to Imaging: 3/12/2025 11:29:45 AM

Image © 2024 Airbus

N

1 mi

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are smallest to largest)

(meters)

(In feet)

POD Number	Code	Sub basin	County	Q64	Q16	Q4	Sec	Tws	Range	X	Y	Map	Distance	Well Depth	Depth Water	Water Column
CP 00653 POD1		CP	LE		SE	SE	04	20S	33E	625573.0	3607367.0 *		2040	60		
CP 01980 POD1		CP	LE	NE	SW	SW	11	20S	33E	627611.5	3605794.6		2265	55	36	19
CP 00317		CP	LE	SW	SE	SW	05	20S	33E	623054.0	3607235.0 *		3014	680	325	355
CP 01865 POD2		CP	LE	SW	NW	SW	02	20S	33E	627454.2	3607733.7		3163	105	0	105

Average Depth to Water: **120 feet**

Minimum Depth: **0 feet**

Maximum Depth: **325 feet**

Record Count: 4

UTM Filters (in meters):

Easting: 625393.00

Northing: 3605334.00

Radius: 4000

*** UTM location was derived from PLSS - see Help**

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

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Groundwater levels for New Mexico

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Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 323442103384101

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 323442103384101 20S.33E.15.22143

Lea County, New Mexico
Latitude 32°34'42", Longitude 103°38'41" NAD27
Land-surface elevation 3,583 feet above NAVD88
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1955-04-20		D	62610		3246.35	NGVD29	1	Z			A
1955-04-20		D	62611		3247.90	NAVD88	1	Z			A
1955-04-20		D	72019	335.10			1	Z			A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

U.S. Department of the Interior | U.S. Geological Survey
Title: Groundwater for New Mexico: Water Levels
URL: https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?

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Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 323541103395501

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 323541103395501 20S.33E.04.43211

Lea County, New Mexico
Latitude 32°35'41", Longitude 103°39'55" NAD27
Land-surface elevation 3,553 feet above NAVD88
The depth of the well is 58 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1965-11-17		D	62610		3516.54	NGVD29	P	Z			A
1965-11-17		D	62611		3518.09	NAVD88	P	Z			A
1965-11-17		D	72019	34.91			P	Z			A
1968-03-19		D	62610		3518.26	NGVD29	1	Z			A
1968-03-19		D	62611		3519.81	NAVD88	1	Z			A
1968-03-19		D	72019	33.19			1	Z			A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Status	P	Pumping
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Page Contact Information: New Mexico Water Data Maintainer
Page Last Modified: 2024-12-03 09:46:36 EST
0.34 0.24 nadww02

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Metho meası

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Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 323341103403501

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 323341103403501 20S.33E.20.22224

Lea County, New Mexico
Latitude 32°33'55", Longitude 103°40'38" NAD27
Land-surface elevation 3,536.00 feet above NGVD29
The depth of the well is 52 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1968-03-19		D	62610		3498.99	NGVD29	1	Z			A
1968-03-19		D	62611		3500.55	NAVD88	1	Z			A
1968-03-19		D	72019	37.01			1	Z			A
1971-02-03		D	62610		3499.16	NGVD29	1	Z			A
1971-02-03		D	62611		3500.72	NAVD88	1	Z			A
1971-02-03		D	72019	36.84			1	Z			A
1972-09-25		D	62610		3499.35	NGVD29	1	Z			A
1972-09-25		D	62611		3500.91	NAVD88	1	Z			A
1972-09-25		D	72019	36.65			1	Z			A
1976-02-24		D	62610		3499.86	NGVD29	1	Z			A
1976-02-24		D	62611		3501.42	NAVD88	1	Z			A
1976-02-24		D	72019	36.14			1	Z			A
1981-02-19		D	62610		3501.00	NGVD29	1	Z			A
1981-02-19		D	62611		3502.56	NAVD88	1	Z			A
1981-02-19		D	72019	35.00			1	Z			A
1986-03-25		D	62610		3501.53	NGVD29	1	Z			A
1986-03-25		D	62611		3503.09	NAVD88	1	Z			A
1986-03-25		D	72019	34.47			1	Z			A
1991-05-23		D	62610		3502.07	NGVD29	1	Z			A
1991-05-23		D	62611		3503.63	NAVD88	1	Z			A
1991-05-23		D	72019	33.93			1	Z			A
1996-02-02		D	62610		3502.83	NGVD29	1	S			A
1996-02-02		D	62611		3504.39	NAVD88	1	S			A
1996-02-02		D	72019	33.17			1	S			A

Received by OCD: 12/4/2024 10:43:20 AM

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Metho meas

Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

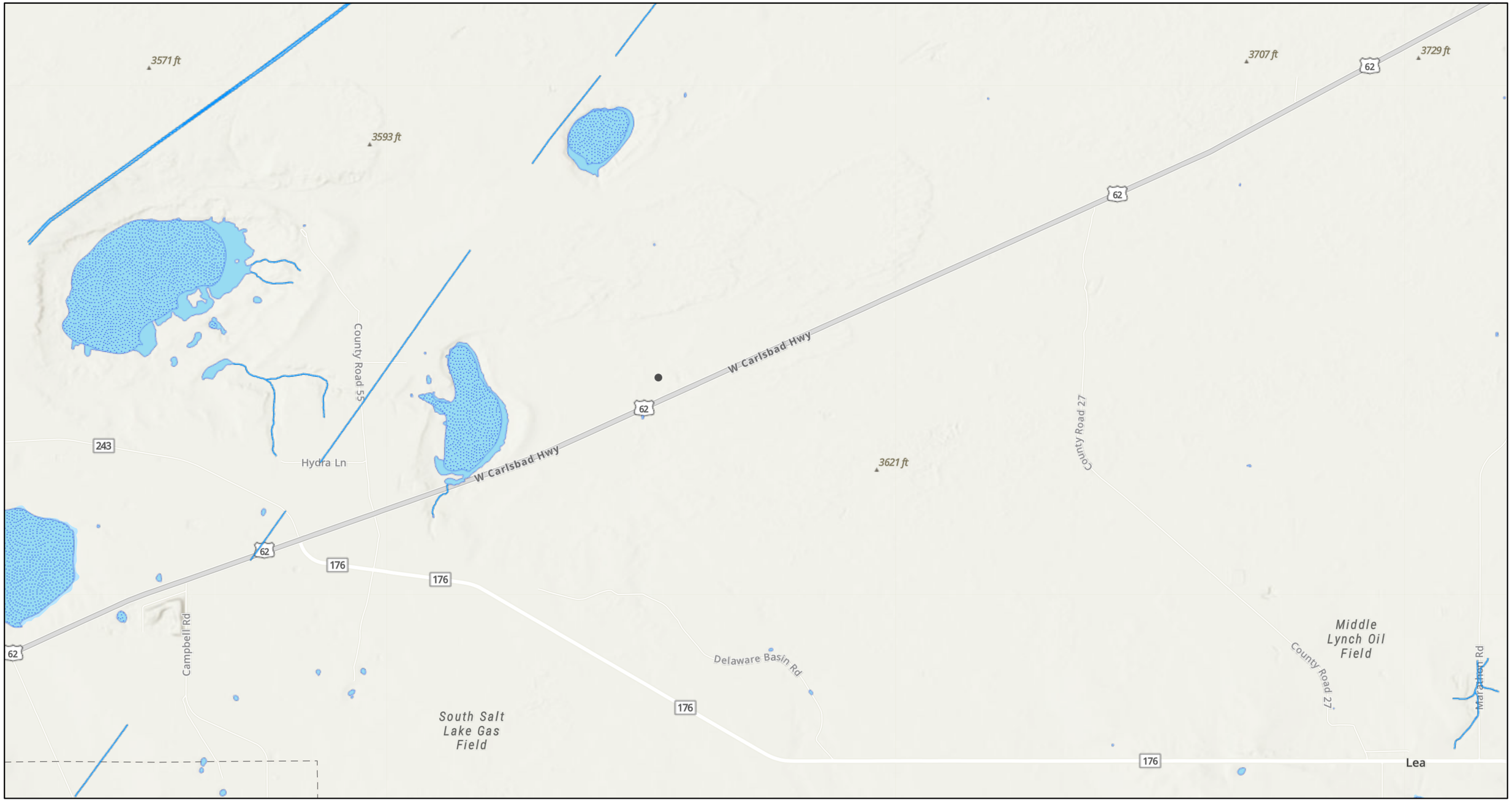
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U.S. Department of the Interior | U.S. Geological Survey
Title: Groundwater for New Mexico: Water Levels
URL: https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?

Page Contact Information: New Mexico Water Data Maintainer
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0.33 0.24 nadww01

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MATADOR PONY EXPRESS EAST (07.16.2023)



12/3/2024, 8:38:52 AM

OSW Water Bodys

OSE Probable Playas

OSE Streams

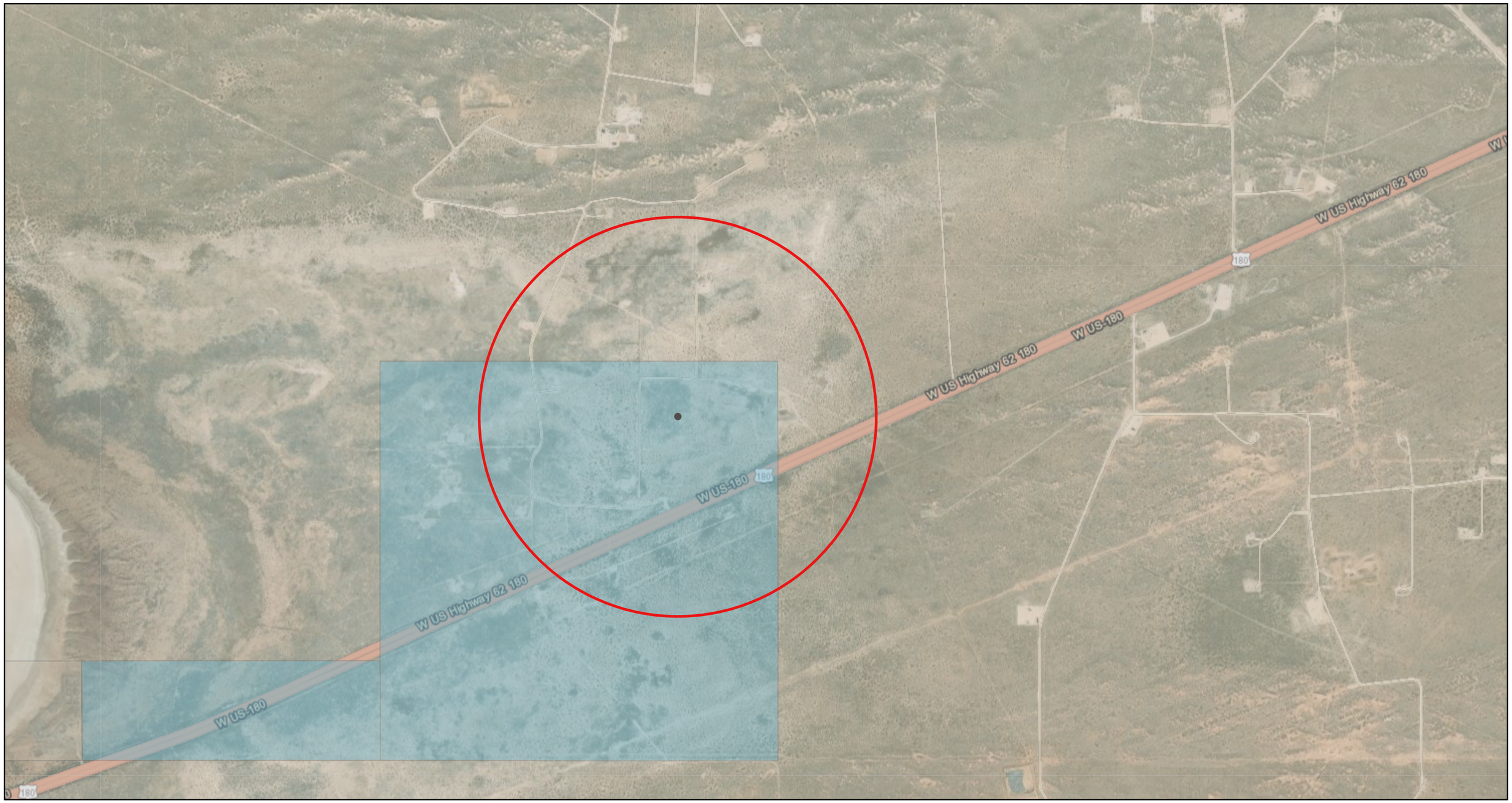
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0 0.75 1.5 3 mi

0 1.25 2.5 5 km

Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS, Esri, NASA, NGA, USGS, FEMA, NM OSE

OSE POD Locations Map



7/17/2023, 2:24:30 PM

Override 1

OSE District Boundary

Water Right Regulations

Closure Area

New Mexico State Trust Lands

Subsurface Estate

Both Estates

SiteBoundaries

1:18,056

0 0.17 0.35 0.7 mi

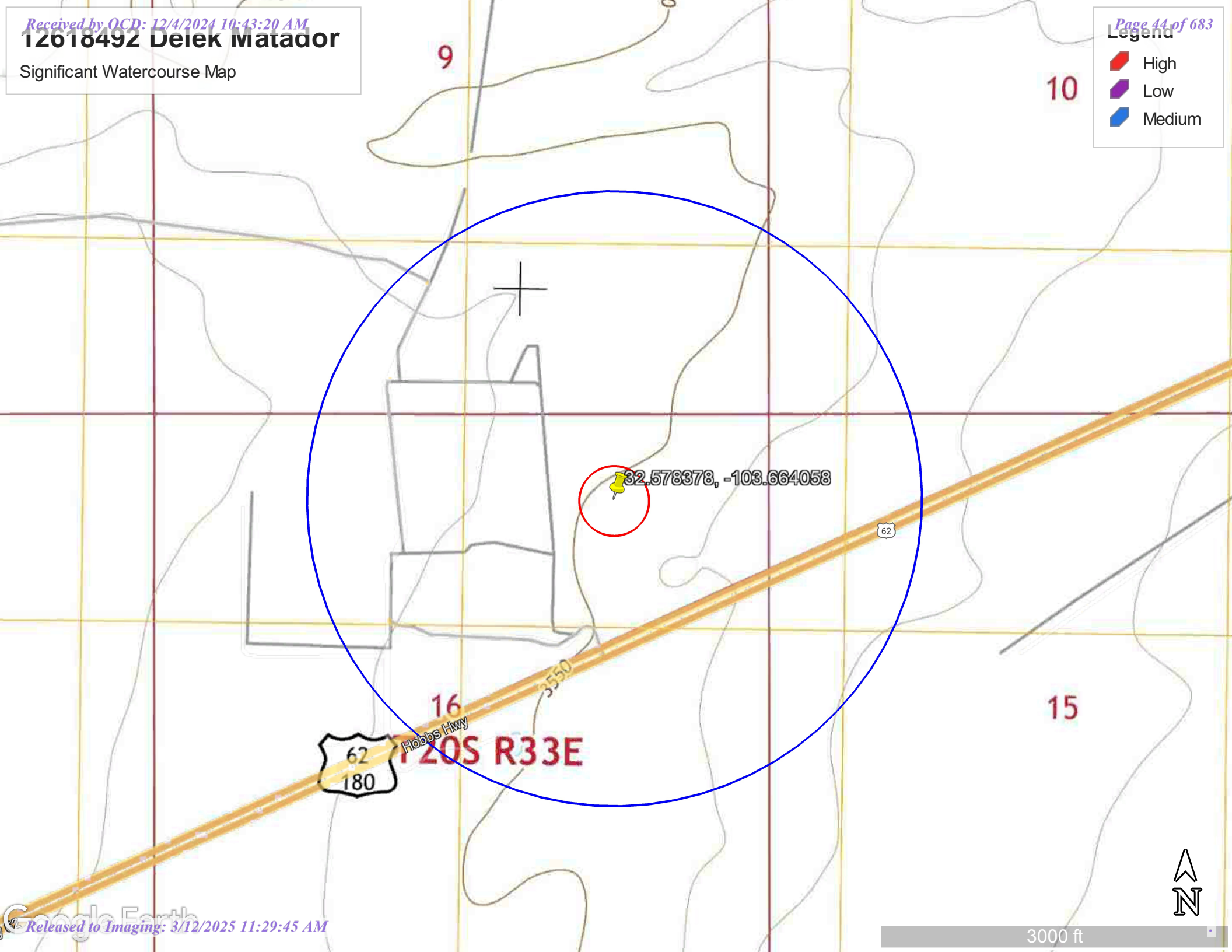
0 0.3 0.6 1.2 km

Esri, HERE, iPC, U.S. Department of Energy Office of Legacy Management, Esri, HERE, Garmin, iPC, Maxar

Web Generated Map
Map is generated by web users.

12618492 Delek Matador

Significant Watercourse Map



Received by OCD: 12/4/2024 10:43:20 AM

U.S. Fish and Wildlife Service
National Wetlands Inventory

Wetlands Map



July 17, 2023

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

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

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

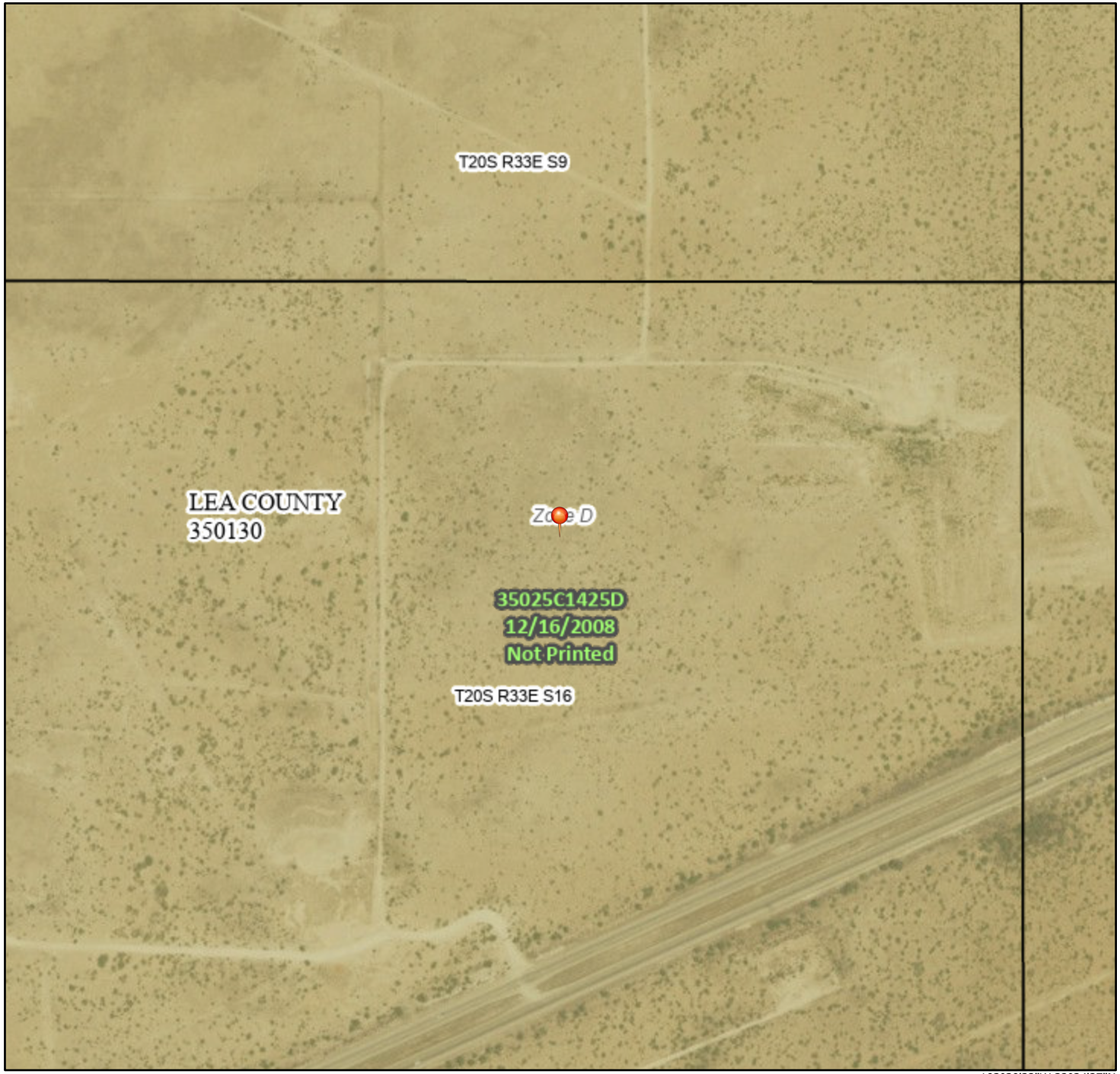
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Received by OCD: 12/4/2024 10:43:20 AM

National Flood Hazard Layer FIRMette

FEMA

103°40'9"W 32°34'57"N



103°39'32"W 32°34'27"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

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

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

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

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/17/2023 at 2:42 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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Attachment B
Laboratory Analytical Reports and Chain-of-Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Nate Reece
GHD Services Inc.
2135 South Loop 250 West
Midland, Texas 79703

Generated 7/24/2023 4:08:41 PM

JOB DESCRIPTION

Delek Matador Produced Water Release
SDG NUMBER 12618492

JOB NUMBER

890-4962-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 5/12/2025 11:29:45 AM

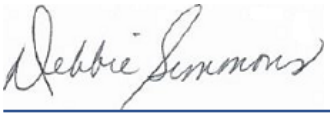
Eurofins Carlsbad

Job Notes

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

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

Authorization



Generated
7/24/2023 4:08:41 PM

Authorized for release by
Debbie Simmons, Project Manager
Debbie.Simmons@et.eurofinsus.com
(832)986-6768

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Laboratory Job ID: 890-4962-1
SDG: 12618492

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Sample Summary 52
Chain of Custody 53
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Definitions/Glossary

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	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: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Job ID: 890-4962-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4962-1

Receipt
The samples were received on 7/18/2023 3:15 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: H-1 (SURFACE) (890-4962-1), H-1 (2FT) (890-4962-2), H-2 (SURFACE) (890-4962-3), H-2 (2FT) (890-4962-4), H-3 (SURFACE) (890-4962-5), H-3 (2FT) (890-4962-6), H-4 (SURFACE) (890-4962-7), H-4 (2FT) (890-4962-8), DS-1 (4FT) (890-4962-9), DS-1 (2.5FT) (890-4962-10), DS-2 (2FT) (890-4962-11), DS-2 (4FT) (890-4962-12), DS-3 (1FT) (890-4962-13), DS-3 (2.5FT) (890-4962-14), DS-4 (1FT) (890-4962-15), DS-4 (4FT) (890-4962-16), DS-5 (2.5FT) (890-4962-17), DS-5 (4FT) (890-4962-18), DS-6 (2.5FT) (890-4962-19), DS-6 (5FT) (890-4962-20), DS-7 (2.5FT) (890-4962-21), DS-7 (5FT) (890-4962-22), DS-8 (2.5FT) (890-4962-23) and DS-8 (5FT) (890-4962-24).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: (CCV 880-58088/2) and (MB 880-58142/5-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following samples were outside control limits: H-2 (SURFACE) (890-4962-3), H-3 (SURFACE) (890-4962-5), DS-1 (2.5FT) (890-4962-10), DS-2 (2FT) (890-4962-11), DS-2 (4FT) (890-4962-12), DS-3 (1FT) (890-4962-13), DS-4 (1FT) (890-4962-15), DS-5 (4FT) (890-4962-18), DS-6 (2.5FT) (890-4962-19) and DS-6 (5FT) (890-4962-20). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-58142 and analytical batch 880-58088 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: The continuing calibration verification (CCV) associated with batch 880-58088 recovered above the upper control limit for m-Xylene & p-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-58088/20).

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

GC Semi VOA
Method 8015MOD_NM: The continuing calibration verification (CCV) associated with batch 880-58184 recovered above the upper control limit for Gasoline Range Organics (GRO)-C6-C10. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-58184/5).

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: H-1 (2FT) (890-4962-2), H-2 (SURFACE) (890-4962-3), H-2 (2FT) (890-4962-4) and (MB 880-58179/1-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: DS-1 (4FT) (890-4962-9), DS-1 (2.5FT) (890-4962-10) and DS-2 (2FT) (890-4962-11). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: DS-6 (2.5FT) (890-4962-19) and (890-4962-A-17-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike duplicate (MSD) recoveries for preparation batch 880-58234 and analytical batch 880-58186 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

Case Narrative

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Job ID: 890-4962-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-58061 and analytical batch 880-58155 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: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-4962-1
SDG: 12618492

Client Sample ID: H-1 (SURFACE)

Lab Sample ID: 890-4962-1
Matrix: Solid

Date Collected: 07/17/23 00:00
Date Received: 07/18/23 15:15
Sample Depth: 0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		07/20/23 10:00	07/20/23 13:37	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/20/23 10:00	07/20/23 13:37	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/20/23 10:00	07/20/23 13:37	1
m-Xylene & p-Xylene	<0.00404	U *+	0.00404		mg/Kg		07/20/23 10:00	07/20/23 13:37	1
o-Xylene	<0.00202	U *+	0.00202		mg/Kg		07/20/23 10:00	07/20/23 13:37	1
Xylenes, Total	<0.00404	U *+	0.00404		mg/Kg		07/20/23 10:00	07/20/23 13:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*07/20/23 10:00*	*07/20/23 13:37*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*07/20/23 10:00*	*07/20/23 13:37*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			07/21/23 10:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			07/21/23 18:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/20/23 17:06	07/21/23 15:01	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/20/23 17:06	07/21/23 15:01	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/20/23 17:06	07/21/23 15:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*125*		*70 - 130*	*07/20/23 17:06*	*07/21/23 15:01*	*1*
o-Terphenyl	*110*		*70 - 130*	*07/20/23 17:06*	*07/21/23 15:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**76.3**		4.96		mg/Kg			07/20/23 13:47	1

Client Sample ID: H-1 (2FT)

Lab Sample ID: 890-4962-2
Matrix: Solid

Date Collected: 07/17/23 00:00
Date Received: 07/18/23 15:15
Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/20/23 10:00	07/20/23 13:17	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/20/23 10:00	07/20/23 13:17	1
Ethylbenzene	**0.00264**		0.00198		mg/Kg		07/20/23 10:00	07/20/23 13:17	1
m-Xylene & p-Xylene	**0.00459**	***+**	0.00396		mg/Kg		07/20/23 10:00	07/20/23 13:17	1
o-Xylene	<0.00198	U *+	0.00198		mg/Kg		07/20/23 10:00	07/20/23 13:17	1
Xylenes, Total	**0.00459**	***+**	0.00396		mg/Kg		07/20/23 10:00	07/20/23 13:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*07/20/23 10:00*	*07/20/23 13:17*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-4962-1
SDG: 12618492

Client Sample ID: H-1 (2FT)

Lab Sample ID: 890-4962-2
Matrix: Solid
Date Collected: 07/17/23 00:00
Date Received: 07/18/23 15:15
Sample Depth: 2

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*07/20/23 10:00*	*07/20/23 13:17*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.00723**		0.00396		mg/Kg			07/21/23 10:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**137**		50.2		mg/Kg			07/21/23 18:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2		mg/Kg		07/20/23 17:06	07/21/23 15:24	1
Diesel Range Organics (Over C10-C28)	**137**		50.2		mg/Kg		07/20/23 17:06	07/21/23 15:24	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		07/20/23 17:06	07/21/23 15:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*140*	*S1+*	*70 - 130*	*07/20/23 17:06*	*07/21/23 15:24*	*1*
o-Terphenyl	*120*		*70 - 130*	*07/20/23 17:06*	*07/21/23 15:24*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**372**		5.02		mg/Kg			07/20/23 14:02	1

Client Sample ID: H-2 (SURFACE)

Lab Sample ID: 890-4962-3
Matrix: Solid
Date Collected: 07/17/23 00:00
Date Received: 07/18/23 15:15
Sample Depth: 0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		07/20/23 10:00	07/20/23 13:58	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/20/23 10:00	07/20/23 13:58	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/20/23 10:00	07/20/23 13:58	1
m-Xylene & p-Xylene	<0.00403	U *+	0.00403		mg/Kg		07/20/23 10:00	07/20/23 13:58	1
o-Xylene	<0.00202	U *+	0.00202		mg/Kg		07/20/23 10:00	07/20/23 13:58	1
Xylenes, Total	<0.00403	U *+	0.00403		mg/Kg		07/20/23 10:00	07/20/23 13:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*07/20/23 10:00*	*07/20/23 13:58*	*1*
1,4-Difluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*07/20/23 10:00*	*07/20/23 13:58*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			07/21/23 10:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2		mg/Kg			07/21/23 18:01	1

Client Sample Results

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: H-2 (SURFACE)

Lab Sample ID: 890-4962-3
Matrix: Solid
Date Collected: 07/17/23 00:00
Date Received: 07/18/23 15:15
Sample Depth: 0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2		mg/Kg		07/20/23 17:06	07/21/23 15:49	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		07/20/23 17:06	07/21/23 15:49	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		07/20/23 17:06	07/21/23 15:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*162*	*S1+*	*70 - 130*	*07/20/23 17:06*	*07/21/23 15:49*	*1*
o-Terphenyl	*143*	*S1+*	*70 - 130*	*07/20/23 17:06*	*07/21/23 15:49*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**81.2**		5.03		mg/Kg			07/20/23 14:07	1

Client Sample ID: H-2 (2FT)

Lab Sample ID: 890-4962-4
Matrix: Solid
Date Collected: 07/17/23 00:00
Date Received: 07/18/23 15:15
Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		07/20/23 10:00	07/20/23 14:18	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/20/23 10:00	07/20/23 14:18	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/20/23 10:00	07/20/23 14:18	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402		mg/Kg		07/20/23 10:00	07/20/23 14:18	1
o-Xylene	<0.00201	U *+	0.00201		mg/Kg		07/20/23 10:00	07/20/23 14:18	1
Xylenes, Total	<0.00402	U *+	0.00402		mg/Kg		07/20/23 10:00	07/20/23 14:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*07/20/23 10:00*	*07/20/23 14:18*	*1*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*07/20/23 10:00*	*07/20/23 14:18*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			07/21/23 10:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			07/21/23 18:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		07/20/23 17:06	07/21/23 16:11	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		07/20/23 17:06	07/21/23 16:11	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		07/20/23 17:06	07/21/23 16:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*176*	*S1+*	*70 - 130*	*07/20/23 17:06*	*07/21/23 16:11*	*1*
o-Terphenyl	*155*	*S1+*	*70 - 130*	*07/20/23 17:06*	*07/21/23 16:11*	*1*

Client Sample Results

Client: GHD Services Inc.
Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Client Sample ID: H-2 (2FT)
Lab Sample ID: 890-4962-4
Date Collected: 07/17/23 00:00
Matrix: Solid
Date Received: 07/18/23 15:15
Sample Depth: 2

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	59.7		5.00		mg/Kg			07/20/23 14:12	1

Client Sample ID: H-3 (SURFACE)
Lab Sample ID: 890-4962-5
Date Collected: 07/17/23 00:00
Matrix: Solid
Date Received: 07/18/23 15:15
Sample Depth: 0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/20/23 10:00	07/20/23 14:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/20/23 10:00	07/20/23 14:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/20/23 10:00	07/20/23 14:39	1
m-Xylene & p-Xylene	<0.00401	U *+	0.00401		mg/Kg		07/20/23 10:00	07/20/23 14:39	1
o-Xylene	<0.00200	U *+	0.00200		mg/Kg		07/20/23 10:00	07/20/23 14:39	1
Xylenes, Total	<0.00401	U *+	0.00401		mg/Kg		07/20/23 10:00	07/20/23 14:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*07/20/23 10:00*	*07/20/23 14:39*	*1*
1,4-Difluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*07/20/23 10:00*	*07/20/23 14:39*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			07/21/23 10:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			07/21/23 18:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		07/20/23 17:06	07/21/23 16:35	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		07/20/23 17:06	07/21/23 16:35	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		07/20/23 17:06	07/21/23 16:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*07/20/23 17:06*	*07/21/23 16:35*	*1*
o-Terphenyl	*100*		*70 - 130*	*07/20/23 17:06*	*07/21/23 16:35*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	161		5.02		mg/Kg			07/20/23 14:17	1

Client Sample Results

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: H-3 (2FT)

Lab Sample ID: 890-4962-6
Matrix: Solid
Date Collected: 07/17/23 00:00
Date Received: 07/18/23 15:15
Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/20/23 10:00	07/20/23 14:59	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/20/23 10:00	07/20/23 14:59	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/20/23 10:00	07/20/23 14:59	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398		mg/Kg		07/20/23 10:00	07/20/23 14:59	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		07/20/23 10:00	07/20/23 14:59	1
Xylenes, Total	<0.00398	U *+	0.00398		mg/Kg		07/20/23 10:00	07/20/23 14:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*07/20/23 10:00*	*07/20/23 14:59*	*1*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*07/20/23 10:00*	*07/20/23 14:59*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			07/21/23 10:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			07/21/23 18:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		07/20/23 17:06	07/21/23 16:57	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		07/20/23 17:06	07/21/23 16:57	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		07/20/23 17:06	07/21/23 16:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*07/20/23 17:06*	*07/21/23 16:57*	*1*
o-Terphenyl	*102*		*70 - 130*	*07/20/23 17:06*	*07/21/23 16:57*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**70.6**		4.98		mg/Kg			07/20/23 14:32	1

Client Sample ID: H-4 (SURFACE)

Lab Sample ID: 890-4962-7
Matrix: Solid
Date Collected: 07/17/23 00:00
Date Received: 07/18/23 15:15
Sample Depth: 0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/20/23 10:00	07/20/23 15:20	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/20/23 10:00	07/20/23 15:20	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/20/23 10:00	07/20/23 15:20	1
m-Xylene & p-Xylene	<0.00397	U *+	0.00397		mg/Kg		07/20/23 10:00	07/20/23 15:20	1
o-Xylene	<0.00198	U *+	0.00198		mg/Kg		07/20/23 10:00	07/20/23 15:20	1
Xylenes, Total	<0.00397	U *+	0.00397		mg/Kg		07/20/23 10:00	07/20/23 15:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*07/20/23 10:00*	*07/20/23 15:20*	*1*

Client Sample Results

Client: GHD Services Inc.
Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Client Sample ID: H-4 (SURFACE)
Lab Sample ID: 890-4962-7
Date Collected: 07/17/23 00:00
Matrix: Solid
Date Received: 07/18/23 15:15
Sample Depth: 0

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*07/20/23 10:00*	*07/20/23 15:20*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			07/21/23 10:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**323**		50.5		mg/Kg			07/24/23 14:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		07/20/23 17:06	07/21/23 17:46	1
Diesel Range Organics (Over C10-C28)	**323**		50.5		mg/Kg		07/20/23 17:06	07/21/23 17:46	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		07/20/23 17:06	07/21/23 17:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*07/20/23 17:06*	*07/21/23 17:46*	*1*
o-Terphenyl	*99*		*70 - 130*	*07/20/23 17:06*	*07/21/23 17:46*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**415**		4.96		mg/Kg			07/20/23 14:37	1

Client Sample ID: H-4 (2FT)
Lab Sample ID: 890-4962-8
Date Collected: 07/17/23 00:00
Matrix: Solid
Date Received: 07/18/23 15:15
Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		07/20/23 10:00	07/20/23 15:40	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/20/23 10:00	07/20/23 15:40	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/20/23 10:00	07/20/23 15:40	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402		mg/Kg		07/20/23 10:00	07/20/23 15:40	1
o-Xylene	<0.00201	U *+	0.00201		mg/Kg		07/20/23 10:00	07/20/23 15:40	1
Xylenes, Total	<0.00402	U *+	0.00402		mg/Kg		07/20/23 10:00	07/20/23 15:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*07/20/23 10:00*	*07/20/23 15:40*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*07/20/23 10:00*	*07/20/23 15:40*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			07/21/23 10:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**80.7**		50.1		mg/Kg			07/24/23 14:21	1

Client Sample Results

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: H-4 (2FT)

Lab Sample ID: 890-4962-8
Matrix: Solid
Date Collected: 07/17/23 00:00
Date Received: 07/18/23 15:15
Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		07/20/23 17:06	07/21/23 18:08	1
Diesel Range Organics (Over C10-C28)	**80.7**		50.1		mg/Kg		07/20/23 17:06	07/21/23 18:08	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		07/20/23 17:06	07/21/23 18:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*80*		*70 - 130*	*07/20/23 17:06*	*07/21/23 18:08*	*1*
o-Terphenyl	*73*		*70 - 130*	*07/20/23 17:06*	*07/21/23 18:08*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**59.7**		4.97		mg/Kg			07/20/23 14:42	1

Client Sample ID: DS-1 (4FT)

Lab Sample ID: 890-4962-9
Matrix: Solid
Date Collected: 07/17/23 00:00
Date Received: 07/18/23 15:15
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		07/20/23 10:00	07/20/23 16:01	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/20/23 10:00	07/20/23 16:01	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/20/23 10:00	07/20/23 16:01	1
m-Xylene & p-Xylene	<0.00399	U *+	0.00399		mg/Kg		07/20/23 10:00	07/20/23 16:01	1
o-Xylene	<0.00200	U *+	0.00200		mg/Kg		07/20/23 10:00	07/20/23 16:01	1
Xylenes, Total	<0.00399	U *+	0.00399		mg/Kg		07/20/23 10:00	07/20/23 16:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*07/20/23 10:00*	*07/20/23 16:01*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*07/20/23 10:00*	*07/20/23 16:01*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			07/21/23 10:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2		mg/Kg			07/24/23 14:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2		mg/Kg		07/20/23 17:06	07/21/23 18:34	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		07/20/23 17:06	07/21/23 18:34	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		07/20/23 17:06	07/21/23 18:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*155*	*S1+*	*70 - 130*	*07/20/23 17:06*	*07/21/23 18:34*	*1*
o-Terphenyl	*139*	*S1+*	*70 - 130*	*07/20/23 17:06*	*07/21/23 18:34*	*1*

Client Sample Results

Client: GHD Services Inc.
Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Client Sample ID: DS-1 (4FT)
Lab Sample ID: 890-4962-9
Date Collected: 07/17/23 00:00
Matrix: Solid
Date Received: 07/18/23 15:15
Sample Depth: 4

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	656		5.03		mg/Kg			07/20/23 14:47	1

Client Sample ID: DS-1 (2.5FT)
Lab Sample ID: 890-4962-10
Date Collected: 07/17/23 00:00
Matrix: Solid
Date Received: 07/18/23 15:15
Sample Depth: 2.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/20/23 10:00	07/20/23 16:56	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/20/23 10:00	07/20/23 16:56	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/20/23 10:00	07/20/23 16:56	1
m-Xylene & p-Xylene	<0.00396	U *+	0.00396		mg/Kg		07/20/23 10:00	07/20/23 16:56	1
o-Xylene	<0.00198	U *+	0.00198		mg/Kg		07/20/23 10:00	07/20/23 16:56	1
Xylenes, Total	<0.00396	U *+	0.00396		mg/Kg		07/20/23 10:00	07/20/23 16:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*07/20/23 10:00*	*07/20/23 16:56*	*1*
1,4-Difluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*07/20/23 10:00*	*07/20/23 16:56*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			07/21/23 10:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			07/24/23 14:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		07/20/23 17:06	07/21/23 18:56	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/20/23 17:06	07/21/23 18:56	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/20/23 17:06	07/21/23 18:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*208*	*S1+*	*70 - 130*	*07/20/23 17:06*	*07/21/23 18:56*	*1*
o-Terphenyl	*184*	*S1+*	*70 - 130*	*07/20/23 17:06*	*07/21/23 18:56*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	473		5.05		mg/Kg			07/20/23 14:52	1

Client Sample Results

Client: GHD Services Inc.
Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Client Sample ID: DS-2 (2FT)
Lab Sample ID: 890-4962-11

Date Collected: 07/17/23 00:00
Matrix: Solid
Date Received: 07/18/23 15:15
Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/20/23 10:00	07/20/23 18:19	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/20/23 10:00	07/20/23 18:19	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/20/23 10:00	07/20/23 18:19	1
m-Xylene & p-Xylene	<0.00400	U *+	0.00400		mg/Kg		07/20/23 10:00	07/20/23 18:19	1
o-Xylene	<0.00200	U *+	0.00200		mg/Kg		07/20/23 10:00	07/20/23 18:19	1
Xylenes, Total	<0.00400	U *+	0.00400		mg/Kg		07/20/23 10:00	07/20/23 18:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*07/20/23 10:00*	*07/20/23 18:19*	*1*
1,4-Difluorobenzene (Surr)	*65*	*S1-*	*70 - 130*	*07/20/23 10:00*	*07/20/23 18:19*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			07/21/23 10:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			07/24/23 14:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		07/20/23 17:06	07/21/23 19:18	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		07/20/23 17:06	07/21/23 19:18	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		07/20/23 17:06	07/21/23 19:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*151*	*S1+*	*70 - 130*	*07/20/23 17:06*	*07/21/23 19:18*	*1*
o-Terphenyl	*135*	*S1+*	*70 - 130*	*07/20/23 17:06*	*07/21/23 19:18*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**737**	**F1**	4.97		mg/Kg			07/20/23 14:56	1

Client Sample ID: DS-2 (4FT)
Lab Sample ID: 890-4962-12

Date Collected: 07/17/23 00:00
Matrix: Solid
Date Received: 07/18/23 15:15
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		07/20/23 10:00	07/20/23 18:39	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/20/23 10:00	07/20/23 18:39	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/20/23 10:00	07/20/23 18:39	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398		mg/Kg		07/20/23 10:00	07/20/23 18:39	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		07/20/23 10:00	07/20/23 18:39	1
Xylenes, Total	<0.00398	U *+	0.00398		mg/Kg		07/20/23 10:00	07/20/23 18:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*07/20/23 10:00*	*07/20/23 18:39*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-4962-1
SDG: 12618492

Client Sample ID: DS-2 (4FT)

Lab Sample ID: 890-4962-12
Matrix: Solid
Date Collected: 07/17/23 00:00
Date Received: 07/18/23 15:15
Sample Depth: 4

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*07/20/23 10:00*	*07/20/23 18:39*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			07/21/23 10:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			07/24/23 14:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		07/20/23 17:06	07/21/23 19:40	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		07/20/23 17:06	07/21/23 19:40	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		07/20/23 17:06	07/21/23 19:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*117*		*70 - 130*	*07/20/23 17:06*	*07/21/23 19:40*	*1*
o-Terphenyl	*102*		*70 - 130*	*07/20/23 17:06*	*07/21/23 19:40*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**580**		5.00		mg/Kg			07/20/23 15:11	1

Client Sample ID: DS-3 (1FT)

Lab Sample ID: 890-4962-13
Matrix: Solid
Date Collected: 07/17/23 00:00
Date Received: 07/18/23 15:15
Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		07/20/23 10:00	07/20/23 19:00	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/20/23 10:00	07/20/23 19:00	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/20/23 10:00	07/20/23 19:00	1
m-Xylene & p-Xylene	<0.00403	U *+	0.00403		mg/Kg		07/20/23 10:00	07/20/23 19:00	1
o-Xylene	<0.00202	U *+	0.00202		mg/Kg		07/20/23 10:00	07/20/23 19:00	1
Xylenes, Total	<0.00403	U *+	0.00403		mg/Kg		07/20/23 10:00	07/20/23 19:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*07/20/23 10:00*	*07/20/23 19:00*	*1*
1,4-Difluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*07/20/23 10:00*	*07/20/23 19:00*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			07/21/23 10:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.5	U	49.5		mg/Kg			07/24/23 14:21	1

Client Sample Results

Client: GHD Services Inc.
Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Client Sample ID: DS-3 (1FT)
Lab Sample ID: 890-4962-13
Date Collected: 07/17/23 00:00
Matrix: Solid
Date Received: 07/18/23 15:15
Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.5	U	49.5		mg/Kg		07/20/23 17:06	07/21/23 20:02	1
Diesel Range Organics (Over C10-C28)	<49.5	U	49.5		mg/Kg		07/20/23 17:06	07/21/23 20:02	1
OII Range Organics (Over C28-C36)	<49.5	U	49.5		mg/Kg		07/20/23 17:06	07/21/23 20:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*115*		*70 - 130*	*07/20/23 17:06*	*07/21/23 20:02*	*1*
o-Terphenyl	*102*		*70 - 130*	*07/20/23 17:06*	*07/21/23 20:02*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**125**		5.00		mg/Kg			07/20/23 15:16	1

Client Sample ID: DS-3 (2.5FT)
Lab Sample ID: 890-4962-14
Date Collected: 07/17/23 00:00
Matrix: Solid
Date Received: 07/18/23 15:15
Sample Depth: 2.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/20/23 10:00	07/20/23 19:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/20/23 10:00	07/20/23 19:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/20/23 10:00	07/20/23 19:20	1
m-Xylene & p-Xylene	<0.00401	U *+	0.00401		mg/Kg		07/20/23 10:00	07/20/23 19:20	1
o-Xylene	<0.00200	U *+	0.00200		mg/Kg		07/20/23 10:00	07/20/23 19:20	1
Xylenes, Total	<0.00401	U *+	0.00401		mg/Kg		07/20/23 10:00	07/20/23 19:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*07/20/23 10:00*	*07/20/23 19:20*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*07/20/23 10:00*	*07/20/23 19:20*	*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			07/21/23 10:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			07/24/23 14:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		07/20/23 17:06	07/21/23 20:28	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		07/20/23 17:06	07/21/23 20:28	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		07/20/23 17:06	07/21/23 20:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*07/20/23 17:06*	*07/21/23 20:28*	*1*
o-Terphenyl	*98*		*70 - 130*	*07/20/23 17:06*	*07/21/23 20:28*	*1*

Client Sample Results

Client: GHD Services Inc.
Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Client Sample ID: DS-3 (2.5FT)
Lab Sample ID: 890-4962-14
Date Collected: 07/17/23 00:00
Matrix: Solid
Date Received: 07/18/23 15:15
Sample Depth: 2.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**103**		4.98		mg/Kg			07/20/23 15:31	1

Client Sample ID: DS-4 (1FT)
Lab Sample ID: 890-4962-15
Date Collected: 07/17/23 00:00
Matrix: Solid
Date Received: 07/18/23 15:15
Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/20/23 10:00	07/20/23 19:40	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/20/23 10:00	07/20/23 19:40	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/20/23 10:00	07/20/23 19:40	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398		mg/Kg		07/20/23 10:00	07/20/23 19:40	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		07/20/23 10:00	07/20/23 19:40	1
Xylenes, Total	<0.00398	U *+	0.00398		mg/Kg		07/20/23 10:00	07/20/23 19:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*07/20/23 10:00*	*07/20/23 19:40*	*1*
1,4-Difluorobenzene (Surr)	*67*	*S1-*	*70 - 130*	*07/20/23 10:00*	*07/20/23 19:40*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			07/21/23 10:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**154**		50.5		mg/Kg			07/24/23 14:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		07/20/23 17:06	07/22/23 07:16	1
Diesel Range Organics (Over C10-C28)	**154**		50.5		mg/Kg		07/20/23 17:06	07/22/23 07:16	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		07/20/23 17:06	07/22/23 07:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*118*		*70 - 130*	*07/20/23 17:06*	*07/22/23 07:16*	*1*
o-Terphenyl	*98*		*70 - 130*	*07/20/23 17:06*	*07/22/23 07:16*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**107**		4.97		mg/Kg			07/20/23 15:36	1

Client Sample Results

Client: GHD Services Inc.
Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Client Sample ID: DS-4 (4FT)
Lab Sample ID: 890-4962-16

Date Collected: 07/17/23 00:00
Matrix: Solid
Date Received: 07/18/23 15:15
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		07/20/23 10:00	07/20/23 20:01	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/20/23 10:00	07/20/23 20:01	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/20/23 10:00	07/20/23 20:01	1
m-Xylene & p-Xylene	<0.00399	U *+	0.00399		mg/Kg		07/20/23 10:00	07/20/23 20:01	1
o-Xylene	<0.00200	U *+	0.00200		mg/Kg		07/20/23 10:00	07/20/23 20:01	1
Xylenes, Total	<0.00399	U *+	0.00399		mg/Kg		07/20/23 10:00	07/20/23 20:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*07/20/23 10:00*	*07/20/23 20:01*	*1*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*	*07/20/23 10:00*	*07/20/23 20:01*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			07/21/23 10:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			07/24/23 14:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		07/20/23 17:06	07/22/23 08:00	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		07/20/23 17:06	07/22/23 08:00	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		07/20/23 17:06	07/22/23 08:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*07/20/23 17:06*	*07/22/23 08:00*	*1*
o-Terphenyl	*96*		*70 - 130*	*07/20/23 17:06*	*07/22/23 08:00*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**89.1**		5.02		mg/Kg			07/20/23 15:41	1

Client Sample ID: DS-5 (2.5FT)
Lab Sample ID: 890-4962-17

Date Collected: 07/17/23 00:00
Matrix: Solid
Date Received: 07/18/23 15:15
Sample Depth: 2.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		07/20/23 10:00	07/20/23 20:21	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/20/23 10:00	07/20/23 20:21	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/20/23 10:00	07/20/23 20:21	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402		mg/Kg		07/20/23 10:00	07/20/23 20:21	1
o-Xylene	<0.00201	U *+	0.00201		mg/Kg		07/20/23 10:00	07/20/23 20:21	1
Xylenes, Total	<0.00402	U *+	0.00402		mg/Kg		07/20/23 10:00	07/20/23 20:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*07/20/23 10:00*	*07/20/23 20:21*	*1*

Client Sample Results

Client: GHD Services Inc.
Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Client Sample ID: DS-5 (2.5FT)
Lab Sample ID: 890-4962-17
Date Collected: 07/17/23 00:00
Matrix: Solid
Date Received: 07/18/23 15:15
Sample Depth: 2.5

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*73*		*70 - 130*	*07/20/23 10:00*	*07/20/23 20:21*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			07/21/23 10:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			07/24/23 16:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U F1	50.4		mg/Kg		07/21/23 11:49	07/21/23 15:00	1
Diesel Range Organics (Over C10-C28)	<50.4	U F1	50.4		mg/Kg		07/21/23 11:49	07/21/23 15:00	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		07/21/23 11:49	07/21/23 15:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*90*		*70 - 130*	*07/21/23 11:49*	*07/21/23 15:00*	*1*
o-Terphenyl	*95*		*70 - 130*	*07/21/23 11:49*	*07/21/23 15:00*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**768**		25.0		mg/Kg			07/20/23 15:46	5

Client Sample ID: DS-5 (4FT)
Lab Sample ID: 890-4962-18
Date Collected: 07/17/23 00:00
Matrix: Solid
Date Received: 07/18/23 15:15
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	0.00202		mg/Kg		07/20/23 10:00	07/20/23 20:42	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/20/23 10:00	07/20/23 20:42	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/20/23 10:00	07/20/23 20:42	1
m-Xylene & p-Xylene	<0.00404	U *+	0.00404		mg/Kg		07/20/23 10:00	07/20/23 20:42	1
o-Xylene	<0.00202	U *+	0.00202		mg/Kg		07/20/23 10:00	07/20/23 20:42	1
Xylenes, Total	<0.00404	U *+	0.00404		mg/Kg		07/20/23 10:00	07/20/23 20:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*07/20/23 10:00*	*07/20/23 20:42*	*1*
1,4-Difluorobenzene (Surr)	*61*	*S1-*	*70 - 130*	*07/20/23 10:00*	*07/20/23 20:42*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			07/21/23 10:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			07/24/23 16:18	1

Client Sample Results

Client: GHD Services Inc.
Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Client Sample ID: DS-5 (4FT)
Lab Sample ID: 890-4962-18
Date Collected: 07/17/23 00:00
Matrix: Solid
Date Received: 07/18/23 15:15
Sample Depth: 4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/21/23 11:49	07/21/23 16:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/21/23 11:49	07/21/23 16:24	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/21/23 11:49	07/21/23 16:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*07/21/23 11:49*	*07/21/23 16:24*	*1*
o-Terphenyl	*91*		*70 - 130*	*07/21/23 11:49*	*07/21/23 16:24*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**924**		24.9		mg/Kg			07/20/23 15:51	5

Client Sample ID: DS-6 (2.5FT)
Lab Sample ID: 890-4962-19
Date Collected: 07/17/23 00:00
Matrix: Solid
Date Received: 07/18/23 15:15
Sample Depth: 2.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		07/20/23 10:00	07/20/23 21:02	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/20/23 10:00	07/20/23 21:02	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/20/23 10:00	07/20/23 21:02	1
m-Xylene & p-Xylene	<0.00403	U *+	0.00403		mg/Kg		07/20/23 10:00	07/20/23 21:02	1
o-Xylene	<0.00202	U *+	0.00202		mg/Kg		07/20/23 10:00	07/20/23 21:02	1
Xylenes, Total	<0.00403	U *+	0.00403		mg/Kg		07/20/23 10:00	07/20/23 21:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*07/20/23 10:00*	*07/20/23 21:02*	*1*
1,4-Difluorobenzene (Surr)	*51*	*S1-*	*70 - 130*	*07/20/23 10:00*	*07/20/23 21:02*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			07/21/23 10:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.5	U	49.5		mg/Kg			07/24/23 16:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.5	U	49.5		mg/Kg		07/21/23 11:49	07/21/23 16:46	1
Diesel Range Organics (Over C10-C28)	<49.5	U	49.5		mg/Kg		07/21/23 11:49	07/21/23 16:46	1
OII Range Organics (Over C28-C36)	<49.5	U	49.5		mg/Kg		07/21/23 11:49	07/21/23 16:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*65*	*S1-*	*70 - 130*	*07/21/23 11:49*	*07/21/23 16:46*	*1*
o-Terphenyl	*80*		*70 - 130*	*07/21/23 11:49*	*07/21/23 16:46*	*1*

Client Sample Results

Client: GHD Services Inc.
Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Client Sample ID: DS-6 (2.5FT)
Lab Sample ID: 890-4962-19

Date Collected: 07/17/23 00:00
Matrix: Solid
Date Received: 07/18/23 15:15
Sample Depth: 2.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	86.3		4.95		mg/Kg			07/20/23 15:56	1

Client Sample ID: DS-6 (5FT)
Lab Sample ID: 890-4962-20

Date Collected: 07/17/23 00:00
Matrix: Solid
Date Received: 07/18/23 15:15
Sample Depth: 5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/20/23 10:00	07/20/23 21:23	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/20/23 10:00	07/20/23 21:23	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/20/23 10:00	07/20/23 21:23	1
m-Xylene & p-Xylene	<0.00396	U *+	0.00396		mg/Kg		07/20/23 10:00	07/20/23 21:23	1
o-Xylene	<0.00198	U *+	0.00198		mg/Kg		07/20/23 10:00	07/20/23 21:23	1
Xylenes, Total	<0.00396	U *+	0.00396		mg/Kg		07/20/23 10:00	07/20/23 21:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*07/20/23 10:00*	*07/20/23 21:23*	*1*
1,4-Difluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*07/20/23 10:00*	*07/20/23 21:23*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			07/21/23 10:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			07/24/23 16:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		07/21/23 11:49	07/21/23 17:08	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		07/21/23 11:49	07/21/23 17:08	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		07/21/23 11:49	07/21/23 17:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*07/21/23 11:49*	*07/21/23 17:08*	*1*
o-Terphenyl	*90*		*70 - 130*	*07/21/23 11:49*	*07/21/23 17:08*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	124		5.04		mg/Kg			07/20/23 16:01	1

Client Sample Results

Client: GHD Services Inc.
Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Client Sample ID: DS-7 (2.5FT)
Lab Sample ID: 890-4962-21
Date Collected: 07/17/23 00:00
Matrix: Solid
Date Received: 07/18/23 15:15
Sample Depth: 2.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		07/20/23 13:41	07/22/23 10:20	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/20/23 13:41	07/22/23 10:20	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/20/23 13:41	07/22/23 10:20	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/20/23 13:41	07/22/23 10:20	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/20/23 13:41	07/22/23 10:20	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/20/23 13:41	07/22/23 10:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*07/20/23 13:41*	*07/22/23 10:20*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*07/20/23 13:41*	*07/22/23 10:20*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			07/24/23 08:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			07/24/23 16:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/21/23 11:49	07/21/23 17:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/21/23 11:49	07/21/23 17:30	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/21/23 11:49	07/21/23 17:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*07/21/23 11:49*	*07/21/23 17:30*	*1*
o-Terphenyl	*89*		*70 - 130*	*07/21/23 11:49*	*07/21/23 17:30*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**343**		5.02		mg/Kg			07/20/23 14:28	1

Client Sample ID: DS-7 (5FT)
Lab Sample ID: 890-4962-22
Date Collected: 07/17/23 00:00
Matrix: Solid
Date Received: 07/18/23 15:15
Sample Depth: 5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		07/20/23 13:41	07/22/23 10:41	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/20/23 13:41	07/22/23 10:41	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/20/23 13:41	07/22/23 10:41	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/20/23 13:41	07/22/23 10:41	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/20/23 13:41	07/22/23 10:41	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/20/23 13:41	07/22/23 10:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*07/20/23 13:41*	*07/22/23 10:41*	*1*

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Client Sample Results

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: DS-7 (5FT)

Lab Sample ID: 890-4962-22
Matrix: Solid
Date Collected: 07/17/23 00:00
Date Received: 07/18/23 15:15
Sample Depth: 5

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*07/20/23 13:41*	*07/22/23 10:41*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			07/24/23 08:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			07/24/23 16:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		07/21/23 11:49	07/21/23 17:51	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/21/23 11:49	07/21/23 17:51	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/21/23 11:49	07/21/23 17:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*80*		*70 - 130*	*07/21/23 11:49*	*07/21/23 17:51*	*1*
o-Terphenyl	*82*		*70 - 130*	*07/21/23 11:49*	*07/21/23 17:51*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**281**		5.00		mg/Kg			07/20/23 14:43	1

Client Sample ID: DS-8 (2.5FT)

Lab Sample ID: 890-4962-23
Matrix: Solid
Date Collected: 07/17/23 00:00
Date Received: 07/18/23 15:15
Sample Depth: 2.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/20/23 13:41	07/22/23 11:02	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/20/23 13:41	07/22/23 11:02	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/20/23 13:41	07/22/23 11:02	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/20/23 13:41	07/22/23 11:02	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/20/23 13:41	07/22/23 11:02	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/20/23 13:41	07/22/23 11:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*07/20/23 13:41*	*07/22/23 11:02*	*1*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*	*07/20/23 13:41*	*07/22/23 11:02*	*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			07/24/23 08:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			07/24/23 16:18	1

Client Sample Results

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: DS-8 (2.5FT)

Lab Sample ID: 890-4962-23
Matrix: Solid
Date Collected: 07/17/23 00:00
Date Received: 07/18/23 15:15
Sample Depth: 2.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		07/21/23 11:49	07/21/23 18:13	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		07/21/23 11:49	07/21/23 18:13	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		07/21/23 11:49	07/21/23 18:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*07/21/23 11:49*	*07/21/23 18:13*	*1*
o-Terphenyl	*90*		*70 - 130*	*07/21/23 11:49*	*07/21/23 18:13*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**495**		4.98		mg/Kg			07/20/23 14:48	1

Client Sample ID: DS-8 (5FT)

Lab Sample ID: 890-4962-24
Matrix: Solid
Date Collected: 07/17/23 00:00
Date Received: 07/18/23 15:15
Sample Depth: 5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00522**		0.00200		mg/Kg		07/20/23 13:41	07/22/23 11:23	1
Toluene	**0.0417**		0.00200		mg/Kg		07/20/23 13:41	07/22/23 11:23	1
Ethylbenzene	**0.0245**		0.00200		mg/Kg		07/20/23 13:41	07/22/23 11:23	1
m-Xylene & p-Xylene	**0.0413**		0.00399		mg/Kg		07/20/23 13:41	07/22/23 11:23	1
o-Xylene	**0.0176**		0.00200		mg/Kg		07/20/23 13:41	07/22/23 11:23	1
Xylenes, Total	**0.0589**		0.00399		mg/Kg		07/20/23 13:41	07/22/23 11:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*07/20/23 13:41*	*07/22/23 11:23*	*1*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*07/20/23 13:41*	*07/22/23 11:23*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.130**		0.00399		mg/Kg			07/24/23 08:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**968**		50.4		mg/Kg			07/24/23 16:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		07/21/23 11:49	07/21/23 18:34	1
Diesel Range Organics (Over C10-C28)	**968**		50.4		mg/Kg		07/21/23 11:49	07/21/23 18:34	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		07/21/23 11:49	07/21/23 18:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*83*		*70 - 130*	*07/21/23 11:49*	*07/21/23 18:34*	*1*
o-Terphenyl	*76*		*70 - 130*	*07/21/23 11:49*	*07/21/23 18:34*	*1*

Client Sample Results

Client: GHD Services Inc.
Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Client Sample ID: DS-8 (5FT)
Lab Sample ID: 890-4962-24
Date Collected: 07/17/23 00:00
Matrix: Solid
Date Received: 07/18/23 15:15
Sample Depth: 5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1700		25.0		mg/Kg			07/20/23 14:54	5

Surrogate Summary

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

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)
890-4962-1	H-1 (SURFACE)	87	83
890-4962-2	H-1 (2FT)	98	79
890-4962-2 MS	H-1 (2FT)	112	94
890-4962-2 MSD	H-1 (2FT)	116	106
890-4962-3	H-2 (SURFACE)	85	68 S1-
890-4962-4	H-2 (2FT)	87	70
890-4962-5	H-3 (SURFACE)	89	68 S1-
890-4962-6	H-3 (2FT)	92	72
890-4962-7	H-4 (SURFACE)	80	81
890-4962-8	H-4 (2FT)	94	77
890-4962-9	DS-1 (4FT)	88	77
890-4962-10	DS-1 (2.5FT)	95	68 S1-
890-4962-11	DS-2 (2FT)	88	65 S1-
890-4962-12	DS-2 (4FT)	88	68 S1-
890-4962-13	DS-3 (1FT)	88	69 S1-
890-4962-14	DS-3 (2.5FT)	91	75
890-4962-15	DS-4 (1FT)	92	67 S1-
890-4962-16	DS-4 (4FT)	92	74
890-4962-17	DS-5 (2.5FT)	93	73
890-4962-18	DS-5 (4FT)	89	61 S1-
890-4962-19	DS-6 (2.5FT)	90	51 S1-
890-4962-20	DS-6 (5FT)	87	68 S1-
890-4962-21	DS-7 (2.5FT)	91	102
890-4962-21 MS	DS-7 (2.5FT)	97	99
890-4962-21 MSD	DS-7 (2.5FT)	108	95
890-4962-22	DS-7 (5FT)	93	110
890-4962-23	DS-8 (2.5FT)	95	115
890-4962-24	DS-8 (5FT)	105	109
LCS 880-58142/1-A	Lab Control Sample	117	105
LCS 880-58149/1-A	Lab Control Sample	95	99
LCSD 880-58142/2-A	Lab Control Sample Dup	107	101
LCSD 880-58149/2-A	Lab Control Sample Dup	100	99
MB 880-58142/5-A	Method Blank	69 S1-	91
MB 880-58149/5-A	Method Blank	87	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)
890-4962-1	H-1 (SURFACE)	125	110
890-4962-2	H-1 (2FT)	140 S1+	120
890-4962-3	H-2 (SURFACE)	162 S1+	143 S1+
890-4962-4	H-2 (2FT)	176 S1+	155 S1+
890-4962-5	H-3 (SURFACE)	109	100

Surrogate Summary

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-4962-6	H-3 (2FT)	112	102										
890-4962-7	H-4 (SURFACE)	122	99										
890-4962-8	H-4 (2FT)	80	73										
890-4962-9	DS-1 (4FT)	155 S1+	139 S1+										
890-4962-10	DS-1 (2.5FT)	208 S1+	184 S1+										
890-4962-11	DS-2 (2FT)	151 S1+	135 S1+										
890-4962-12	DS-2 (4FT)	117	102										
890-4962-13	DS-3 (1FT)	115	102										
890-4962-14	DS-3 (2.5FT)	110	98										
890-4962-15	DS-4 (1FT)	118	98										
890-4962-16	DS-4 (4FT)	111	96										
890-4962-17	DS-5 (2.5FT)	90	95										
890-4962-17 MS	DS-5 (2.5FT)	94	85										
890-4962-17 MSD	DS-5 (2.5FT)	0.03 S1-	0 S1-										
890-4962-18	DS-5 (4FT)	90	91										
890-4962-19	DS-6 (2.5FT)	65 S1-	80										
890-4962-20	DS-6 (5FT)	89	90										
890-4962-21	DS-7 (2.5FT)	87	89										
890-4962-22	DS-7 (5FT)	80	82										
890-4962-23	DS-8 (2.5FT)	88	90										
890-4962-24	DS-8 (5FT)	83	76										
LCS 880-58179/2-A	Lab Control Sample	93	86										
LCS 880-58234/2-A	Lab Control Sample	89	83										
LCSD 880-58179/3-A	Lab Control Sample Dup	94	85										
LCSD 880-58234/3-A	Lab Control Sample Dup	89	83										
MB 880-58179/1-A	Method Blank	156 S1+	137 S1+										
MB 880-58234/1-A	Method Blank	96	99										

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-58142/5-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58088 **Prep Batch: 58142**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/20/23 10:00	07/20/23 12:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/20/23 10:00	07/20/23 12:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/20/23 10:00	07/20/23 12:50	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/20/23 10:00	07/20/23 12:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/20/23 10:00	07/20/23 12:50	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/20/23 10:00	07/20/23 12:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*07/20/23 10:00*	*07/20/23 12:50*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*07/20/23 10:00*	*07/20/23 12:50*	*1*

Lab Sample ID: LCS 880-58142/1-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58088 **Prep Batch: 58142**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1289		mg/Kg		129	70 - 130
Toluene	0.100	0.1145		mg/Kg		114	70 - 130
Ethylbenzene	0.100	0.1301		mg/Kg		130	70 - 130
m-Xylene & p-Xylene	0.200	0.2737	*+	mg/Kg		137	70 - 130
o-Xylene	0.100	0.1334	*+	mg/Kg		133	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 880-58142/2-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58088 **Prep Batch: 58142**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1185		mg/Kg		119	70 - 130	8	35
Toluene	0.100	0.1045		mg/Kg		105	70 - 130	9	35
Ethylbenzene	0.100	0.1193		mg/Kg		119	70 - 130	9	35
m-Xylene & p-Xylene	0.200	0.2474		mg/Kg		124	70 - 130	10	35
o-Xylene	0.100	0.1195		mg/Kg		120	70 - 130	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-4962-2 MS **Client Sample ID: H-1 (2FT)**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58088 **Prep Batch: 58142**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00198	U	0.0996	0.1046		mg/Kg		105	70 - 130
Toluene	<0.00198	U	0.0996	0.1016		mg/Kg		100	70 - 130

QC Sample Results

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

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

Lab Sample ID: 890-4962-2 MS — **Client Sample ID: H-1 (2FT)**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58088 — **Prep Batch: 58142**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	0.00264		0.0996	0.1212		mg/Kg		119	70 - 130
m-Xylene & p-Xylene	0.00459	*+	0.199	0.2515		mg/Kg		124	70 - 130
o-Xylene	<0.00198	U *+	0.0996	0.1205		mg/Kg		119	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: 890-4962-2 MSD — **Client Sample ID: H-1 (2FT)**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58088 — **Prep Batch: 58142**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.0998	0.1254		mg/Kg		126	70 - 130	18	35
Toluene	<0.00198	U	0.0998	0.1086		mg/Kg		107	70 - 130	7	35
Ethylbenzene	0.00264		0.0998	0.1239		mg/Kg		122	70 - 130	2	35
m-Xylene & p-Xylene	0.00459	*+	0.200	0.2599		mg/Kg		128	70 - 130	3	35
o-Xylene	<0.00198	U *+	0.0998	0.1279		mg/Kg		126	70 - 130	6	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: MB 880-58149/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58258 — **Prep Batch: 58149**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/20/23 13:41	07/22/23 09:58	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/20/23 13:41	07/22/23 09:58	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/20/23 13:41	07/22/23 09:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/20/23 13:41	07/22/23 09:58	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/20/23 13:41	07/22/23 09:58	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/20/23 13:41	07/22/23 09:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*07/20/23 13:41*	*07/22/23 09:58*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*07/20/23 13:41*	*07/22/23 09:58*	*1*

Lab Sample ID: LCS 880-58149/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58258 — **Prep Batch: 58149**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1074		mg/Kg		107	70 - 130
Toluene	0.100	0.1086		mg/Kg		109	70 - 130
Ethylbenzene	0.100	0.09756		mg/Kg		98	70 - 130
m-Xylene & p-Xylene	0.200	0.1879		mg/Kg		94	70 - 130

QC Sample Results

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

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

Lab Sample ID: LCS 880-58149/1-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58258 **Prep Batch: 58149**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.09244		mg/Kg		92	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 880-58149/2-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58258 **Prep Batch: 58149**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1151		mg/Kg		115	70 - 130	7	35
Toluene			0.100	0.1186		mg/Kg		119	70 - 130	9	35
Ethylbenzene			0.100	0.1085		mg/Kg		108	70 - 130	11	35
m-Xylene & p-Xylene			0.200	0.2100		mg/Kg		105	70 - 130	11	35
o-Xylene			0.100	0.1028		mg/Kg		103	70 - 130	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-4962-21 MS **Client Sample ID: DS-7 (2.5FT)**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58258 **Prep Batch: 58149**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U	0.0994	0.09048		mg/Kg		91	70 - 130		
Toluene	<0.00202	U	0.0994	0.08995		mg/Kg		90	70 - 130		
Ethylbenzene	<0.00202	U	0.0994	0.07772		mg/Kg		78	70 - 130		
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1496		mg/Kg		75	70 - 130		
o-Xylene	<0.00202	U	0.0994	0.07552		mg/Kg		76	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-4962-21 MSD **Client Sample ID: DS-7 (2.5FT)**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58258 **Prep Batch: 58149**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0998	0.09473		mg/Kg		95	70 - 130	5	35
Toluene	<0.00202	U	0.0998	0.1066		mg/Kg		107	70 - 130	17	35
Ethylbenzene	<0.00202	U	0.0998	0.09994		mg/Kg		100	70 - 130	25	35
m-Xylene & p-Xylene	<0.00403	U	0.200	0.1970		mg/Kg		99	70 - 130	27	35
o-Xylene	<0.00202	U	0.0998	0.09769		mg/Kg		98	70 - 130	26	35

QC Sample Results

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

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

Lab Sample ID: 890-4962-21 MSD **Client Sample ID: DS-7 (2.5FT)**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58258 **Prep Batch: 58149**

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

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

Lab Sample ID: MB 880-58179/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58184 **Prep Batch: 58179**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/20/23 17:06	07/21/23 09:35	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/20/23 17:06	07/21/23 09:35	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/20/23 17:06	07/21/23 09:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	156	S1+	70 - 130	07/20/23 17:06	07/21/23 09:35	1
o-Terphenyl	137	S1+	70 - 130	07/20/23 17:06	07/21/23 09:35	1

Lab Sample ID: LCS 880-58179/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58184 **Prep Batch: 58179**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	891.9		mg/Kg		89	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	807.3		mg/Kg		81	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	93		70 - 130
o-Terphenyl	86		70 - 130

Lab Sample ID: LCSD 880-58179/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58184 **Prep Batch: 58179**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	845.5		mg/Kg		85	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	784.4		mg/Kg		78	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	94		70 - 130
o-Terphenyl	85		70 - 130

QC Sample Results

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

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

Lab Sample ID: MB 880-58234/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58186 **Prep Batch: 58234**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/21/23 11:49	07/21/23 12:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/21/23 11:49	07/21/23 12:00	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/21/23 11:49	07/21/23 12:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*07/21/23 11:49*	*07/21/23 12:00*	*1*
o-Terphenyl	*99*		*70 - 130*	*07/21/23 11:49*	*07/21/23 12:00*	*1*

Lab Sample ID: LCS 880-58234/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58186 **Prep Batch: 58234**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	795.1		mg/Kg		80	70 - 130
Diesel Range Organics (Over C10-C28)	1000	922.1		mg/Kg		92	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*89*		*70 - 130*
o-Terphenyl	*83*		*70 - 130*

Lab Sample ID: LCSD 880-58234/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58186 **Prep Batch: 58234**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	792.3		mg/Kg		79	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	1000	927.0		mg/Kg		93	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*89*		*70 - 130*
o-Terphenyl	*83*		*70 - 130*

Lab Sample ID: 890-4962-17 MS **Client Sample ID: DS-5 (2.5FT)**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58186 **Prep Batch: 58234**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.4	U F1	1010	858.7		mg/Kg		85	70 - 130
Diesel Range Organics (Over C10-C28)	<50.4	U F1	1010	906.1		mg/Kg		87	70 - 130

QC Sample Results

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

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

Lab Sample ID: 890-4962-17 MS **Client Sample ID: DS-5 (2.5FT)**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58186 **Prep Batch: 58234**

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	94		70 - 130
o-Terphenyl	85		70 - 130

Lab Sample ID: 890-4962-17 MSD **Client Sample ID: DS-5 (2.5FT)**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58186 **Prep Batch: 58234**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.4	U F1	1010	<50.3	U F1	mg/Kg		0	70 - 130	NC	20
Diesel Range Organics (Over C10-C28)	<50.4	U F1	1010	<50.3	U F1	mg/Kg		0	70 - 130	NC	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	0.03	S1-	70 - 130
o-Terphenyl	0	S1-	70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-58061/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 58155

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/20/23 13:18	1

Lab Sample ID: LCS 880-58061/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 58155

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	244.4		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-58061/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 58155

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	244.4		mg/Kg		98	90 - 110	0	20

Lab Sample ID: 890-4962-1 MS **Client Sample ID: H-1 (SURFACE)**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 58155

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	76.3		248	299.9		mg/Kg		90	90 - 110		

QC Sample Results

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-4962-1 MSD — **Client Sample ID: H-1 (SURFACE)**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58155

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	76.3		248	301.5		mg/Kg		91	90 - 110	1	20

Lab Sample ID: 890-4962-11 MS — **Client Sample ID: DS-2 (2FT)**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58155

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	737	F1	249	940.0	F1	mg/Kg		82	90 - 110

Lab Sample ID: 890-4962-11 MSD — **Client Sample ID: DS-2 (2FT)**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58155

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	737	F1	249	941.3	F1	mg/Kg		82	90 - 110	0	20

Lab Sample ID: MB 880-58100/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58157

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/20/23 14:12	1

Lab Sample ID: LCS 880-58100/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58157

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	232.6		mg/Kg		93	90 - 110

Lab Sample ID: LCSD 880-58100/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58157

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	233.8		mg/Kg		94	90 - 110	1	20

Lab Sample ID: 890-4962-21 MS — **Client Sample ID: DS-7 (2.5FT)**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58157

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	343		251	578.4		mg/Kg		94	90 - 110

Lab Sample ID: 890-4962-21 MSD — **Client Sample ID: DS-7 (2.5FT)**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58157

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	343		251	578.7		mg/Kg		94	90 - 110	0	20

QC Association Summary

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

GC VOA

Analysis Batch: 58088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4962-1	H-1 (SURFACE)	Total/NA	Solid	8021B	58142
890-4962-2	H-1 (2FT)	Total/NA	Solid	8021B	58142
890-4962-3	H-2 (SURFACE)	Total/NA	Solid	8021B	58142
890-4962-4	H-2 (2FT)	Total/NA	Solid	8021B	58142
890-4962-5	H-3 (SURFACE)	Total/NA	Solid	8021B	58142
890-4962-6	H-3 (2FT)	Total/NA	Solid	8021B	58142
890-4962-7	H-4 (SURFACE)	Total/NA	Solid	8021B	58142
890-4962-8	H-4 (2FT)	Total/NA	Solid	8021B	58142
890-4962-9	DS-1 (4FT)	Total/NA	Solid	8021B	58142
890-4962-10	DS-1 (2.5FT)	Total/NA	Solid	8021B	58142
890-4962-11	DS-2 (2FT)	Total/NA	Solid	8021B	58142
890-4962-12	DS-2 (4FT)	Total/NA	Solid	8021B	58142
890-4962-13	DS-3 (1FT)	Total/NA	Solid	8021B	58142
890-4962-14	DS-3 (2.5FT)	Total/NA	Solid	8021B	58142
890-4962-15	DS-4 (1FT)	Total/NA	Solid	8021B	58142
890-4962-16	DS-4 (4FT)	Total/NA	Solid	8021B	58142
890-4962-17	DS-5 (2.5FT)	Total/NA	Solid	8021B	58142
890-4962-18	DS-5 (4FT)	Total/NA	Solid	8021B	58142
890-4962-19	DS-6 (2.5FT)	Total/NA	Solid	8021B	58142
890-4962-20	DS-6 (5FT)	Total/NA	Solid	8021B	58142
MB 880-58142/5-A	Method Blank	Total/NA	Solid	8021B	58142
LCS 880-58142/1-A	Lab Control Sample	Total/NA	Solid	8021B	58142
LCSD 880-58142/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	58142
890-4962-2 MS	H-1 (2FT)	Total/NA	Solid	8021B	58142
890-4962-2 MSD	H-1 (2FT)	Total/NA	Solid	8021B	58142

Prep Batch: 58142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4962-1	H-1 (SURFACE)	Total/NA	Solid	5035	
890-4962-2	H-1 (2FT)	Total/NA	Solid	5035	
890-4962-3	H-2 (SURFACE)	Total/NA	Solid	5035	
890-4962-4	H-2 (2FT)	Total/NA	Solid	5035	
890-4962-5	H-3 (SURFACE)	Total/NA	Solid	5035	
890-4962-6	H-3 (2FT)	Total/NA	Solid	5035	
890-4962-7	H-4 (SURFACE)	Total/NA	Solid	5035	
890-4962-8	H-4 (2FT)	Total/NA	Solid	5035	
890-4962-9	DS-1 (4FT)	Total/NA	Solid	5035	
890-4962-10	DS-1 (2.5FT)	Total/NA	Solid	5035	
890-4962-11	DS-2 (2FT)	Total/NA	Solid	5035	
890-4962-12	DS-2 (4FT)	Total/NA	Solid	5035	
890-4962-13	DS-3 (1FT)	Total/NA	Solid	5035	
890-4962-14	DS-3 (2.5FT)	Total/NA	Solid	5035	
890-4962-15	DS-4 (1FT)	Total/NA	Solid	5035	
890-4962-16	DS-4 (4FT)	Total/NA	Solid	5035	
890-4962-17	DS-5 (2.5FT)	Total/NA	Solid	5035	
890-4962-18	DS-5 (4FT)	Total/NA	Solid	5035	
890-4962-19	DS-6 (2.5FT)	Total/NA	Solid	5035	
890-4962-20	DS-6 (5FT)	Total/NA	Solid	5035	
MB 880-58142/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-58142/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-58142/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

QC Association Summary

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

GC VOA (Continued)

Prep Batch: 58142 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4962-2 MS	H-1 (2FT)	Total/NA	Solid	5035	
890-4962-2 MSD	H-1 (2FT)	Total/NA	Solid	5035	

Prep Batch: 58149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4962-21	DS-7 (2.5FT)	Total/NA	Solid	5035	
890-4962-22	DS-7 (5FT)	Total/NA	Solid	5035	
890-4962-23	DS-8 (2.5FT)	Total/NA	Solid	5035	
890-4962-24	DS-8 (5FT)	Total/NA	Solid	5035	
MB 880-58149/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-58149/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-58149/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4962-21 MS	DS-7 (2.5FT)	Total/NA	Solid	5035	
890-4962-21 MSD	DS-7 (2.5FT)	Total/NA	Solid	5035	

Analysis Batch: 58224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4962-1	H-1 (SURFACE)	Total/NA	Solid	Total BTEX	
890-4962-2	H-1 (2FT)	Total/NA	Solid	Total BTEX	
890-4962-3	H-2 (SURFACE)	Total/NA	Solid	Total BTEX	
890-4962-4	H-2 (2FT)	Total/NA	Solid	Total BTEX	
890-4962-5	H-3 (SURFACE)	Total/NA	Solid	Total BTEX	
890-4962-6	H-3 (2FT)	Total/NA	Solid	Total BTEX	
890-4962-7	H-4 (SURFACE)	Total/NA	Solid	Total BTEX	
890-4962-8	H-4 (2FT)	Total/NA	Solid	Total BTEX	
890-4962-9	DS-1 (4FT)	Total/NA	Solid	Total BTEX	
890-4962-10	DS-1 (2.5FT)	Total/NA	Solid	Total BTEX	
890-4962-11	DS-2 (2FT)	Total/NA	Solid	Total BTEX	
890-4962-12	DS-2 (4FT)	Total/NA	Solid	Total BTEX	
890-4962-13	DS-3 (1FT)	Total/NA	Solid	Total BTEX	
890-4962-14	DS-3 (2.5FT)	Total/NA	Solid	Total BTEX	
890-4962-15	DS-4 (1FT)	Total/NA	Solid	Total BTEX	
890-4962-16	DS-4 (4FT)	Total/NA	Solid	Total BTEX	
890-4962-17	DS-5 (2.5FT)	Total/NA	Solid	Total BTEX	
890-4962-18	DS-5 (4FT)	Total/NA	Solid	Total BTEX	
890-4962-19	DS-6 (2.5FT)	Total/NA	Solid	Total BTEX	
890-4962-20	DS-6 (5FT)	Total/NA	Solid	Total BTEX	
890-4962-21	DS-7 (2.5FT)	Total/NA	Solid	Total BTEX	
890-4962-22	DS-7 (5FT)	Total/NA	Solid	Total BTEX	
890-4962-23	DS-8 (2.5FT)	Total/NA	Solid	Total BTEX	
890-4962-24	DS-8 (5FT)	Total/NA	Solid	Total BTEX	

Analysis Batch: 58258

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4962-21	DS-7 (2.5FT)	Total/NA	Solid	8021B	58149
890-4962-22	DS-7 (5FT)	Total/NA	Solid	8021B	58149
890-4962-23	DS-8 (2.5FT)	Total/NA	Solid	8021B	58149
890-4962-24	DS-8 (5FT)	Total/NA	Solid	8021B	58149
MB 880-58149/5-A	Method Blank	Total/NA	Solid	8021B	58149
LCS 880-58149/1-A	Lab Control Sample	Total/NA	Solid	8021B	58149
LCSD 880-58149/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	58149

QC Association Summary

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

GC VOA (Continued)

Analysis Batch: 58258 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4962-21 MS	DS-7 (2.5FT)	Total/NA	Solid	8021B	58149
890-4962-21 MSD	DS-7 (2.5FT)	Total/NA	Solid	8021B	58149

GC Semi VOA

Prep Batch: 58179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4962-1	H-1 (SURFACE)	Total/NA	Solid	8015NM Prep	
890-4962-2	H-1 (2FT)	Total/NA	Solid	8015NM Prep	
890-4962-3	H-2 (SURFACE)	Total/NA	Solid	8015NM Prep	
890-4962-4	H-2 (2FT)	Total/NA	Solid	8015NM Prep	
890-4962-5	H-3 (SURFACE)	Total/NA	Solid	8015NM Prep	
890-4962-6	H-3 (2FT)	Total/NA	Solid	8015NM Prep	
890-4962-7	H-4 (SURFACE)	Total/NA	Solid	8015NM Prep	
890-4962-8	H-4 (2FT)	Total/NA	Solid	8015NM Prep	
890-4962-9	DS-1 (4FT)	Total/NA	Solid	8015NM Prep	
890-4962-10	DS-1 (2.5FT)	Total/NA	Solid	8015NM Prep	
890-4962-11	DS-2 (2FT)	Total/NA	Solid	8015NM Prep	
890-4962-12	DS-2 (4FT)	Total/NA	Solid	8015NM Prep	
890-4962-13	DS-3 (1FT)	Total/NA	Solid	8015NM Prep	
890-4962-14	DS-3 (2.5FT)	Total/NA	Solid	8015NM Prep	
890-4962-15	DS-4 (1FT)	Total/NA	Solid	8015NM Prep	
890-4962-16	DS-4 (4FT)	Total/NA	Solid	8015NM Prep	
MB 880-58179/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-58179/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-58179/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 58184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4962-1	H-1 (SURFACE)	Total/NA	Solid	8015B NM	58179
890-4962-2	H-1 (2FT)	Total/NA	Solid	8015B NM	58179
890-4962-3	H-2 (SURFACE)	Total/NA	Solid	8015B NM	58179
890-4962-4	H-2 (2FT)	Total/NA	Solid	8015B NM	58179
890-4962-5	H-3 (SURFACE)	Total/NA	Solid	8015B NM	58179
890-4962-6	H-3 (2FT)	Total/NA	Solid	8015B NM	58179
890-4962-7	H-4 (SURFACE)	Total/NA	Solid	8015B NM	58179
890-4962-8	H-4 (2FT)	Total/NA	Solid	8015B NM	58179
890-4962-9	DS-1 (4FT)	Total/NA	Solid	8015B NM	58179
890-4962-10	DS-1 (2.5FT)	Total/NA	Solid	8015B NM	58179
890-4962-11	DS-2 (2FT)	Total/NA	Solid	8015B NM	58179
890-4962-12	DS-2 (4FT)	Total/NA	Solid	8015B NM	58179
890-4962-13	DS-3 (1FT)	Total/NA	Solid	8015B NM	58179
890-4962-14	DS-3 (2.5FT)	Total/NA	Solid	8015B NM	58179
890-4962-15	DS-4 (1FT)	Total/NA	Solid	8015B NM	58179
890-4962-16	DS-4 (4FT)	Total/NA	Solid	8015B NM	58179
MB 880-58179/1-A	Method Blank	Total/NA	Solid	8015B NM	58179
LCS 880-58179/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	58179
LCSD 880-58179/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	58179

QC Association Summary

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

GC Semi VOA

Analysis Batch: 58186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4962-17	DS-5 (2.5FT)	Total/NA	Solid	8015B NM	58234
890-4962-18	DS-5 (4FT)	Total/NA	Solid	8015B NM	58234
890-4962-19	DS-6 (2.5FT)	Total/NA	Solid	8015B NM	58234
890-4962-20	DS-6 (5FT)	Total/NA	Solid	8015B NM	58234
890-4962-21	DS-7 (2.5FT)	Total/NA	Solid	8015B NM	58234
890-4962-22	DS-7 (5FT)	Total/NA	Solid	8015B NM	58234
890-4962-23	DS-8 (2.5FT)	Total/NA	Solid	8015B NM	58234
890-4962-24	DS-8 (5FT)	Total/NA	Solid	8015B NM	58234
MB 880-58234/1-A	Method Blank	Total/NA	Solid	8015B NM	58234
LCS 880-58234/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	58234
LCSD 880-58234/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	58234
890-4962-17 MS	DS-5 (2.5FT)	Total/NA	Solid	8015B NM	58234
890-4962-17 MSD	DS-5 (2.5FT)	Total/NA	Solid	8015B NM	58234

Prep Batch: 58234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4962-17	DS-5 (2.5FT)	Total/NA	Solid	8015NM Prep	
890-4962-18	DS-5 (4FT)	Total/NA	Solid	8015NM Prep	
890-4962-19	DS-6 (2.5FT)	Total/NA	Solid	8015NM Prep	
890-4962-20	DS-6 (5FT)	Total/NA	Solid	8015NM Prep	
890-4962-21	DS-7 (2.5FT)	Total/NA	Solid	8015NM Prep	
890-4962-22	DS-7 (5FT)	Total/NA	Solid	8015NM Prep	
890-4962-23	DS-8 (2.5FT)	Total/NA	Solid	8015NM Prep	
890-4962-24	DS-8 (5FT)	Total/NA	Solid	8015NM Prep	
MB 880-58234/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-58234/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-58234/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4962-17 MS	DS-5 (2.5FT)	Total/NA	Solid	8015NM Prep	
890-4962-17 MSD	DS-5 (2.5FT)	Total/NA	Solid	8015NM Prep	

Analysis Batch: 58257

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4962-1	H-1 (SURFACE)	Total/NA	Solid	8015 NM	
890-4962-2	H-1 (2FT)	Total/NA	Solid	8015 NM	
890-4962-3	H-2 (SURFACE)	Total/NA	Solid	8015 NM	
890-4962-4	H-2 (2FT)	Total/NA	Solid	8015 NM	
890-4962-5	H-3 (SURFACE)	Total/NA	Solid	8015 NM	
890-4962-6	H-3 (2FT)	Total/NA	Solid	8015 NM	
890-4962-7	H-4 (SURFACE)	Total/NA	Solid	8015 NM	
890-4962-8	H-4 (2FT)	Total/NA	Solid	8015 NM	
890-4962-9	DS-1 (4FT)	Total/NA	Solid	8015 NM	
890-4962-10	DS-1 (2.5FT)	Total/NA	Solid	8015 NM	
890-4962-11	DS-2 (2FT)	Total/NA	Solid	8015 NM	
890-4962-12	DS-2 (4FT)	Total/NA	Solid	8015 NM	
890-4962-13	DS-3 (1FT)	Total/NA	Solid	8015 NM	
890-4962-14	DS-3 (2.5FT)	Total/NA	Solid	8015 NM	
890-4962-15	DS-4 (1FT)	Total/NA	Solid	8015 NM	
890-4962-16	DS-4 (4FT)	Total/NA	Solid	8015 NM	
890-4962-17	DS-5 (2.5FT)	Total/NA	Solid	8015 NM	
890-4962-18	DS-5 (4FT)	Total/NA	Solid	8015 NM	
890-4962-19	DS-6 (2.5FT)	Total/NA	Solid	8015 NM	

QC Association Summary

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

GC Semi VOA (Continued)

Analysis Batch: 58257 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4962-20	DS-6 (5FT)	Total/NA	Solid	8015 NM	
890-4962-21	DS-7 (2.5FT)	Total/NA	Solid	8015 NM	
890-4962-22	DS-7 (5FT)	Total/NA	Solid	8015 NM	
890-4962-23	DS-8 (2.5FT)	Total/NA	Solid	8015 NM	
890-4962-24	DS-8 (5FT)	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 58061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4962-1	H-1 (SURFACE)	Soluble	Solid	DI Leach	
890-4962-2	H-1 (2FT)	Soluble	Solid	DI Leach	
890-4962-3	H-2 (SURFACE)	Soluble	Solid	DI Leach	
890-4962-4	H-2 (2FT)	Soluble	Solid	DI Leach	
890-4962-5	H-3 (SURFACE)	Soluble	Solid	DI Leach	
890-4962-6	H-3 (2FT)	Soluble	Solid	DI Leach	
890-4962-7	H-4 (SURFACE)	Soluble	Solid	DI Leach	
890-4962-8	H-4 (2FT)	Soluble	Solid	DI Leach	
890-4962-9	DS-1 (4FT)	Soluble	Solid	DI Leach	
890-4962-10	DS-1 (2.5FT)	Soluble	Solid	DI Leach	
890-4962-11	DS-2 (2FT)	Soluble	Solid	DI Leach	
890-4962-12	DS-2 (4FT)	Soluble	Solid	DI Leach	
890-4962-13	DS-3 (1FT)	Soluble	Solid	DI Leach	
890-4962-14	DS-3 (2.5FT)	Soluble	Solid	DI Leach	
890-4962-15	DS-4 (1FT)	Soluble	Solid	DI Leach	
890-4962-16	DS-4 (4FT)	Soluble	Solid	DI Leach	
890-4962-17	DS-5 (2.5FT)	Soluble	Solid	DI Leach	
890-4962-18	DS-5 (4FT)	Soluble	Solid	DI Leach	
890-4962-19	DS-6 (2.5FT)	Soluble	Solid	DI Leach	
890-4962-20	DS-6 (5FT)	Soluble	Solid	DI Leach	
MB 880-58061/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-58061/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-58061/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4962-1 MS	H-1 (SURFACE)	Soluble	Solid	DI Leach	
890-4962-1 MSD	H-1 (SURFACE)	Soluble	Solid	DI Leach	
890-4962-11 MS	DS-2 (2FT)	Soluble	Solid	DI Leach	
890-4962-11 MSD	DS-2 (2FT)	Soluble	Solid	DI Leach	

Leach Batch: 58100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4962-21	DS-7 (2.5FT)	Soluble	Solid	DI Leach	
890-4962-22	DS-7 (5FT)	Soluble	Solid	DI Leach	
890-4962-23	DS-8 (2.5FT)	Soluble	Solid	DI Leach	
890-4962-24	DS-8 (5FT)	Soluble	Solid	DI Leach	
MB 880-58100/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-58100/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-58100/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4962-21 MS	DS-7 (2.5FT)	Soluble	Solid	DI Leach	
890-4962-21 MSD	DS-7 (2.5FT)	Soluble	Solid	DI Leach	

QC Association Summary

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

HPLC/IC

Analysis Batch: 58155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4962-1	H-1 (SURFACE)	Soluble	Solid	300.0	58061
890-4962-2	H-1 (2FT)	Soluble	Solid	300.0	58061
890-4962-3	H-2 (SURFACE)	Soluble	Solid	300.0	58061
890-4962-4	H-2 (2FT)	Soluble	Solid	300.0	58061
890-4962-5	H-3 (SURFACE)	Soluble	Solid	300.0	58061
890-4962-6	H-3 (2FT)	Soluble	Solid	300.0	58061
890-4962-7	H-4 (SURFACE)	Soluble	Solid	300.0	58061
890-4962-8	H-4 (2FT)	Soluble	Solid	300.0	58061
890-4962-9	DS-1 (4FT)	Soluble	Solid	300.0	58061
890-4962-10	DS-1 (2.5FT)	Soluble	Solid	300.0	58061
890-4962-11	DS-2 (2FT)	Soluble	Solid	300.0	58061
890-4962-12	DS-2 (4FT)	Soluble	Solid	300.0	58061
890-4962-13	DS-3 (1FT)	Soluble	Solid	300.0	58061
890-4962-14	DS-3 (2.5FT)	Soluble	Solid	300.0	58061
890-4962-15	DS-4 (1FT)	Soluble	Solid	300.0	58061
890-4962-16	DS-4 (4FT)	Soluble	Solid	300.0	58061
890-4962-17	DS-5 (2.5FT)	Soluble	Solid	300.0	58061
890-4962-18	DS-5 (4FT)	Soluble	Solid	300.0	58061
890-4962-19	DS-6 (2.5FT)	Soluble	Solid	300.0	58061
890-4962-20	DS-6 (5FT)	Soluble	Solid	300.0	58061
MB 880-58061/1-A	Method Blank	Soluble	Solid	300.0	58061
LCS 880-58061/2-A	Lab Control Sample	Soluble	Solid	300.0	58061
LCSD 880-58061/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	58061
890-4962-1 MS	H-1 (SURFACE)	Soluble	Solid	300.0	58061
890-4962-1 MSD	H-1 (SURFACE)	Soluble	Solid	300.0	58061
890-4962-11 MS	DS-2 (2FT)	Soluble	Solid	300.0	58061
890-4962-11 MSD	DS-2 (2FT)	Soluble	Solid	300.0	58061

Analysis Batch: 58157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4962-21	DS-7 (2.5FT)	Soluble	Solid	300.0	58100
890-4962-22	DS-7 (5FT)	Soluble	Solid	300.0	58100
890-4962-23	DS-8 (2.5FT)	Soluble	Solid	300.0	58100
890-4962-24	DS-8 (5FT)	Soluble	Solid	300.0	58100
MB 880-58100/1-A	Method Blank	Soluble	Solid	300.0	58100
LCS 880-58100/2-A	Lab Control Sample	Soluble	Solid	300.0	58100
LCSD 880-58100/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	58100
890-4962-21 MS	DS-7 (2.5FT)	Soluble	Solid	300.0	58100
890-4962-21 MSD	DS-7 (2.5FT)	Soluble	Solid	300.0	58100

Lab Chronicle

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: H-1 (SURFACE) Lab Sample ID: 890-4962-1

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

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	58142	07/20/23 10:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58088	07/20/23 13:37	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/21/23 10:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			58257	07/21/23 18:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	58179	07/20/23 17:06	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58184	07/21/23 15:01	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	58061	07/19/23 15:48	KS	EET MID
Soluble	Analysis	300.0		1			58155	07/20/23 13:47	CH	EET MID

Client Sample ID: H-1 (2FT) Lab Sample ID: 890-4962-2

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	58142	07/20/23 10:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58088	07/20/23 13:17	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/21/23 10:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			58257	07/21/23 18:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	58179	07/20/23 17:06	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58184	07/21/23 15:24	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	58061	07/19/23 15:48	KS	EET MID
Soluble	Analysis	300.0		1			58155	07/20/23 14:02	CH	EET MID

Client Sample ID: H-2 (SURFACE) Lab Sample ID: 890-4962-3

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

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	58142	07/20/23 10:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58088	07/20/23 13:58	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/21/23 10:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			58257	07/21/23 18:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.96 g	10 mL	58179	07/20/23 17:06	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58184	07/21/23 15:49	AJ	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	58061	07/19/23 15:48	KS	EET MID
Soluble	Analysis	300.0		1			58155	07/20/23 14:07	CH	EET MID

Client Sample ID: H-2 (2FT) Lab Sample ID: 890-4962-4

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	58142	07/20/23 10:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58088	07/20/23 14:18	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/21/23 10:08	SM	EET MID

Lab Chronicle

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: H-2 (2FT) Lab Sample ID: 890-4962-4

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

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			58257	07/21/23 18:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	58179	07/20/23 17:06	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58184	07/21/23 16:11	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	58061	07/19/23 15:48	KS	EET MID
Soluble	Analysis	300.0		1			58155	07/20/23 14:12	CH	EET MID

Client Sample ID: H-3 (SURFACE) Lab Sample ID: 890-4962-5

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

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	58142	07/20/23 10:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58088	07/20/23 14:39	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/21/23 10:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			58257	07/21/23 18:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	58179	07/20/23 17:06	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58184	07/21/23 16:35	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	58061	07/19/23 15:48	KS	EET MID
Soluble	Analysis	300.0		1			58155	07/20/23 14:17	CH	EET MID

Client Sample ID: H-3 (2FT) Lab Sample ID: 890-4962-6

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

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	58142	07/20/23 10:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58088	07/20/23 14:59	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/21/23 10:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			58257	07/21/23 18:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	58179	07/20/23 17:06	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58184	07/21/23 16:57	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	58061	07/19/23 15:48	KS	EET MID
Soluble	Analysis	300.0		1			58155	07/20/23 14:32	CH	EET MID

Client Sample ID: H-4 (SURFACE) Lab Sample ID: 890-4962-7

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	58142	07/20/23 10:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58088	07/20/23 15:20	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/21/23 10:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			58257	07/24/23 14:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	58179	07/20/23 17:06	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58184	07/21/23 17:46	AJ	EET MID

Lab Chronicle

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: H-4 (SURFACE) Lab Sample ID: 890-4962-7

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

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	58061	07/19/23 15:48	KS	EET MID
Soluble	Analysis	300.0		1			58155	07/20/23 14:37	CH	EET MID

Client Sample ID: H-4 (2FT) Lab Sample ID: 890-4962-8

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

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	58142	07/20/23 10:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58088	07/20/23 15:40	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/21/23 10:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			58257	07/24/23 14:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	58179	07/20/23 17:06	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58184	07/21/23 18:08	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	58061	07/19/23 15:48	KS	EET MID
Soluble	Analysis	300.0		1			58155	07/20/23 14:42	CH	EET MID

Client Sample ID: DS-1 (4FT) Lab Sample ID: 890-4962-9

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

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	58142	07/20/23 10:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58088	07/20/23 16:01	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/21/23 10:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			58257	07/24/23 14:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	58179	07/20/23 17:06	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58184	07/21/23 18:34	AJ	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	58061	07/19/23 15:48	KS	EET MID
Soluble	Analysis	300.0		1			58155	07/20/23 14:47	CH	EET MID

Client Sample ID: DS-1 (2.5FT) Lab Sample ID: 890-4962-10

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	58142	07/20/23 10:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58088	07/20/23 16:56	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/21/23 10:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			58257	07/24/23 14:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	58179	07/20/23 17:06	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58184	07/21/23 18:56	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	58061	07/19/23 15:48	KS	EET MID
Soluble	Analysis	300.0		1			58155	07/20/23 14:52	CH	EET MID

Lab Chronicle

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: DS-2 (2FT) Lab Sample ID: 890-4962-11

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	58142	07/20/23 10:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58088	07/20/23 18:19	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/21/23 10:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			58257	07/24/23 14:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	58179	07/20/23 17:06	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58184	07/21/23 19:18	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	58061	07/19/23 15:48	KS	EET MID
Soluble	Analysis	300.0		1			58155	07/20/23 14:56	CH	EET MID

Client Sample ID: DS-2 (4FT) Lab Sample ID: 890-4962-12

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

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	58142	07/20/23 10:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58088	07/20/23 18:39	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/21/23 10:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			58257	07/24/23 14:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	58179	07/20/23 17:06	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58184	07/21/23 19:40	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	58061	07/19/23 15:48	KS	EET MID
Soluble	Analysis	300.0		1			58155	07/20/23 15:11	CH	EET MID

Client Sample ID: DS-3 (1FT) Lab Sample ID: 890-4962-13

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

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	58142	07/20/23 10:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58088	07/20/23 19:00	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/21/23 10:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			58257	07/24/23 14:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.10 g	10 mL	58179	07/20/23 17:06	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58184	07/21/23 20:02	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	58061	07/19/23 15:48	KS	EET MID
Soluble	Analysis	300.0		1			58155	07/20/23 15:16	CH	EET MID

Client Sample ID: DS-3 (2.5FT) Lab Sample ID: 890-4962-14

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

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	58142	07/20/23 10:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58088	07/20/23 19:20	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/21/23 10:08	SM	EET MID

Lab Chronicle

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: DS-3 (2.5FT) Lab Sample ID: 890-4962-14

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

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			58257	07/24/23 14:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	58179	07/20/23 17:06	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58184	07/21/23 20:28	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	58061	07/19/23 15:48	KS	EET MID
Soluble	Analysis	300.0		1			58155	07/20/23 15:31	CH	EET MID

Client Sample ID: DS-4 (1FT) Lab Sample ID: 890-4962-15

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

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	58142	07/20/23 10:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58088	07/20/23 19:40	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/21/23 10:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			58257	07/24/23 14:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	58179	07/20/23 17:06	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58184	07/22/23 07:16	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	58061	07/19/23 15:48	KS	EET MID
Soluble	Analysis	300.0		1			58155	07/20/23 15:36	CH	EET MID

Client Sample ID: DS-4 (4FT) Lab Sample ID: 890-4962-16

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

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	58142	07/20/23 10:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58088	07/20/23 20:01	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/21/23 10:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			58257	07/24/23 14:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	58179	07/20/23 17:06	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58184	07/22/23 08:00	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	58061	07/19/23 15:48	KS	EET MID
Soluble	Analysis	300.0		1			58155	07/20/23 15:41	CH	EET MID

Client Sample ID: DS-5 (2.5FT) Lab Sample ID: 890-4962-17

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

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	58142	07/20/23 10:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58088	07/20/23 20:21	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/21/23 10:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			58257	07/24/23 16:18	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	58234	07/21/23 11:49	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58186	07/21/23 15:00	SM	EET MID

Lab Chronicle

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: DS-5 (2.5FT) Lab Sample ID: 890-4962-17

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	58061	07/19/23 15:48	KS	EET MID
Soluble	Analysis	300.0		5			58155	07/20/23 15:46	CH	EET MID

Client Sample ID: DS-5 (4FT) Lab Sample ID: 890-4962-18

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

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	58142	07/20/23 10:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58088	07/20/23 20:42	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/21/23 10:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			58257	07/24/23 16:18	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	58234	07/21/23 11:49	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58186	07/21/23 16:24	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	58061	07/19/23 15:48	KS	EET MID
Soluble	Analysis	300.0		5			58155	07/20/23 15:51	CH	EET MID

Client Sample ID: DS-6 (2.5FT) Lab Sample ID: 890-4962-19

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

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	58142	07/20/23 10:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58088	07/20/23 21:02	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/21/23 10:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			58257	07/24/23 16:18	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.10 g	10 mL	58234	07/21/23 11:49	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58186	07/21/23 16:46	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	58061	07/19/23 15:48	KS	EET MID
Soluble	Analysis	300.0		1			58155	07/20/23 15:56	CH	EET MID

Client Sample ID: DS-6 (5FT) Lab Sample ID: 890-4962-20

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	58142	07/20/23 10:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58088	07/20/23 21:23	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/21/23 10:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			58257	07/24/23 16:18	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	58234	07/21/23 11:49	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58186	07/21/23 17:08	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	58061	07/19/23 15:48	KS	EET MID
Soluble	Analysis	300.0		1			58155	07/20/23 16:01	CH	EET MID

Lab Chronicle

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: DS-7 (2.5FT) Lab Sample ID: 890-4962-21

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

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	58149	07/20/23 13:41	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58258	07/22/23 10:20	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/24/23 08:47	SM	EET MID
Total/NA	Analysis	8015 NM		1			58257	07/24/23 16:18	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	58234	07/21/23 11:49	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58186	07/21/23 17:30	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	58100	07/20/23 09:57	KS	EET MID
Soluble	Analysis	300.0		1			58157	07/20/23 14:28	CH	EET MID

Client Sample ID: DS-7 (5FT) Lab Sample ID: 890-4962-22

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

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	58149	07/20/23 13:41	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58258	07/22/23 10:41	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/24/23 08:47	SM	EET MID
Total/NA	Analysis	8015 NM		1			58257	07/24/23 16:18	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	58234	07/21/23 11:49	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58186	07/21/23 17:51	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	58100	07/20/23 09:57	KS	EET MID
Soluble	Analysis	300.0		1			58157	07/20/23 14:43	CH	EET MID

Client Sample ID: DS-8 (2.5FT) Lab Sample ID: 890-4962-23

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

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	58149	07/20/23 13:41	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58258	07/22/23 11:02	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/24/23 08:47	SM	EET MID
Total/NA	Analysis	8015 NM		1			58257	07/24/23 16:18	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	58234	07/21/23 11:49	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58186	07/21/23 18:13	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	58100	07/20/23 09:57	KS	EET MID
Soluble	Analysis	300.0		1			58157	07/20/23 14:48	CH	EET MID

Client Sample ID: DS-8 (5FT) Lab Sample ID: 890-4962-24

Date Collected: 07/17/23 00:00 **Matrix: Solid**
Date Received: 07/18/23 15:15

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	58149	07/20/23 13:41	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58258	07/22/23 11:23	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58224	07/24/23 08:47	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: GHD Services Inc.
Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Client Sample ID: DS-8 (5FT)
Date Collected: 07/17/23 00:00
Date Received: 07/18/23 15:15

Lab Sample ID: 890-4962-24
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			58257	07/24/23 16:18	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	58234	07/21/23 11:49	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58186	07/21/23 18:34	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	58100	07/20/23 09:57	KS	EET MID
Soluble	Analysis	300.0		5			58157	07/20/23 14:54	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: GHD Services Inc.
Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: GHD Services Inc. Job ID: 890-4962-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-4962-1
SDG: 12618492

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4962-1	H-1 (SURFACE)	Solid	07/17/23 00:00	07/18/23 15:15	0
890-4962-2	H-1 (2FT)	Solid	07/17/23 00:00	07/18/23 15:15	2
890-4962-3	H-2 (SURFACE)	Solid	07/17/23 00:00	07/18/23 15:15	0
890-4962-4	H-2 (2FT)	Solid	07/17/23 00:00	07/18/23 15:15	2
890-4962-5	H-3 (SURFACE)	Solid	07/17/23 00:00	07/18/23 15:15	0
890-4962-6	H-3 (2FT)	Solid	07/17/23 00:00	07/18/23 15:15	2
890-4962-7	H-4 (SURFACE)	Solid	07/17/23 00:00	07/18/23 15:15	0
890-4962-8	H-4 (2FT)	Solid	07/17/23 00:00	07/18/23 15:15	2
890-4962-9	DS-1 (4FT)	Solid	07/17/23 00:00	07/18/23 15:15	4
890-4962-10	DS-1 (2.5FT)	Solid	07/17/23 00:00	07/18/23 15:15	2.5
890-4962-11	DS-2 (2FT)	Solid	07/17/23 00:00	07/18/23 15:15	2
890-4962-12	DS-2 (4FT)	Solid	07/17/23 00:00	07/18/23 15:15	4
890-4962-13	DS-3 (1FT)	Solid	07/17/23 00:00	07/18/23 15:15	1
890-4962-14	DS-3 (2.5FT)	Solid	07/17/23 00:00	07/18/23 15:15	2.5
890-4962-15	DS-4 (1FT)	Solid	07/17/23 00:00	07/18/23 15:15	1
890-4962-16	DS-4 (4FT)	Solid	07/17/23 00:00	07/18/23 15:15	4
890-4962-17	DS-5 (2.5FT)	Solid	07/17/23 00:00	07/18/23 15:15	2.5
890-4962-18	DS-5 (4FT)	Solid	07/17/23 00:00	07/18/23 15:15	4
890-4962-19	DS-6 (2.5FT)	Solid	07/17/23 00:00	07/18/23 15:15	2.5
890-4962-20	DS-6 (5FT)	Solid	07/17/23 00:00	07/18/23 15:15	5
890-4962-21	DS-7 (2.5FT)	Solid	07/17/23 00:00	07/18/23 15:15	2.5
890-4962-22	DS-7 (5FT)	Solid	07/17/23 00:00	07/18/23 15:15	5
890-4962-23	DS-8 (2.5FT)	Solid	07/17/23 00:00	07/18/23 15:15	2.5
890-4962-24	DS-8 (5FT)	Solid	07/17/23 00:00	07/18/23 15:15	5

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 3

Project Manager:	Nate. Reece	Bill to: (if different)	
Company Name:	GHD	Company Name:	
Address:	2135 S Loop 250 W	Address:	
City, State ZIP:	Midland, TX, 79703	City, State ZIP:	
Phone:		Email:	Nate.Reece@ghd.com

Work Order Comments

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

Project Name:	Delaware Matador Produced Water release	Turn Around	
Project Number:	12618492	☐ Routine ☑ Rush	
Project Location:	Eunice, NM	Due Date:	24hr TAT
Sampler's Name:	Daniel Sparks	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	TVM007	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.4	
Total Containers:		Corrected Temperature:	1.2	

ANALYSIS REQUEST



Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2SO_4: H_2 | NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: NaSO$_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Chloride	BTEX	TPH	Sample Comments
H-1 (Surface)	SO	7-17-23		0	Grab	1	x	x	x	
H-1 (2ft)		7-17-23		2						
H-2 (Surface)				0						
H-2 (2ft)				2						
H-3 (Surface)				0						
H-3 (2ft)				2						
H-4 (Surface)				0						
H-4 (2ft)				2						
DS-1 (4ft)				4						
DS-1 (2.5ft)				2.5						

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 D Sparks	7.18.23	7-18-23/1515	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Received by OCD: 12/4/2024 10:43:20 AM
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Released to Imaging: 3/12/2025 11:29:45 AM
7/24/2023

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7/24/2023

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 2 of 3

Project Manager:	nate Reece	Bill to: (if different)	
Company Name:	GHD	Company Name:	
Address:	2135 S Loop 250 W	Address:	
City, State ZIP:	Midland, TX 79703	City, State ZIP:	
Phone:	Email:	nate.reece@ghd.com	

Work Order Comments

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

Project Name:	Delek Matador Produced Water Release	Turn Around	
Project Number:	12618492	☐ Routine ☑ Rush	
Project Location:	Eunice, NM	Due Date:	24 hr TAT
Sampler's Name:	Daniel Sparks	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

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

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: Chloride	BTEX	TPH	Sample Comments
DS-2 (2ft)	SO	7-17-23		2	Grab	1		X	X	X	
DS-2 (4 ft)				4							
DS-3 (1ft)				1							
DS-3 (2.5ft)				2.5							
DS-4 (1ft)				1							
DS-4 (4ft)				4							
DS-5 (2.5ft)				2.5							
DS-5 (4ft)				4							
DS-6 (2.5ft)				2.5							
DS-6 (5ft)				5							

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 D Sparks	Cle Cl	7-18-23/1515	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

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Received by OCD: 12/4/2024 10:43:20 AM

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Nate Reece	Bill to: (if different)	
Company Name:	GHD	Company Name:	
Address:	2135 S Loop 250 W	Address:	
City, State ZIP:	Midland, TX, 79703	City, State ZIP:	
Phone:	Email:	nate.reece@ghd.com	

Work Order Comments

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

Project Name:	Delek matador Produced water Release	Turn Around	
Project Number:	12618492	☐ Routine ☑ Rush	
Project Location:	Eunice, NM	Due Date:	24 hr TAT
Sampler's Name:	Daniel Sparks	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

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

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2SO_4: H_2 | NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: NaSO$_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Parameters: Chlorides	BTEX	TPH	Sample Comments
DS-7 (2.5ft)	SO	7-17-23		2.5	Grab	1	x	x	x	
DS-7 (5ft)	"	"		5	"	"	"	"	"	
DS-8 (2.5ft)	"	"		2.5	"	"	"	"	"	
DS-8 (5ft)	"	"		5	"	"	"	"	"	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 D Sparks	Cue Cup	7-18-23/1515	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Received by OCD: 12/4/2024 10:43:20 AM
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7/24/2023
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Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 890-4962-1
SDG Number: 12618492

Login Number: 4962
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: GHD Services Inc.

Job Number: 890-4962-1
SDG Number: 12618492

Login Number: 4962
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/20/23 12:42 PM

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

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ANALYTICAL REPORT

PREPARED FOR

Attn: Nate Reece
GHD Services Inc.
2135 South Loop 250 West
Midland, Texas 79703

Generated 7/27/2023 7:44:56 AM

JOB DESCRIPTION

Delek Matador Produced Water Release
SDG NUMBER 12618492

JOB NUMBER

890-4986-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 5/12/2023 11:29:43 AM

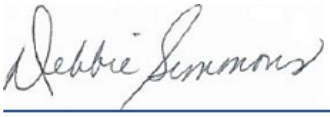
Eurofins Carlsbad

Job Notes

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

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

Authorization



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Authorized for release by
Debbie Simmons, Project Manager
Debbie.Simmons@et.eurofinsus.com
(832)986-6768

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Definitions/Glossary

Client: GHD Services Inc. Job ID: 890-4986-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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: GHD Services Inc. Job ID: 890-4986-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Job ID: 890-4986-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4986-1

Receipt
The samples were received on 7/24/2023 2:24 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 3.0°C

Receipt Exceptions
The following samples \were received and analyzed from an unpreserved bulk soil jar: TP1-1FT (890-4986-1), TP1-10FT (890-4986-2), TP2-1FT (890-4986-3), TP2-4FT (890-4986-4), TP3-1FT (890-4986-5), TP3-4FT (890-4986-6), TP6-1FT (890-4986-7) and TP6-4FT (890-4986-8).

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
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-58447 and analytical batch 880-58484 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: GHD Services Inc. Job ID: 890-4986-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: TP1-1FT

Lab Sample ID: 890-4986-1
Matrix: Solid
Date Collected: 07/24/23 10:00
Date Received: 07/24/23 14:24
Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/25/23 11:03	07/25/23 13:34	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/25/23 11:03	07/25/23 13:34	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/25/23 11:03	07/25/23 13:34	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/25/23 11:03	07/25/23 13:34	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/25/23 11:03	07/25/23 13:34	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/25/23 11:03	07/25/23 13:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*07/25/23 11:03*	*07/25/23 13:34*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*07/25/23 11:03*	*07/25/23 13:34*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			07/26/23 09:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			07/27/23 08:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/25/23 15:32	07/26/23 16:20	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/25/23 15:32	07/26/23 16:20	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/25/23 15:32	07/26/23 16:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*07/25/23 15:32*	*07/26/23 16:20*	*1*
o-Terphenyl	*90*		*70 - 130*	*07/25/23 15:32*	*07/26/23 16:20*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4170**	**F1**	25.2		mg/Kg			07/25/23 18:32	5

Client Sample ID: TP1-10FT

Lab Sample ID: 890-4986-2
Matrix: Solid
Date Collected: 07/24/23 10:30
Date Received: 07/24/23 14:24
Sample Depth: 10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		07/25/23 11:03	07/25/23 13:55	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/25/23 11:03	07/25/23 13:55	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/25/23 11:03	07/25/23 13:55	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/25/23 11:03	07/25/23 13:55	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/25/23 11:03	07/25/23 13:55	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/25/23 11:03	07/25/23 13:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*07/25/23 11:03*	*07/25/23 13:55*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-4986-1
SDG: 12618492

Client Sample ID: TP1-10FT

Lab Sample ID: 890-4986-2
Matrix: Solid
Date Collected: 07/24/23 10:30
Date Received: 07/24/23 14:24
Sample Depth: 10

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*07/25/23 11:03*	*07/25/23 13:55*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			07/26/23 09:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			07/27/23 08:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/25/23 15:32	07/26/23 19:20	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/25/23 15:32	07/26/23 19:20	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/25/23 15:32	07/26/23 19:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*07/25/23 15:32*	*07/26/23 19:20*	*1*
o-Terphenyl	*112*		*70 - 130*	*07/25/23 15:32*	*07/26/23 19:20*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1080**		50.0		mg/Kg			07/25/23 18:50	10

Client Sample ID: TP2-1FT

Lab Sample ID: 890-4986-3
Matrix: Solid
Date Collected: 07/24/23 10:45
Date Received: 07/24/23 14:24
Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		07/25/23 11:03	07/25/23 14:16	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/25/23 11:03	07/25/23 14:16	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/25/23 11:03	07/25/23 14:16	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/25/23 11:03	07/25/23 14:16	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/25/23 11:03	07/25/23 14:16	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/25/23 11:03	07/25/23 14:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*07/25/23 11:03*	*07/25/23 14:16*	*1*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*07/25/23 11:03*	*07/25/23 14:16*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			07/26/23 09:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			07/27/23 08:32	1

Client Sample Results

Client: GHD Services Inc. Job ID: 890-4986-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: TP2-1FT — Lab Sample ID: 890-4986-3

Date Collected: 07/24/23 10:45 **Matrix: Solid**
Date Received: 07/24/23 14:24
Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		07/25/23 15:32	07/26/23 19:41	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		07/25/23 15:32	07/26/23 19:41	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		07/25/23 15:32	07/26/23 19:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*07/25/23 15:32*	*07/26/23 19:41*	*1*
o-Terphenyl	*103*		*70 - 130*	*07/25/23 15:32*	*07/26/23 19:41*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1050**		25.0		mg/Kg			07/25/23 19:01	5

Client Sample ID: TP2-4FT — Lab Sample ID: 890-4986-4

Date Collected: 07/24/23 11:00 **Matrix: Solid**
Date Received: 07/24/23 14:24
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		07/25/23 11:03	07/25/23 14:36	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/25/23 11:03	07/25/23 14:36	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/25/23 11:03	07/25/23 14:36	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/25/23 11:03	07/25/23 14:36	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/25/23 11:03	07/25/23 14:36	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/25/23 11:03	07/25/23 14:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*07/25/23 11:03*	*07/25/23 14:36*	*1*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*07/25/23 11:03*	*07/25/23 14:36*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			07/26/23 09:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.5	U	49.5		mg/Kg			07/27/23 08:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.5	U	49.5		mg/Kg		07/25/23 15:32	07/26/23 20:02	1
Diesel Range Organics (Over C10-C28)	<49.5	U	49.5		mg/Kg		07/25/23 15:32	07/26/23 20:02	1
OII Range Organics (Over C28-C36)	<49.5	U	49.5		mg/Kg		07/25/23 15:32	07/26/23 20:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*07/25/23 15:32*	*07/26/23 20:02*	*1*
o-Terphenyl	*93*		*70 - 130*	*07/25/23 15:32*	*07/26/23 20:02*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-4986-1
SDG: 12618492

Client Sample ID: TP2-4FT

Lab Sample ID: 890-4986-4
Matrix: Solid
Date Collected: 07/24/23 11:00
Date Received: 07/24/23 14:24
Sample Depth: 4

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	450		4.97		mg/Kg			07/25/23 19:19	1

Client Sample ID: TP3-1FT

Lab Sample ID: 890-4986-5
Matrix: Solid
Date Collected: 07/24/23 11:15
Date Received: 07/24/23 14:24
Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/25/23 11:03	07/25/23 14:57	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/25/23 11:03	07/25/23 14:57	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/25/23 11:03	07/25/23 14:57	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/25/23 11:03	07/25/23 14:57	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/25/23 11:03	07/25/23 14:57	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/25/23 11:03	07/25/23 14:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*07/25/23 11:03*	*07/25/23 14:57*	*1*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*	*07/25/23 11:03*	*07/25/23 14:57*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			07/26/23 09:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			07/27/23 08:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		07/25/23 15:32	07/26/23 20:23	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/25/23 15:32	07/26/23 20:23	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/25/23 15:32	07/26/23 20:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*07/25/23 15:32*	*07/26/23 20:23*	*1*
o-Terphenyl	*92*		*70 - 130*	*07/25/23 15:32*	*07/26/23 20:23*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	548		4.96		mg/Kg			07/25/23 19:25	1

Client Sample Results

Client: GHD Services Inc.
Job ID: 890-4986-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Client Sample ID: TP3-4FT
Lab Sample ID: 890-4986-6
Date Collected: 07/24/23 11:30
Matrix: Solid
Date Received: 07/24/23 14:24
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		07/25/23 11:03	07/25/23 15:18	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/25/23 11:03	07/25/23 15:18	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/25/23 11:03	07/25/23 15:18	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/25/23 11:03	07/25/23 15:18	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/25/23 11:03	07/25/23 15:18	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/25/23 11:03	07/25/23 15:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*07/25/23 11:03*	*07/25/23 15:18*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*07/25/23 11:03*	*07/25/23 15:18*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			07/26/23 09:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			07/27/23 08:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		07/25/23 15:32	07/26/23 20:44	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		07/25/23 15:32	07/26/23 20:44	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		07/25/23 15:32	07/26/23 20:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*77*		*70 - 130*	*07/25/23 15:32*	*07/26/23 20:44*	*1*
o-Terphenyl	*87*		*70 - 130*	*07/25/23 15:32*	*07/26/23 20:44*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**588**		25.0		mg/Kg			07/25/23 19:31	5

Client Sample ID: TP6-1FT
Lab Sample ID: 890-4986-7
Date Collected: 07/24/23 11:45
Matrix: Solid
Date Received: 07/24/23 14:24
Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		07/25/23 11:03	07/25/23 15:39	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/25/23 11:03	07/25/23 15:39	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/25/23 11:03	07/25/23 15:39	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		07/25/23 11:03	07/25/23 15:39	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/25/23 11:03	07/25/23 15:39	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		07/25/23 11:03	07/25/23 15:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*07/25/23 11:03*	*07/25/23 15:39*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-4986-1
SDG: 12618492

Client Sample ID: TP6-1FT

Lab Sample ID: 890-4986-7
Matrix: Solid

Date Collected: 07/24/23 11:45
Date Received: 07/24/23 14:24
Sample Depth: 1

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*07/25/23 11:03*	*07/25/23 15:39*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			07/26/23 09:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			07/27/23 08:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		07/25/23 15:32	07/26/23 21:05	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		07/25/23 15:32	07/26/23 21:05	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		07/25/23 15:32	07/26/23 21:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*83*		*70 - 130*	*07/25/23 15:32*	*07/26/23 21:05*	*1*
o-Terphenyl	*94*		*70 - 130*	*07/25/23 15:32*	*07/26/23 21:05*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1260**		25.2		mg/Kg			07/25/23 19:38	5

Client Sample ID: TP6-4FT

Lab Sample ID: 890-4986-8
Matrix: Solid

Date Collected: 07/24/23 12:10
Date Received: 07/24/23 14:24
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		07/25/23 11:03	07/25/23 16:00	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/25/23 11:03	07/25/23 16:00	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/25/23 11:03	07/25/23 16:00	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/25/23 11:03	07/25/23 16:00	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/25/23 11:03	07/25/23 16:00	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/25/23 11:03	07/25/23 16:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*07/25/23 11:03*	*07/25/23 16:00*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*07/25/23 11:03*	*07/25/23 16:00*	*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			07/26/23 09:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2		mg/Kg			07/27/23 08:32	1

Eurofins Carlsbad

Client Sample Results

Client: GHD Services Inc.
Job ID: 890-4986-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Client Sample ID: TP6-4FT
Lab Sample ID: 890-4986-8
Date Collected: 07/24/23 12:10
Matrix: Solid
Date Received: 07/24/23 14:24
Sample Depth: 4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2		mg/Kg		07/25/23 15:32	07/27/23 06:48	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		07/25/23 15:32	07/27/23 06:48	1
Oil Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		07/25/23 15:32	07/27/23 06:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*81*		*70 - 130*	*07/25/23 15:32*	*07/27/23 06:48*	*1*
o-Terphenyl	*90*		*70 - 130*	*07/25/23 15:32*	*07/27/23 06:48*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**728**		25.1		mg/Kg			07/25/23 19:44	5

Surrogate Summary

Client: GHD Services Inc. Job ID: 890-4986-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

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)
890-4986-1	TP1-1FT	106	98
890-4986-1 MS	TP1-1FT	107	99
890-4986-1 MSD	TP1-1FT	101	105
890-4986-2	TP1-10FT	99	110
890-4986-3	TP2-1FT	105	109
890-4986-4	TP2-4FT	108	114
890-4986-5	TP3-1FT	109	115
890-4986-6	TP3-4FT	112	113
890-4986-7	TP6-1FT	109	112
890-4986-8	TP6-4FT	109	110
LCS 880-58465/1-A	Lab Control Sample	106	101
LCSD 880-58465/2-A	Lab Control Sample Dup	113	101
MB 880-58465/5-A	Method Blank	93	92

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)
890-4986-1	TP1-1FT	82	90
890-4986-1 MS	TP1-1FT	90	84
890-4986-1 MSD	TP1-1FT	93	86
890-4986-2	TP1-10FT	101	112
890-4986-3	TP2-1FT	92	103
890-4986-4	TP2-4FT	84	93
890-4986-5	TP3-1FT	82	92
890-4986-6	TP3-4FT	77	87
890-4986-7	TP6-1FT	83	94
890-4986-8	TP6-4FT	81	90
LCS 880-58493/2-A	Lab Control Sample	99	95
LCSD 880-58493/3-A	Lab Control Sample Dup	91	88
MB 880-58493/1-A	Method Blank	82	85

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: GHD Services Inc. Job ID: 890-4986-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-58465/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58416 — **Prep Batch: 58465**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/25/23 11:03	07/25/23 13:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/25/23 11:03	07/25/23 13:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/25/23 11:03	07/25/23 13:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/25/23 11:03	07/25/23 13:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/25/23 11:03	07/25/23 13:12	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/25/23 11:03	07/25/23 13:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*07/25/23 11:03*	*07/25/23 13:12*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*07/25/23 11:03*	*07/25/23 13:12*	*1*

Lab Sample ID: LCS 880-58465/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58416 — **Prep Batch: 58465**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1076		mg/Kg		108	70 - 130
Toluene	0.100	0.1087		mg/Kg		109	70 - 130
Ethylbenzene	0.100	0.09767		mg/Kg		98	70 - 130
m-Xylene & p-Xylene	0.200	0.1853		mg/Kg		93	70 - 130
o-Xylene	0.100	0.09272		mg/Kg		93	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-58465/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58416 — **Prep Batch: 58465**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1009		mg/Kg		101	70 - 130	6	35
Toluene	0.100	0.1030		mg/Kg		103	70 - 130	5	35
Ethylbenzene	0.100	0.09183		mg/Kg		92	70 - 130	6	35
m-Xylene & p-Xylene	0.200	0.1736		mg/Kg		87	70 - 130	7	35
o-Xylene	0.100	0.08555		mg/Kg		86	70 - 130	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-4986-1 MS — **Client Sample ID: TP1-1FT**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58416 — **Prep Batch: 58465**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.0992	0.08916		mg/Kg		90	70 - 130
Toluene	<0.00199	U	0.0992	0.09439		mg/Kg		95	70 - 130

QC Sample Results

Client: GHD Services Inc. Job ID: 890-4986-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

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

Lab Sample ID: 890-4986-1 MS **Client Sample ID: TP1-1FT**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58416 **Prep Batch: 58465**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.0992	0.08636		mg/Kg		87	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.198	0.1660		mg/Kg		84	70 - 130
o-Xylene	<0.00199	U	0.0992	0.08230		mg/Kg		83	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-4986-1 MSD **Client Sample ID: TP1-1FT**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58416 **Prep Batch: 58465**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0990	0.1231		mg/Kg		124	70 - 130	32	35
Toluene	<0.00199	U	0.0990	0.1184		mg/Kg		120	70 - 130	23	35
Ethylbenzene	<0.00199	U	0.0990	0.1037		mg/Kg		105	70 - 130	18	35
m-Xylene & p-Xylene	<0.00398	U	0.198	0.1942		mg/Kg		98	70 - 130	16	35
o-Xylene	<0.00199	U	0.0990	0.09638		mg/Kg		97	70 - 130	16	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

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

Lab Sample ID: MB 880-58493/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58515 **Prep Batch: 58493**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/25/23 15:29	07/26/23 09:29	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/25/23 15:29	07/26/23 09:29	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/25/23 15:29	07/26/23 09:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*07/25/23 15:29*	*07/26/23 09:29*	*1*
o-Terphenyl	*85*		*70 - 130*	*07/25/23 15:29*	*07/26/23 09:29*	*1*

Lab Sample ID: LCS 880-58493/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58515 **Prep Batch: 58493**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	774.6		mg/Kg		77	70 - 130
Diesel Range Organics (Over C10-C28)	1000	993.7		mg/Kg		99	70 - 130

QC Sample Results

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-4986-1
SDG: 12618492

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

Lab Sample ID: LCS 880-58493/2-A
Matrix: Solid
Analysis Batch: 58515

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58493

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	95		70 - 130

Lab Sample ID: LCSD 880-58493/3-A
Matrix: Solid
Analysis Batch: 58515

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58493

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	758.7		mg/Kg		76	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	929.8		mg/Kg		93	70 - 130	7	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	88		70 - 130

Lab Sample ID: 890-4986-1 MS
Matrix: Solid
Analysis Batch: 58515

Client Sample ID: TP1-1FT
Prep Type: Total/NA
Prep Batch: 58493

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	1010	788.2		mg/Kg		75	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	1010	901.2		mg/Kg		86	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	84		70 - 130

Lab Sample ID: 890-4986-1 MSD
Matrix: Solid
Analysis Batch: 58515

Client Sample ID: TP1-1FT
Prep Type: Total/NA
Prep Batch: 58493

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	1010	805.6		mg/Kg		77	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U	1010	926.7		mg/Kg		89	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	93		70 - 130
o-Terphenyl	86		70 - 130

QC Sample Results

Client: GHD Services Inc. Job ID: 890-4986-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-58447/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 58484

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/25/23 16:48	1

Lab Sample ID: LCS 880-58447/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 58484

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	239.7		mg/Kg		96	90 - 110		

Lab Sample ID: LCSD 880-58447/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 58484

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	240.7		mg/Kg		96	90 - 110	0	20

Lab Sample ID: 890-4986-1 MS **Client Sample ID: TP1-1FT**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 58484

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	4170	F1	1260	5004	F1	mg/Kg		66	90 - 110		

Lab Sample ID: 890-4986-1 MSD **Client Sample ID: TP1-1FT**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 58484

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	4170	F1	1260	4991	F1	mg/Kg		65	90 - 110	0	20

QC Association Summary

Client: GHD Services Inc. Job ID: 890-4986-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

GC VOA

Analysis Batch: 58416

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4986-1	TP1-1FT	Total/NA	Solid	8021B	58465
890-4986-2	TP1-10FT	Total/NA	Solid	8021B	58465
890-4986-3	TP2-1FT	Total/NA	Solid	8021B	58465
890-4986-4	TP2-4FT	Total/NA	Solid	8021B	58465
890-4986-5	TP3-1FT	Total/NA	Solid	8021B	58465
890-4986-6	TP3-4FT	Total/NA	Solid	8021B	58465
890-4986-7	TP6-1FT	Total/NA	Solid	8021B	58465
890-4986-8	TP6-4FT	Total/NA	Solid	8021B	58465
MB 880-58465/5-A	Method Blank	Total/NA	Solid	8021B	58465
LCS 880-58465/1-A	Lab Control Sample	Total/NA	Solid	8021B	58465
LCSD 880-58465/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	58465
890-4986-1 MS	TP1-1FT	Total/NA	Solid	8021B	58465
890-4986-1 MSD	TP1-1FT	Total/NA	Solid	8021B	58465

Prep Batch: 58465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4986-1	TP1-1FT	Total/NA	Solid	5035	
890-4986-2	TP1-10FT	Total/NA	Solid	5035	
890-4986-3	TP2-1FT	Total/NA	Solid	5035	
890-4986-4	TP2-4FT	Total/NA	Solid	5035	
890-4986-5	TP3-1FT	Total/NA	Solid	5035	
890-4986-6	TP3-4FT	Total/NA	Solid	5035	
890-4986-7	TP6-1FT	Total/NA	Solid	5035	
890-4986-8	TP6-4FT	Total/NA	Solid	5035	
MB 880-58465/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-58465/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-58465/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4986-1 MS	TP1-1FT	Total/NA	Solid	5035	
890-4986-1 MSD	TP1-1FT	Total/NA	Solid	5035	

Analysis Batch: 58525

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4986-1	TP1-1FT	Total/NA	Solid	Total BTEX	
890-4986-2	TP1-10FT	Total/NA	Solid	Total BTEX	
890-4986-3	TP2-1FT	Total/NA	Solid	Total BTEX	
890-4986-4	TP2-4FT	Total/NA	Solid	Total BTEX	
890-4986-5	TP3-1FT	Total/NA	Solid	Total BTEX	
890-4986-6	TP3-4FT	Total/NA	Solid	Total BTEX	
890-4986-7	TP6-1FT	Total/NA	Solid	Total BTEX	
890-4986-8	TP6-4FT	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 58493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4986-1	TP1-1FT	Total/NA	Solid	8015NM Prep	
890-4986-2	TP1-10FT	Total/NA	Solid	8015NM Prep	
890-4986-3	TP2-1FT	Total/NA	Solid	8015NM Prep	
890-4986-4	TP2-4FT	Total/NA	Solid	8015NM Prep	
890-4986-5	TP3-1FT	Total/NA	Solid	8015NM Prep	
890-4986-6	TP3-4FT	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: GHD Services Inc. Job ID: 890-4986-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

GC Semi VOA (Continued)

Prep Batch: 58493 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4986-7	TP6-1FT	Total/NA	Solid	8015NM Prep	
890-4986-8	TP6-4FT	Total/NA	Solid	8015NM Prep	
MB 880-58493/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-58493/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-58493/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4986-1 MS	TP1-1FT	Total/NA	Solid	8015NM Prep	
890-4986-1 MSD	TP1-1FT	Total/NA	Solid	8015NM Prep	

Analysis Batch: 58515

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4986-1	TP1-1FT	Total/NA	Solid	8015B NM	58493
890-4986-2	TP1-10FT	Total/NA	Solid	8015B NM	58493
890-4986-3	TP2-1FT	Total/NA	Solid	8015B NM	58493
890-4986-4	TP2-4FT	Total/NA	Solid	8015B NM	58493
890-4986-5	TP3-1FT	Total/NA	Solid	8015B NM	58493
890-4986-6	TP3-4FT	Total/NA	Solid	8015B NM	58493
890-4986-7	TP6-1FT	Total/NA	Solid	8015B NM	58493
890-4986-8	TP6-4FT	Total/NA	Solid	8015B NM	58493
MB 880-58493/1-A	Method Blank	Total/NA	Solid	8015B NM	58493
LCS 880-58493/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	58493
LCSD 880-58493/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	58493
890-4986-1 MS	TP1-1FT	Total/NA	Solid	8015B NM	58493
890-4986-1 MSD	TP1-1FT	Total/NA	Solid	8015B NM	58493

Analysis Batch: 58629

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4986-1	TP1-1FT	Total/NA	Solid	8015 NM	
890-4986-2	TP1-10FT	Total/NA	Solid	8015 NM	
890-4986-3	TP2-1FT	Total/NA	Solid	8015 NM	
890-4986-4	TP2-4FT	Total/NA	Solid	8015 NM	
890-4986-5	TP3-1FT	Total/NA	Solid	8015 NM	
890-4986-6	TP3-4FT	Total/NA	Solid	8015 NM	
890-4986-7	TP6-1FT	Total/NA	Solid	8015 NM	
890-4986-8	TP6-4FT	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 58447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4986-1	TP1-1FT	Soluble	Solid	DI Leach	
890-4986-2	TP1-10FT	Soluble	Solid	DI Leach	
890-4986-3	TP2-1FT	Soluble	Solid	DI Leach	
890-4986-4	TP2-4FT	Soluble	Solid	DI Leach	
890-4986-5	TP3-1FT	Soluble	Solid	DI Leach	
890-4986-6	TP3-4FT	Soluble	Solid	DI Leach	
890-4986-7	TP6-1FT	Soluble	Solid	DI Leach	
890-4986-8	TP6-4FT	Soluble	Solid	DI Leach	
MB 880-58447/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-58447/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-58447/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4986-1 MS	TP1-1FT	Soluble	Solid	DI Leach	

QC Association Summary

Client: GHD Services Inc. Job ID: 890-4986-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

HPLC/IC (Continued)

Leach Batch: 58447 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4986-1 MSD	TP1-1FT	Soluble	Solid	DI Leach	

Analysis Batch: 58484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4986-1	TP1-1FT	Soluble	Solid	300.0	58447
890-4986-2	TP1-10FT	Soluble	Solid	300.0	58447
890-4986-3	TP2-1FT	Soluble	Solid	300.0	58447
890-4986-4	TP2-4FT	Soluble	Solid	300.0	58447
890-4986-5	TP3-1FT	Soluble	Solid	300.0	58447
890-4986-6	TP3-4FT	Soluble	Solid	300.0	58447
890-4986-7	TP6-1FT	Soluble	Solid	300.0	58447
890-4986-8	TP6-4FT	Soluble	Solid	300.0	58447
MB 880-58447/1-A	Method Blank	Soluble	Solid	300.0	58447
LCS 880-58447/2-A	Lab Control Sample	Soluble	Solid	300.0	58447
LCSD 880-58447/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	58447
890-4986-1 MS	TP1-1FT	Soluble	Solid	300.0	58447
890-4986-1 MSD	TP1-1FT	Soluble	Solid	300.0	58447

Lab Chronicle

Client: GHD Services Inc. Job ID: 890-4986-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: TP1-1FT — Lab Sample ID: 890-4986-1

Date Collected: 07/24/23 10:00 **Matrix: Solid**
Date Received: 07/24/23 14:24

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	58465	07/25/23 11:03	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58416	07/25/23 13:34	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58525	07/26/23 09:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			58629	07/27/23 08:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	58493	07/25/23 15:32	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58515	07/26/23 16:20	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	58447	07/25/23 09:51	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	58484	07/25/23 18:32	CH	EET MID

Client Sample ID: TP1-10FT — Lab Sample ID: 890-4986-2

Date Collected: 07/24/23 10:30 **Matrix: Solid**
Date Received: 07/24/23 14:24

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	58465	07/25/23 11:03	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58416	07/25/23 13:55	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58525	07/26/23 09:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			58629	07/27/23 08:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	58493	07/25/23 15:32	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58515	07/26/23 19:20	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	58447	07/25/23 09:51	KS	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	58484	07/25/23 18:50	CH	EET MID

Client Sample ID: TP2-1FT — Lab Sample ID: 890-4986-3

Date Collected: 07/24/23 10:45 **Matrix: Solid**
Date Received: 07/24/23 14:24

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	58465	07/25/23 11:03	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58416	07/25/23 14:16	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58525	07/26/23 09:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			58629	07/27/23 08:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	58493	07/25/23 15:32	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58515	07/26/23 19:41	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	58447	07/25/23 09:51	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	58484	07/25/23 19:01	CH	EET MID

Client Sample ID: TP2-4FT — Lab Sample ID: 890-4986-4

Date Collected: 07/24/23 11:00 **Matrix: Solid**
Date Received: 07/24/23 14:24

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	58465	07/25/23 11:03	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58416	07/25/23 14:36	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58525	07/26/23 09:30	SM	EET MID

Lab Chronicle

Client: GHD Services Inc. Job ID: 890-4986-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: TP2-4FT — Lab Sample ID: 890-4986-4

Date Collected: 07/24/23 11:00 **Matrix: Solid**
Date Received: 07/24/23 14:24

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			58629	07/27/23 08:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.10 g	10 mL	58493	07/25/23 15:32	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58515	07/26/23 20:02	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	58447	07/25/23 09:51	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	58484	07/25/23 19:19	CH	EET MID

Client Sample ID: TP3-1FT — Lab Sample ID: 890-4986-5

Date Collected: 07/24/23 11:15 **Matrix: Solid**
Date Received: 07/24/23 14:24

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	58465	07/25/23 11:03	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58416	07/25/23 14:57	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58525	07/26/23 09:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			58629	07/27/23 08:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	58493	07/25/23 15:32	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58515	07/26/23 20:23	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	58447	07/25/23 09:51	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	58484	07/25/23 19:25	CH	EET MID

Client Sample ID: TP3-4FT — Lab Sample ID: 890-4986-6

Date Collected: 07/24/23 11:30 **Matrix: Solid**
Date Received: 07/24/23 14:24

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	58465	07/25/23 11:03	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58416	07/25/23 15:18	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58525	07/26/23 09:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			58629	07/27/23 08:32	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	58493	07/25/23 15:32	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58515	07/26/23 20:44	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	58447	07/25/23 09:51	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	58484	07/25/23 19:31	CH	EET MID

Client Sample ID: TP6-1FT — Lab Sample ID: 890-4986-7

Date Collected: 07/24/23 11:45 **Matrix: Solid**
Date Received: 07/24/23 14:24

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	58465	07/25/23 11:03	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58416	07/25/23 15:39	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58525	07/26/23 09:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			58629	07/27/23 08:32	SM	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	58493	07/25/23 15:32	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58515	07/26/23 21:05	SM	EET MID

Lab Chronicle

Client: GHD Services Inc. Job ID: 890-4986-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: TP6-1FT — Lab Sample ID: 890-4986-7

Date Collected: 07/24/23 11:45 **Matrix: Solid**
Date Received: 07/24/23 14:24

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.96 g	50 mL	58447	07/25/23 09:51	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	58484	07/25/23 19:38	CH	EET MID

Client Sample ID: TP6-4FT — Lab Sample ID: 890-4986-8

Date Collected: 07/24/23 12:10 **Matrix: Solid**
Date Received: 07/24/23 14:24

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	58465	07/25/23 11:03	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58416	07/25/23 16:00	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58525	07/26/23 09:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			58629	07/27/23 08:32	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	58493	07/25/23 15:32	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58515	07/27/23 06:48	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	58447	07/25/23 09:51	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	58484	07/25/23 19:44	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 890-4986-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: GHD Services Inc. Job ID: 890-4986-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-4986-1
SDG: 12618492

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4986-1	TP1-1FT	Solid	07/24/23 10:00	07/24/23 14:24	1
890-4986-2	TP1-10FT	Solid	07/24/23 10:30	07/24/23 14:24	10
890-4986-3	TP2-1FT	Solid	07/24/23 10:45	07/24/23 14:24	1
890-4986-4	TP2-4FT	Solid	07/24/23 11:00	07/24/23 14:24	4
890-4986-5	TP3-1FT	Solid	07/24/23 11:15	07/24/23 14:24	1
890-4986-6	TP3-4FT	Solid	07/24/23 11:30	07/24/23 14:24	4
890-4986-7	TP6-1FT	Solid	07/24/23 11:45	07/24/23 14:24	1
890-4986-8	TP6-4FT	Solid	07/24/23 12:10	07/24/23 14:24	4

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Nate Reece	Bill to: (if different)	
Company Name:	GHD	Company Name:	
Address:	6121 E Indian School Rd	Address:	
City, State ZIP:	Albuquerque, NM 87110	City, State ZIP:	
Phone:	(281) 386-7158	Email:	nate.reece@ghd.com

Work Order Comments

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

Project Name:	Delek Matador Produced Water Release	Turn Around	
Project Number:	12618492	☐ Routine ☑ Rush	
Project Location:	32.578378, -103.664057	Due Date: ~0.2	
Sampler's Name:	Tristanna Crapo	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	TWM007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	3.2
Total Containers:		Corrected Temperature:	3.0

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
SO_4: H_2 | NaOH: Na
PO_4: HP
HSO_4: NABIS
$H_2S_2O_3$: $NaSO_3$
Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

ANALYSIS REQUEST

Pres. Code | Parameters: Cl 300, TPH, BTEX

890-4986 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Cl 300	TPH	BTEX	Sample Comments
TP1-1ft	S	7/24/23	1000	1ft	G	1	X	X	X	Please send results to rebecca.pons@ghd.com, Tristanna.Crapo@ghd.com, nate.reece@ghd.com, and J.T.murney@ghd.com
TP1-10ft	S	7/24/23	1030	10ft						
TP2-1ft	S	7/24/23	1045	1ft						
TP2-4ft	S	7/24/23	1100	4ft						
TP3-1ft	S	7/24/23	1115	1ft						
TP3-4ft	S	7/24/23	1130	4ft						
TP5-1ft	S	7/24/23	1145	1ft						
TP6-4ft	S	7/24/23	1210	4ft						

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		7.24.23 1425			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

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Received by OCD: 12/4/2024 10:43:20 AM

Released to Imaging: 3/12/2025 11:29:45 AM

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 890-4986-1
SDG Number: 12618492

Login Number: 4986
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.	N/A	Refer to Job Narrative for details.
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 890-4986-1
SDG Number: 12618492

Login Number: 4986
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/25/23 10:57 AM

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

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ANALYTICAL REPORT

PREPARED FOR

Attn: Nate Reece
GHD Services Inc.
2135 South Loop 250 West
Midland, Texas 79703

Generated 8/2/2023 11:57:41 AM

JOB DESCRIPTION

Delek Matador Produced Water Release
SDG NUMBER 12618492

JOB NUMBER

890-4995-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 3/12/2025 11:29:43 AM

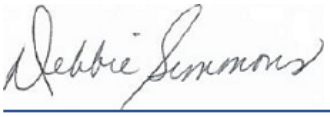
Eurofins Carlsbad

Job Notes

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

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

Authorization



Generated
8/2/2023 11:57:41 AM

Authorized for release by
Debbie Simmons, Project Manager
Debbie.Simmons@et.eurofinsus.com
(832)986-6768

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Laboratory Job ID: 890-4995-1
SDG: 12618492

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Definitions/Glossary

Client: GHD Services Inc. Job ID: 890-4995-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Qualifiers

GC/MS VOA

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

GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Metals

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

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
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: GHD Services Inc. Job ID: 890-4995-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Job ID: 890-4995-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4995-1

Comments
No additional comments.

Receipt
The sample was received on 7/26/2023 9:32 AM. 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 was 2.6º C.

Receipt Exceptions

The following sample was received and analyzed from an unpreserved bulk soil jar: Waste;amd Sample Testing (890-4995-1).

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS Semi VOA
Methods 8270D, 8270E: The laboratory control sample (LCS) for preparation batch 860-115076 and analytical batch 860-115084 recovered outside control limits for the following analyte: Pyridine. Pyridine has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. Batch precision also exceeded control limits for this analyte. These results have been reported and qualified.

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

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

General Chemistry
Method 1010: Due to the nature of the sample matrix, sample Waste;amd Sample Testing (890-4995-1), (860-53914-A-1) and (860-53914-A-1 DU) could not be stirred during the testing which is a modification to the method. For regulatory compliance samples, method modification is not allowed. The results should be considered to be estimated.

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

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

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

Client Sample Results

Client: GHD Services Inc. Job ID: 890-4995-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: Waste;amd Sample Testing
Lab Sample ID: 890-4995-1
Date Collected: 07/25/23 08:30
Matrix: Solid
Date Received: 07/26/23 09:32
Sample Depth: n/a

Method: SW846 8260C - Volatile Organic Compounds by GC/MS - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0500	U	0.0500		mg/L			07/31/23 12:28	50
Carbon tetrachloride	<0.250	U	0.250		mg/L			07/31/23 12:28	50
Chlorobenzene	<0.0500	U	0.0500		mg/L			07/31/23 12:28	50
Chloroform	<0.0500	U	0.0500		mg/L			07/31/23 12:28	50
1,2-Dichloroethane	<0.0500	U	0.0500		mg/L			07/31/23 12:28	50
1,1-Dichloroethene	<0.0500	U	0.0500		mg/L			07/31/23 12:28	50
2-Butanone	<2.50	U	2.50		mg/L			07/31/23 12:28	50
Tetrachloroethene	<0.0500	U	0.0500		mg/L			07/31/23 12:28	50
Trichloroethene	<0.250	U	0.250		mg/L			07/31/23 12:28	50
Vinyl chloride	<0.100	U	0.100		mg/L			07/31/23 12:28	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*63 - 144*		*07/31/23 12:28*	*50*
4-Bromofluorobenzene (Surr)	*98*		*74 - 124*		*07/31/23 12:28*	*50*
Dibromofluoromethane (Surr)	*109*		*75 - 131*		*07/31/23 12:28*	*50*
Toluene-d8 (Surr)	*97*		*80 - 120*		*07/31/23 12:28*	*50*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.125	U	0.125		mg/L		08/01/23 06:29	08/01/23 18:04	5
2,4,5-Trichlorophenol	<0.125	U	0.125		mg/L		08/01/23 06:29	08/01/23 18:04	5
2,4,6-Trichlorophenol	<0.125	U	0.125		mg/L		08/01/23 06:29	08/01/23 18:04	5
2,4-Dinitrotoluene	<0.125	U	0.125		mg/L		08/01/23 06:29	08/01/23 18:04	5
2-Methylphenol	<0.125	U	0.125		mg/L		08/01/23 06:29	08/01/23 18:04	5
Hexachlorobenzene	<0.125	U	0.125		mg/L		08/01/23 06:29	08/01/23 18:04	5
Hexachlorobutadiene	<0.125	U	0.125		mg/L		08/01/23 06:29	08/01/23 18:04	5
Hexachloroethane	<0.125	U	0.125		mg/L		08/01/23 06:29	08/01/23 18:04	5
Nitrobenzene	<0.125	U	0.125		mg/L		08/01/23 06:29	08/01/23 18:04	5
Pentachlorophenol	<0.250	U	0.250		mg/L		08/01/23 06:29	08/01/23 18:04	5
Pyridine	<0.250	U *- *1	0.250		mg/L		08/01/23 06:29	08/01/23 18:04	5
3 & 4 Methylphenol	<0.250	U	0.250		mg/L		08/01/23 06:29	08/01/23 18:04	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*82*		*31 - 132*	*08/01/23 06:29*	*08/01/23 18:04*	*5*
2-Fluorobiphenyl (Surr)	*88*		*29 - 112*	*08/01/23 06:29*	*08/01/23 18:04*	*5*
2-Fluorophenol (Surr)	*54*		*21 - 114*	*08/01/23 06:29*	*08/01/23 18:04*	*5*
Nitrobenzene-d5 (Surr)	*87*		*26 - 110*	*08/01/23 06:29*	*08/01/23 18:04*	*5*
p-Terphenyl-d14 (Surr)	*88*		*20 - 141*	*08/01/23 06:29*	*08/01/23 18:04*	*5*
Phenol-d5 (Surr)	*52*		*16 - 117*	*08/01/23 06:29*	*08/01/23 18:04*	*5*

Method: SW846 6010D - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0500	U	0.0500		mg/L		07/28/23 12:30	07/28/23 19:49	1
Barium	**0.835**		0.0500		mg/L		07/28/23 12:30	07/28/23 19:49	1
Cadmium	<0.0250	U	0.0250		mg/L		07/28/23 12:30	07/28/23 19:49	1
Chromium	<0.0500	U	0.0500		mg/L		07/28/23 12:30	07/28/23 19:49	1
Lead	<0.0500	U	0.0500		mg/L		07/28/23 12:30	07/28/23 19:49	1
Selenium	<0.150	U	0.150		mg/L		07/28/23 12:30	07/28/23 19:49	1
Silver	<0.100	U	0.100		mg/L		07/28/23 12:30	07/28/23 19:49	1

Client Sample Results

Client: GHD Services Inc. Job ID: 890-4995-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: Waste;amd Sample Testing Lab Sample ID: 890-4995-1

Date Collected: 07/25/23 08:30 **Matrix: Solid**
Date Received: 07/26/23 09:32
Sample Depth: n/a

Method: SW846 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200	U	0.000200		mg/L		07/28/23 12:09	07/28/23 19:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint (SW846 1010)	**>180**		1.00		Degrees F			07/27/23 18:19	1
Cyanide, Reactive (SW846 9012)	<0.0250	U	0.0250		mg/Kg		07/28/23 15:09	07/28/23 18:03	1
Sulfide, Reactive (SW846 9034)	<6.25	U	6.25		mg/Kg		07/28/23 15:09	07/30/23 13:57	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 9045D)	**8.5**	**HF**			SU			07/27/23 19:41	1
Temperature (SW846 9045D)	**20.1**	**HF**			Deg. C			07/27/23 19:41	1
Corrosivity (SW846 9045D)	**8.5**	**HF**			SU			07/27/23 19:41	1

Surrogate Summary

Client: GHD Services Inc. Job ID: 890-4995-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(63-144)	(74-124)	(75-131)	(80-120)
LCS 860-114857/3	Lab Control Sample	106	104	91	96
LCSD 860-114857/4	Lab Control Sample Dup	99	100	100	94
MB 860-114857/11	Method Blank	123	105	106	100

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid **Prep Type: TCLP**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(63-144)	(74-124)	(75-131)	(80-120)
890-4995-1	Waste;amd Sample Testing	110	98	109	97
890-4995-1 MS	Waste;amd Sample Testing	109	103	105	97
LB 860-114679/1-A	Method Blank	117	103	95	99

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	TPHd14	PHL
Lab Sample ID	Client Sample ID	(31-132)	(29-112)	(21-114)	(26-110)	(20-141)	(16-117)
LCS 860-115076/2-A	Lab Control Sample	84	71	30	59	105	22
LCSD 860-115076/3-A	Lab Control Sample Dup	87	72	30	63	110	21
MB 860-115076/1-A	Method Blank	74	98	44	85	113	27

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)
PHL = Phenol-d5 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: TCLP**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	TPHd14	PHL
Lab Sample ID	Client Sample ID	(31-132)	(29-112)	(21-114)	(26-110)	(20-141)	(16-117)
890-4995-1	Waste;amd Sample Testing	82	88	54	87	88	52
LB 860-114508/1-G	Method Blank	95	81	73	90	90	66

Surrogate Summary

Client: GHD Services Inc. Job ID: 890-4995-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Matrix: Solid **Prep Type: TCLP**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TBP (31-132)	FBP (29-112)	2FP (21-114)	NBZ (26-110)	TPHd14 (20-141)	PHL (16-117)		
LB 860-114697/1-H	Method Blank	69	95	68	83	103	52		

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)
PHL = Phenol-d5 (Surr)

QC Sample Results

Client: GHD Services Inc. Job ID: 890-4995-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 860-114857/11 **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 114857

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00100	U	0.00100		mg/L			07/31/23 11:50	1
Carbon tetrachloride	<0.00500	U	0.00500		mg/L			07/31/23 11:50	1
Chlorobenzene	<0.00100	U	0.00100		mg/L			07/31/23 11:50	1
Chloroform	<0.00100	U	0.00100		mg/L			07/31/23 11:50	1
1,2-Dichloroethane	<0.00100	U	0.00100		mg/L			07/31/23 11:50	1
1,1-Dichloroethene	<0.00100	U	0.00100		mg/L			07/31/23 11:50	1
2-Butanone	<0.0500	U	0.0500		mg/L			07/31/23 11:50	1
Tetrachloroethene	<0.00100	U	0.00100		mg/L			07/31/23 11:50	1
Trichloroethene	<0.00500	U	0.00500		mg/L			07/31/23 11:50	1
Vinyl chloride	<0.00200	U	0.00200		mg/L			07/31/23 11:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*123*		*63 - 144*		*07/31/23 11:50*	*1*
4-Bromofluorobenzene (Surr)	*105*		*74 - 124*		*07/31/23 11:50*	*1*
Dibromofluoromethane (Surr)	*106*		*75 - 131*		*07/31/23 11:50*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*07/31/23 11:50*	*1*

Lab Sample ID: LCS 860-114857/3 **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 114857

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.0500	0.04874		mg/L		97	75 - 125
Carbon tetrachloride	0.0500	0.05570		mg/L		111	70 - 130
Chlorobenzene	0.0500	0.05211		mg/L		104	65 - 135
Chloroform	0.0500	0.05162		mg/L		103	70 - 121
1,2-Dichloroethane	0.0500	0.05600		mg/L		112	72 - 130
1,1-Dichloroethene	0.0500	0.04932		mg/L		99	50 - 150
2-Butanone	0.250	0.2302		mg/L		92	60 - 140
Tetrachloroethene	0.0500	0.05745		mg/L		115	71 - 125
Trichloroethene	0.0500	0.05393		mg/L		108	75 - 135
Vinyl chloride	0.0500	0.05371		mg/L		107	60 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*63 - 144*
4-Bromofluorobenzene (Surr)	*104*		*74 - 124*
Dibromofluoromethane (Surr)	*91*		*75 - 131*
Toluene-d8 (Surr)	*96*		*80 - 120*

Lab Sample ID: LCSD 860-114857/4 **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 114857

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.0500	0.04702		mg/L		94	75 - 125	4	25
Carbon tetrachloride	0.0500	0.05378		mg/L		108	70 - 130	4	25
Chlorobenzene	0.0500	0.04968		mg/L		99	65 - 135	5	25
Chloroform	0.0500	0.05163		mg/L		103	70 - 121	0	25

QC Sample Results

Client: GHD Services Inc. Job ID: 890-4995-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 860-114857/4 **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 114857

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichloroethane			0.0500	0.04916		mg/L		98	72 - 130	13	25
1,1-Dichloroethene			0.0500	0.04752		mg/L		95	50 - 150	4	25
2-Butanone			0.250	0.2151		mg/L		86	60 - 140	7	25
Tetrachloroethene			0.0500	0.05364		mg/L		107	71 - 125	7	25
Trichloroethene			0.0500	0.05374		mg/L		107	75 - 135	0	25
Vinyl chloride			0.0500	0.05008		mg/L		100	60 - 140	7	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*63 - 144*
4-Bromofluorobenzene (Surr)	*100*		*74 - 124*
Dibromofluoromethane (Surr)	*100*		*75 - 131*
Toluene-d8 (Surr)	*94*		*80 - 120*

Lab Sample ID: LB 860-114679/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: TCLP**
Analysis Batch: 114857

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00500	U	0.00500		mg/L			07/31/23 11:31	5
Carbon tetrachloride	<0.0250	U	0.0250		mg/L			07/31/23 11:31	5
Chlorobenzene	<0.00500	U	0.00500		mg/L			07/31/23 11:31	5
Chloroform	<0.00500	U	0.00500		mg/L			07/31/23 11:31	5
1,2-Dichloroethane	<0.00500	U	0.00500		mg/L			07/31/23 11:31	5
1,1-Dichloroethene	<0.00500	U	0.00500		mg/L			07/31/23 11:31	5
2-Butanone	<0.250	U	0.250		mg/L			07/31/23 11:31	5
Tetrachloroethene	<0.00500	U	0.00500		mg/L			07/31/23 11:31	5
Trichloroethene	<0.0250	U	0.0250		mg/L			07/31/23 11:31	5
Vinyl chloride	<0.0100	U	0.0100		mg/L			07/31/23 11:31	5

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*117*		*63 - 144*		*07/31/23 11:31*	*5*
4-Bromofluorobenzene (Surr)	*103*		*74 - 124*		*07/31/23 11:31*	*5*
Dibromofluoromethane (Surr)	*95*		*75 - 131*		*07/31/23 11:31*	*5*
Toluene-d8 (Surr)	*99*		*80 - 120*		*07/31/23 11:31*	*5*

Lab Sample ID: 890-4995-1 MS **Client Sample ID: Waste;amd Sample Testing**
Matrix: Solid **Prep Type: TCLP**
Analysis Batch: 114857

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.0500	U	2.50	2.706		mg/L		108	66 - 142
Carbon tetrachloride	<0.250	U	2.50	2.445		mg/L		98	62 - 125
Chlorobenzene	<0.0500	U	2.50	2.591		mg/L		104	60 - 133
Chloroform	<0.0500	U	2.50	2.786		mg/L		111	70 - 130
1,2-Dichloroethane	<0.0500	U	2.50	2.893		mg/L		116	68 - 127
1,1-Dichloroethene	<0.0500	U	2.50	2.503		mg/L		100	59 - 172
2-Butanone	<2.50	U	12.5	11.22		mg/L		90	60 - 140
Tetrachloroethene	<0.0500	U	2.50	2.931		mg/L		117	71 - 125

QC Sample Results

Client: GHD Services Inc. Job ID: 890-4995-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 890-4995-1 MS **Client Sample ID: Waste;amd Sample Testing**
Matrix: Solid **Prep Type: TCLP**
Analysis Batch: 114857

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Trichloroethene	<0.250	U	2.50	3.031		mg/L		121	62 - 137
Vinyl chloride	<0.100	U	2.50	2.705		mg/L		108	60 - 140

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*109*		*63 - 144*
4-Bromofluorobenzene (Surr)	*103*		*74 - 124*
Dibromofluoromethane (Surr)	*105*		*75 - 131*
Toluene-d8 (Surr)	*97*		*80 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 860-115076/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 115084 **Prep Batch: 115076**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.00500	U	0.00500		mg/L		08/01/23 06:29	08/01/23 15:12	1
2,4,5-Trichlorophenol	<0.00500	U	0.00500		mg/L		08/01/23 06:29	08/01/23 15:12	1
2,4,6-Trichlorophenol	<0.00500	U	0.00500		mg/L		08/01/23 06:29	08/01/23 15:12	1
2,4-Dinitrotoluene	<0.00500	U	0.00500		mg/L		08/01/23 06:29	08/01/23 15:12	1
2-Methylphenol	<0.00500	U	0.00500		mg/L		08/01/23 06:29	08/01/23 15:12	1
Hexachlorobenzene	<0.00500	U	0.00500		mg/L		08/01/23 06:29	08/01/23 15:12	1
Hexachlorobutadiene	<0.00500	U	0.00500		mg/L		08/01/23 06:29	08/01/23 15:12	1
Hexachloroethane	<0.00500	U	0.00500		mg/L		08/01/23 06:29	08/01/23 15:12	1
Nitrobenzene	<0.00500	U	0.00500		mg/L		08/01/23 06:29	08/01/23 15:12	1
Pentachlorophenol	<0.0100	U	0.0100		mg/L		08/01/23 06:29	08/01/23 15:12	1
Pyridine	<0.0100	U	0.0100		mg/L		08/01/23 06:29	08/01/23 15:12	1
3 & 4 Methylphenol	<0.0100	U	0.0100		mg/L		08/01/23 06:29	08/01/23 15:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*74*		*31 - 132*	*08/01/23 06:29*	*08/01/23 15:12*	*1*
2-Fluorobiphenyl (Surr)	*98*		*29 - 112*	*08/01/23 06:29*	*08/01/23 15:12*	*1*
2-Fluorophenol (Surr)	*44*		*21 - 114*	*08/01/23 06:29*	*08/01/23 15:12*	*1*
Nitrobenzene-d5 (Surr)	*85*		*26 - 110*	*08/01/23 06:29*	*08/01/23 15:12*	*1*
p-Terphenyl-d14 (Surr)	*113*		*20 - 141*	*08/01/23 06:29*	*08/01/23 15:12*	*1*
Phenol-d5 (Surr)	*27*		*16 - 117*	*08/01/23 06:29*	*08/01/23 15:12*	*1*

Lab Sample ID: LCS 860-115076/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 115084 **Prep Batch: 115076**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dichlorobenzene	0.0400	0.02035		mg/L		51	37 - 111
2,4,5-Trichlorophenol	0.0400	0.03249		mg/L		81	39 - 125
2,4,6-Trichlorophenol	0.0400	0.03067		mg/L		77	42 - 125
2,4-Dinitrotoluene	0.0400	0.03643		mg/L		91	41 - 128
2-Methylphenol	0.0400	0.01957		mg/L		49	36 - 105
Hexachlorobenzene	0.0400	0.03605		mg/L		90	39 - 128

QC Sample Results

Client: GHD Services Inc. Job ID: 890-4995-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 860-115076/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 115084 **Prep Batch: 115076**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexachlorobutadiene	0.0400	0.02192		mg/L		55	31 - 120
Hexachloroethane	0.0400	0.01807		mg/L		45	37 - 109
Nitrobenzene	0.0400	0.02545		mg/L		64	37 - 114
Pentachlorophenol	0.0400	0.02551		mg/L		64	10 - 137
Pyridine	0.0400	0.0006063	J *-	mg/L		2	5 - 130
3 & 4 Methylphenol	0.0400	0.01815		mg/L		45	35 - 116

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*84*		*31 - 132*
2-Fluorobiphenyl (Surr)	*71*		*29 - 112*
2-Fluorophenol (Surr)	*30*		*21 - 114*
Nitrobenzene-d5 (Surr)	*59*		*26 - 110*
p-Terphenyl-d14 (Surr)	*105*		*20 - 141*
Phenol-d5 (Surr)	*22*		*16 - 117*

Lab Sample ID: LCSD 860-115076/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 115084 **Prep Batch: 115076**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dichlorobenzene	0.0400	0.02201		mg/L		55	37 - 111	8	30
2,4,5-Trichlorophenol	0.0400	0.03109		mg/L		78	39 - 125	4	30
2,4,6-Trichlorophenol	0.0400	0.03052		mg/L		76	42 - 125	0	30
2,4-Dinitrotoluene	0.0400	0.03718		mg/L		93	41 - 128	2	30
2-Methylphenol	0.0400	0.01963		mg/L		49	36 - 105	0	30
Hexachlorobenzene	0.0400	0.03697		mg/L		92	39 - 128	3	30
Hexachlorobutadiene	0.0400	0.02365		mg/L		59	31 - 120	8	30
Hexachloroethane	0.0400	0.01969		mg/L		49	37 - 109	9	30
Nitrobenzene	0.0400	0.02694		mg/L		67	37 - 114	6	30
Pentachlorophenol	0.0400	0.02682		mg/L		67	10 - 137	5	40
Pyridine	0.0400	0.008252	J *1	mg/L		21	5 - 130	173	50
3 & 4 Methylphenol	0.0400	0.01786		mg/L		45	35 - 116	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*87*		*31 - 132*
2-Fluorobiphenyl (Surr)	*72*		*29 - 112*
2-Fluorophenol (Surr)	*30*		*21 - 114*
Nitrobenzene-d5 (Surr)	*63*		*26 - 110*
p-Terphenyl-d14 (Surr)	*110*		*20 - 141*
Phenol-d5 (Surr)	*21*		*16 - 117*

Lab Sample ID: LB 860-114508/1-G **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: TCLP**
Analysis Batch: 114778 **Prep Batch: 114769**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.0250	U	0.0250		mg/L		07/29/23 10:15	07/29/23 19:20	1
2,4,5-Trichlorophenol	<0.0250	U	0.0250		mg/L		07/29/23 10:15	07/29/23 19:20	1

QC Sample Results

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-4995-1
SDG: 12618492

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LB 860-114508/1-G
Matrix: Solid
Analysis Batch: 114778

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 114769

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	<0.0250	U	0.0250		mg/L		07/29/23 10:15	07/29/23 19:20	1
2,4-Dinitrotoluene	<0.0250	U	0.0250		mg/L		07/29/23 10:15	07/29/23 19:20	1
2-Methylphenol	<0.0250	U	0.0250		mg/L		07/29/23 10:15	07/29/23 19:20	1
Hexachlorobenzene	<0.0250	U	0.0250		mg/L		07/29/23 10:15	07/29/23 19:20	1
Hexachlorobutadiene	<0.0250	U	0.0250		mg/L		07/29/23 10:15	07/29/23 19:20	1
Hexachloroethane	<0.0250	U	0.0250		mg/L		07/29/23 10:15	07/29/23 19:20	1
Nitrobenzene	<0.0250	U	0.0250		mg/L		07/29/23 10:15	07/29/23 19:20	1
Pentachlorophenol	<0.0500	U	0.0500		mg/L		07/29/23 10:15	07/29/23 19:20	1
Pyridine	<0.0500	U	0.0500		mg/L		07/29/23 10:15	07/29/23 19:20	1
3 & 4 Methylphenol	<0.0500	U	0.0500		mg/L		07/29/23 10:15	07/29/23 19:20	1

Surrogate	*%Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*95*		*31 - 132*	*07/29/23 10:15*	*07/29/23 19:20*	*1*
2-Fluorobiphenyl (Surr)	*81*		*29 - 112*	*07/29/23 10:15*	*07/29/23 19:20*	*1*
2-Fluorophenol (Surr)	*73*		*21 - 114*	*07/29/23 10:15*	*07/29/23 19:20*	*1*
Nitrobenzene-d5 (Surr)	*90*		*26 - 110*	*07/29/23 10:15*	*07/29/23 19:20*	*1*
p-Terphenyl-d14 (Surr)	*90*		*20 - 141*	*07/29/23 10:15*	*07/29/23 19:20*	*1*
Phenol-d5 (Surr)	*66*		*16 - 117*	*07/29/23 10:15*	*07/29/23 19:20*	*1*

Lab Sample ID: LB 860-114697/1-H
Matrix: Solid
Analysis Batch: 115084

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 115076

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.0250	U	0.0250		mg/L		08/01/23 06:29	08/01/23 15:37	1
2,4,5-Trichlorophenol	<0.0250	U	0.0250		mg/L		08/01/23 06:29	08/01/23 15:37	1
2,4,6-Trichlorophenol	<0.0250	U	0.0250		mg/L		08/01/23 06:29	08/01/23 15:37	1
2,4-Dinitrotoluene	<0.0250	U	0.0250		mg/L		08/01/23 06:29	08/01/23 15:37	1
2-Methylphenol	<0.0250	U	0.0250		mg/L		08/01/23 06:29	08/01/23 15:37	1
Hexachlorobenzene	<0.0250	U	0.0250		mg/L		08/01/23 06:29	08/01/23 15:37	1
Hexachlorobutadiene	<0.0250	U	0.0250		mg/L		08/01/23 06:29	08/01/23 15:37	1
Hexachloroethane	<0.0250	U	0.0250		mg/L		08/01/23 06:29	08/01/23 15:37	1
Nitrobenzene	<0.0250	U	0.0250		mg/L		08/01/23 06:29	08/01/23 15:37	1
Pentachlorophenol	<0.0500	U	0.0500		mg/L		08/01/23 06:29	08/01/23 15:37	1
Pyridine	<0.0500	U	0.0500		mg/L		08/01/23 06:29	08/01/23 15:37	1
3 & 4 Methylphenol	<0.0500	U	0.0500		mg/L		08/01/23 06:29	08/01/23 15:37	1

Surrogate	*%Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*69*		*31 - 132*	*08/01/23 06:29*	*08/01/23 15:37*	*1*
2-Fluorobiphenyl (Surr)	*95*		*29 - 112*	*08/01/23 06:29*	*08/01/23 15:37*	*1*
2-Fluorophenol (Surr)	*68*		*21 - 114*	*08/01/23 06:29*	*08/01/23 15:37*	*1*
Nitrobenzene-d5 (Surr)	*83*		*26 - 110*	*08/01/23 06:29*	*08/01/23 15:37*	*1*
p-Terphenyl-d14 (Surr)	*103*		*20 - 141*	*08/01/23 06:29*	*08/01/23 15:37*	*1*
Phenol-d5 (Surr)	*52*		*16 - 117*	*08/01/23 06:29*	*08/01/23 15:37*	*1*

QC Sample Results

Client: GHD Services Inc. Job ID: 890-4995-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 860-114645/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 114876 **Prep Batch: 114645**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0100	U	0.0100		mg/L		07/28/23 12:30	07/28/23 18:33	1
Barium	<0.0100	U	0.0100		mg/L		07/28/23 12:30	07/28/23 18:33	1
Cadmium	<0.00500	U	0.00500		mg/L		07/28/23 12:30	07/28/23 18:33	1
Chromium	<0.0100	U	0.0100		mg/L		07/28/23 12:30	07/28/23 18:33	1
Lead	<0.0100	U	0.0100		mg/L		07/28/23 12:30	07/28/23 18:33	1
Selenium	<0.0300	U	0.0300		mg/L		07/28/23 12:30	07/28/23 18:33	1
Silver	<0.0200	U	0.0200		mg/L		07/28/23 12:30	07/28/23 18:33	1

Lab Sample ID: LCS 860-114645/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 114876 **Prep Batch: 114645**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1.00	0.9530		mg/L		95	80 - 120
Barium	1.00	0.9730		mg/L		97	80 - 120
Cadmium	1.00	0.9520		mg/L		95	80 - 120
Chromium	1.00	0.9690		mg/L		97	80 - 120
Lead	1.00	0.9550		mg/L		96	80 - 120
Selenium	1.00	0.9680		mg/L		97	80 - 120
Silver	0.500	0.5000		mg/L		100	80 - 120

Lab Sample ID: LCSD 860-114645/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 114876 **Prep Batch: 114645**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	1.00	0.9530		mg/L		95	80 - 120	0	20
Barium	1.00	0.9710		mg/L		97	80 - 120	0	20
Cadmium	1.00	0.9520		mg/L		95	80 - 120	0	20
Chromium	1.00	0.9700		mg/L		97	80 - 120	0	20
Lead	1.00	0.9550		mg/L		96	80 - 120	0	20
Selenium	1.00	0.9650		mg/L		97	80 - 120	0	20
Silver	0.500	0.4990		mg/L		100	80 - 120	0	20

Lab Sample ID: LB 860-114508/1-E **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: TCLP**
Analysis Batch: 114876 **Prep Batch: 114645**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0500	U	0.0500		mg/L		07/28/23 12:30	07/28/23 18:40	1
Barium	<0.0500	U	0.0500		mg/L		07/28/23 12:30	07/28/23 18:40	1
Cadmium	<0.0250	U	0.0250		mg/L		07/28/23 12:30	07/28/23 18:40	1
Chromium	<0.0500	U	0.0500		mg/L		07/28/23 12:30	07/28/23 18:40	1
Lead	<0.0500	U	0.0500		mg/L		07/28/23 12:30	07/28/23 18:40	1
Selenium	<0.150	U	0.150		mg/L		07/28/23 12:30	07/28/23 18:40	1
Silver	<0.100	U	0.100		mg/L		07/28/23 12:30	07/28/23 18:40	1

QC Sample Results

Client: GHD Services Inc. Job ID: 890-4995-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 860-114642/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 114752 — **Prep Batch: 114642**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200	U	0.000200		mg/L		07/28/23 13:09	07/28/23 19:20	1

Lab Sample ID: LCS 860-114642/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 114752 — **Prep Batch: 114642**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00200	0.001708		mg/L		85	80 - 120

Lab Sample ID: LCSD 860-114642/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 114752 — **Prep Batch: 114642**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.00200	0.001680		mg/L		84	80 - 120	2	20

Lab Sample ID: LB 860-114508/1-D — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 114752 — **Prep Batch: 114642**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200	U	0.000200		mg/L		07/28/23 12:09	07/28/23 19:28	1

Method: 1010 - Ignitability, Pensky-Martens Closed-Cup Method

Lab Sample ID: LCS 860-114524/1 — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 114524

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Flashpoint	126	128.1		Degrees F		102	90 - 110

Method: 9012 - Cyanide, Reactive

Lab Sample ID: MB 860-114692/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 114738 — **Prep Batch: 114692**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Reactive	<0.0250	U	0.0250		mg/Kg		07/28/23 15:08	07/28/23 17:56	1

Lab Sample ID: LCS 860-114692/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 114738 — **Prep Batch: 114692**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Reactive	20.0	2.491		mg/Kg		12	5 - 40

QC Sample Results

Client: GHD Services Inc. Job ID: 890-4995-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Method: 9012 - Cyanide, Reactive (Continued)

Lab Sample ID: LCSD 860-114692/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 114738 **Prep Batch: 114692**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cyanide, Reactive			19.8	2.546		mg/Kg		13	5 - 40	2	20

Method: 9034 - Sulfide, Reactive

Lab Sample ID: MB 860-114690/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 114823 **Prep Batch: 114690**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Reactive	<6.25	U	6.25		mg/Kg		07/28/23 15:08	07/30/23 13:57	1

Lab Sample ID: LCS 860-114690/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 114823 **Prep Batch: 114690**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfide, Reactive			50.0	48.09		mg/Kg		96	30 - 120		

Lab Sample ID: LCSD 860-114690/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 114823 **Prep Batch: 114690**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide, Reactive			49.5	51.58		mg/Kg		104	30 - 120	7	20

QC Association Summary

Client: GHD Services Inc. Job ID: 890-4995-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

GC/MS VOA

Leach Batch: 114679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4995-1	Waste;amd Sample Testing	TCLP	Solid	1311	
LB 860-114679/1-A	Method Blank	TCLP	Solid	1311	
890-4995-1 MS	Waste;amd Sample Testing	TCLP	Solid	1311	

Analysis Batch: 114857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4995-1	Waste;amd Sample Testing	TCLP	Solid	8260C	114679
LB 860-114679/1-A	Method Blank	TCLP	Solid	8260C	114679
MB 860-114857/11	Method Blank	Total/NA	Solid	8260C	
LCS 860-114857/3	Lab Control Sample	Total/NA	Solid	8260C	
LCSD 860-114857/4	Lab Control Sample Dup	Total/NA	Solid	8260C	
890-4995-1 MS	Waste;amd Sample Testing	TCLP	Solid	8260C	114679

GC/MS Semi VOA

Leach Batch: 114508

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4995-1	Waste;amd Sample Testing	TCLP	Solid	1311	
LB 860-114508/1-G	Method Blank	TCLP	Solid	1311	

Leach Batch: 114697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 860-114697/1-H	Method Blank	TCLP	Solid	1311	

Prep Batch: 114769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 860-114508/1-G	Method Blank	TCLP	Solid	3510C	114508

Analysis Batch: 114778

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 860-114508/1-G	Method Blank	TCLP	Solid	8270D	114769

Prep Batch: 115076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4995-1	Waste;amd Sample Testing	TCLP	Solid	3510C	114508
LB 860-114697/1-H	Method Blank	TCLP	Solid	3510C	114697
MB 860-115076/1-A	Method Blank	Total/NA	Solid	3510C	
LCS 860-115076/2-A	Lab Control Sample	Total/NA	Solid	3510C	
LCSD 860-115076/3-A	Lab Control Sample Dup	Total/NA	Solid	3510C	

Analysis Batch: 115084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 860-114697/1-H	Method Blank	TCLP	Solid	8270D	115076
MB 860-115076/1-A	Method Blank	Total/NA	Solid	8270D	115076
LCS 860-115076/2-A	Lab Control Sample	Total/NA	Solid	8270D	115076
LCSD 860-115076/3-A	Lab Control Sample Dup	Total/NA	Solid	8270D	115076

Analysis Batch: 115227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4995-1	Waste;amd Sample Testing	TCLP	Solid	8270D	115076

QC Association Summary

Client: GHD Services Inc. Job ID: 890-4995-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Metals

Leach Batch: 114508

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4995-1	Waste;amd Sample Testing	TCLP	Solid	1311	
LB 860-114508/1-D	Method Blank	TCLP	Solid	1311	
LB 860-114508/1-E	Method Blank	TCLP	Solid	1311	

Prep Batch: 114642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4995-1	Waste;amd Sample Testing	TCLP	Solid	7470A	114508
LB 860-114508/1-D	Method Blank	TCLP	Solid	7470A	114508
MB 860-114642/1-A	Method Blank	Total/NA	Solid	7470A	
LCS 860-114642/2-A	Lab Control Sample	Total/NA	Solid	7470A	
LCSD 860-114642/3-A	Lab Control Sample Dup	Total/NA	Solid	7470A	

Prep Batch: 114645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4995-1	Waste;amd Sample Testing	TCLP	Solid	3010A	114508
LB 860-114508/1-E	Method Blank	TCLP	Solid	3010A	114508
MB 860-114645/1-A	Method Blank	Total/NA	Solid	3010A	
LCS 860-114645/2-A	Lab Control Sample	Total/NA	Solid	3010A	
LCSD 860-114645/3-A	Lab Control Sample Dup	Total/NA	Solid	3010A	

Analysis Batch: 114752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4995-1	Waste;amd Sample Testing	TCLP	Solid	7470A	114642
LB 860-114508/1-D	Method Blank	TCLP	Solid	7470A	114642
MB 860-114642/1-A	Method Blank	Total/NA	Solid	7470A	114642
LCS 860-114642/2-A	Lab Control Sample	Total/NA	Solid	7470A	114642
LCSD 860-114642/3-A	Lab Control Sample Dup	Total/NA	Solid	7470A	114642

Analysis Batch: 114876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4995-1	Waste;amd Sample Testing	TCLP	Solid	6010D	114645
LB 860-114508/1-E	Method Blank	TCLP	Solid	6010D	114645
MB 860-114645/1-A	Method Blank	Total/NA	Solid	6010D	114645
LCS 860-114645/2-A	Lab Control Sample	Total/NA	Solid	6010D	114645
LCSD 860-114645/3-A	Lab Control Sample Dup	Total/NA	Solid	6010D	114645

General Chemistry

Leach Batch: 114503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4995-1	Waste;amd Sample Testing	Soluble	Solid	DI Leach	

Analysis Batch: 114524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4995-1	Waste;amd Sample Testing	Total/NA	Solid	1010	
LCS 860-114524/1	Lab Control Sample	Total/NA	Solid	1010	

Analysis Batch: 114536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4995-1	Waste;amd Sample Testing	Soluble	Solid	9045D	114503

QC Association Summary

Client: GHD Services Inc. Job ID: 890-4995-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

General Chemistry

Prep Batch: 114690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4995-1	Waste;amd Sample Testing	Total/NA	Solid	7.3.4	
MB 860-114690/1-A	Method Blank	Total/NA	Solid	7.3.4	
LCS 860-114690/2-A	Lab Control Sample	Total/NA	Solid	7.3.4	
LCSD 860-114690/3-A	Lab Control Sample Dup	Total/NA	Solid	7.3.4	

Prep Batch: 114692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4995-1	Waste;amd Sample Testing	Total/NA	Solid	7.3.3	
MB 860-114692/1-A	Method Blank	Total/NA	Solid	7.3.3	
LCS 860-114692/2-A	Lab Control Sample	Total/NA	Solid	7.3.3	
LCSD 860-114692/3-A	Lab Control Sample Dup	Total/NA	Solid	7.3.3	

Analysis Batch: 114738

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4995-1	Waste;amd Sample Testing	Total/NA	Solid	9012	114692
MB 860-114692/1-A	Method Blank	Total/NA	Solid	9012	114692
LCS 860-114692/2-A	Lab Control Sample	Total/NA	Solid	9012	114692
LCSD 860-114692/3-A	Lab Control Sample Dup	Total/NA	Solid	9012	114692

Analysis Batch: 114823

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4995-1	Waste;amd Sample Testing	Total/NA	Solid	9034	114690
MB 860-114690/1-A	Method Blank	Total/NA	Solid	9034	114690
LCS 860-114690/2-A	Lab Control Sample	Total/NA	Solid	9034	114690
LCSD 860-114690/3-A	Lab Control Sample Dup	Total/NA	Solid	9034	114690

Lab Chronicle

Client: GHD Services Inc. Job ID: 890-4995-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: Waste;amd Sample Testing
Date Collected: 07/25/23 08:30
Date Received: 07/26/23 09:32

Lab Sample ID: 890-4995-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	114679	07/28/23 14:00	EMC	EET HOU
							Completed:	07/29/23 06:00 [1]		
TCLP	Analysis	8260C		50	5 mL	5 mL	114857	07/31/23 12:28	AN	EET HOU
TCLP	Leach	1311			1.0 g	1.0 mL	114508	07/27/23 16:00	EMC	EET HOU
							Completed:	07/28/23 08:00 [1]		
TCLP	Prep	3510C			200 mL	1.00 mL	115076	08/01/23 06:29	DR	EET HOU
TCLP	Analysis	8270D		5	1 mL	1 mL	115227	08/01/23 18:04	PXS	EET HOU
TCLP	Leach	1311			1.0 g	1.0 mL	114508	07/27/23 16:00	EMC	EET HOU
							Completed:	07/28/23 08:00 [1]		
TCLP	Prep	3010A			10 mL	50 mL	114645	07/28/23 12:30	MD	EET HOU
TCLP	Analysis	6010D		1			114876	07/28/23 19:49	JDM	EET HOU
TCLP	Leach	1311			1.0 g	1.0 mL	114508	07/27/23 16:00	EMC	EET HOU
							Completed:	07/28/23 08:00 [1]		
TCLP	Prep	7470A			50 mL	50 mL	114642	07/28/23 12:09	AGR	EET HOU
TCLP	Analysis	7470A		1			114752	07/28/23 19:49	SHZ	EET HOU
Total/NA	Analysis	1010		1			114524	07/27/23 18:19	JM	EET HOU
Total/NA	Prep	7.3.3			10 g	50 mL	114692	07/28/23 15:09	JM	EET HOU
Total/NA	Analysis	9012		1	10 mL	10 mL	114738	07/28/23 18:03	AA	EET HOU
Total/NA	Prep	7.3.4			10 g	50 mL	114690	07/28/23 15:09	JM	EET HOU
Total/NA	Analysis	9034		1	40 mL	50 mL	114823	07/30/23 13:57	PSC	EET HOU
Soluble	Leach	DI Leach			20.00 g	20 mL	114503	07/27/23 16:41	TL	EET HOU
Soluble	Analysis	9045D		1	20.00 g	20 mL	114536	07/27/23 19:41	TL	EET HOU

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:
EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 890-4995-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Laboratory: Eurofins Houston

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-00759	08-04-23
Florida	NELAP	E871002	06-30-24
Louisiana (All)	NELAP	03054	06-30-24
Oklahoma	State	1306	08-31-23
Texas	NELAP	T104704215-23-50	06-30-24
Texas	TCEQ Water Supply	T104704215	12-28-25
USDA	US Federal Programs	525-23-79-79507	03-20-26

Method Summary

Client: GHD Services Inc.
Job ID: 890-4995-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	EET HOU
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET HOU
6010D	Metals (ICP)	SW846	EET HOU
7470A	Mercury (CVAA)	SW846	EET HOU
1010	Ignitability, Pensky-Martens Closed-Cup Method	SW846	EET HOU
9012	Cyanide, Reactive	SW846	EET HOU
9034	Sulfide, Reactive	SW846	EET HOU
9045D	pH	SW846	EET HOU
1311	TCLP Extraction	SW846	EET HOU
3010A	Preparation, Total Metals	SW846	EET HOU
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET HOU
5030C	Purge and Trap	SW846	EET HOU
7.3.3	Cyanide, Reactive	SW846	EET HOU
7.3.4	Sulfide, Reactive	SW846	EET HOU
7470A	Preparation, Mercury	SW846	EET HOU
DI Leach	Deionized Water Leaching Procedure	ASTM	EET HOU

Protocol References:

ASTM = ASTM International

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

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Sample Summary

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-4995-1
SDG: 12618492

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4995-1	Waste;amd Sample Testing	Solid	07/25/23 08:30	07/26/23 09:32	n/a

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8/2/2023

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Nate Reece	Bill to: (if different)	
Company Name:	GHD Services Inc.	Company Name:	
Address:	11451 W. Katy FWY. #400	Address:	
City, State ZIP:	Houston, TX 77079	City, State ZIP:	
Phone:	(281) 286-7158 Email:	nate.reece@ghd.com	

Work Order Comments

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

Project Name:	Delek Matador produced water release	Turn Around	
Project Number:	126018492	☐ Routine	☑ Rush
Project Location:	32.578378,-103.66405	Due Date:	1 Day
Sampler's Name:	Tristanna Crapo	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	Thm007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	22.8
Total Containers:		Corrected Temperature:	22.6

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	1311 Semi-volatile/Metal ext	8270 TCLP SVOCs	6010 7470 TCLP Metals	1311 (CONT) Volatile Extraction	8260 TCLP VOCs	Cyanide Reactive Cyanide	7.3 Reactive Sulfide	1010 Ignitability	9045 Corrosivity (pH)
Wasteland sample testing	S	7-25-23	0830	N/A	G	8		X	X	X	X	X	X	X	X	X

Parameters

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

890-4995 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 Tl 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 Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		7-26-23 932	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Received by OCD: 12/4/2024 10:43:20 AM

Released to Imaging: 3/12/2025 11:29:45 AM

Released to Imaging: 3/12/2025 11:29:45 AM
Received by OCD: 12/4/2024 10:43:20 AM

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Simmons, Debbie	Carrier Tracking No(s):	COC No: 890-1393.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Debbie.Simmons@et.eurofinsus.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP Louisiana; NELAP - Texas		Job #: 890-4995-1
Address: 4145 Greenbriar Dr	Due Date Requested: 7/27/2023			
City: Stafford	TAT Requested (days):			
State, Zip: TX, 77477				
Phone: 281-240-4200(Tel)	PO #:			
Email:	WO #:			
Project Name: Delek Matador Produced Water Release	Project #: 89000176			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Y Trizma, Z other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1010_Calc	9012_ReactiveCN/7.3.3 Reactive Cyanide	9034_Reactive/7.3.4	9045D/DI_LEACH_NP	8260C/1311_Z TCLP VOCs	8270D/1311_T TCLP SVOCs	6010D/1311T_M RCRA 8 (excl. Hg)	7470A/1311T_Hg Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:													
Waste Lan Sample Testing (890-4995-1)	7/25/23	08:30 Mountain		Solid			X	X	X	X	X	X	X	X	8	

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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I II III IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Clue			FedEX		
Relinquished by: FedEX	Date/Time:	Company	Received by:	Date/Time: 7/27/2023 9:37	Company EX
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: Temp: IR ID:HOU-338
C/F:-0.3 1.8
Corrected Temp: 1.5

2021

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 890-4995-1
SDG Number: 12618492

Login Number: 4995
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: GHD Services Inc.

Job Number: 890-4995-1
SDG Number: 12618492

Login Number: 4995
List Number: 2
Creator: Pena, Jesiel

List Source: Eurofins Houston
List Creation: 07/27/23 02:17 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?	N/A	
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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Nate Reece
GHD Services Inc.
2135 South Loop 250 West
Midland, Texas 79703

Generated 7/31/2023 3:25:31 PM

JOB DESCRIPTION

Delek Matador Produced Water Release
SDG NUMBER 12618492

JOB NUMBER

890-5000-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 5/12/2023 11:29:43 AM

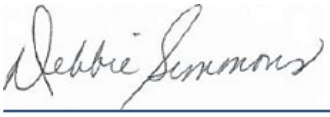
Eurofins Carlsbad

Job Notes

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

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

Authorization



Generated
7/31/2023 3:25:31 PM

Authorized for release by
Debbie Simmons, Project Manager
Debbie.Simmons@et.eurofinsus.com
(832)986-6768

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Laboratory Job ID: 890-5000-1
SDG: 12618492

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Definitions/Glossary

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
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
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: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Job ID: 890-5000-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5000-1

Receipt
The samples were received on 7/27/2023 9:50 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 1.6°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: TP16-1 (890-5000-1), TP16-3 (890-5000-2), TP20-2 (890-5000-3), TP20-4 (890-5000-4), TP25-1 (890-5000-5), TP25-2 (890-5000-6), TP22-1 (890-5000-7), TP22-2 (890-5000-8), TP19-3 (890-5000-9), TP19-5 (890-5000-10), TP18-2 (890-5000-11), TP18-1 (890-5000-12), TP17-1 (890-5000-13), TP17-2 (890-5000-14), TP13-1 (890-5000-15), TP13-2 (890-5000-16), TP14-3 (890-5000-17) and TP14-6 (890-5000-18).

GC VOA
Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-58784 and analytical batch 880-58783 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: The laboratory control sample (LCS) associated with preparation batch 880-58728 and analytical batch 880-58690 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: TP16-1 (890-5000-1), TP16-3 (890-5000-2), TP20-2 (890-5000-3), TP20-4 (890-5000-4), TP25-1 (890-5000-5), TP25-2 (890-5000-6), TP22-1 (890-5000-7), TP22-2 (890-5000-8), TP19-3 (890-5000-9), TP19-5 (890-5000-10), (LCSD 880-58728/2-A), (890-5000-A-1-D MS) and (890-5000-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: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-5000-1
SDG: 12618492

Client Sample ID: TP16-1

Date Collected: 07/26/23 09:15
Date Received: 07/27/23 09:50
Sample Depth: 1

Lab Sample ID: 890-5000-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/28/23 13:01	07/28/23 18:12	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/28/23 13:01	07/28/23 18:12	1
Ethylbenzene	<0.00198	U *+	0.00198		mg/Kg		07/28/23 13:01	07/28/23 18:12	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		07/28/23 13:01	07/28/23 18:12	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/28/23 13:01	07/28/23 18:12	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		07/28/23 13:01	07/28/23 18:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*144*	*S1+*	*70 - 130*	*07/28/23 13:01*	*07/28/23 18:12*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*07/28/23 13:01*	*07/28/23 18:12*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			07/31/23 11:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			07/31/23 15:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		07/28/23 17:25	07/30/23 10:15	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/28/23 17:25	07/30/23 10:15	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/28/23 17:25	07/30/23 10:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*07/28/23 17:25*	*07/30/23 10:15*	*1*
o-Terphenyl	*97*		*70 - 130*	*07/28/23 17:25*	*07/30/23 10:15*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**574**		4.99		mg/Kg			07/28/23 11:55	1

Client Sample ID: TP16-3

Date Collected: 07/26/23 09:30
Date Received: 07/27/23 09:50
Sample Depth: 3

Lab Sample ID: 890-5000-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/28/23 13:01	07/28/23 18:37	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/28/23 13:01	07/28/23 18:37	1
Ethylbenzene	<0.00198	U *+	0.00198		mg/Kg		07/28/23 13:01	07/28/23 18:37	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		07/28/23 13:01	07/28/23 18:37	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/28/23 13:01	07/28/23 18:37	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		07/28/23 13:01	07/28/23 18:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*147*	*S1+*	*70 - 130*	*07/28/23 13:01*	*07/28/23 18:37*	*1*

Client Sample Results

Client: GHD Services Inc.
Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Client Sample ID: TP16-3
Lab Sample ID: 890-5000-2
Date Collected: 07/26/23 09:30
Matrix: Solid
Date Received: 07/27/23 09:50
Sample Depth: 3

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*07/28/23 13:01*	*07/28/23 18:37*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			07/31/23 11:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			07/31/23 15:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		07/28/23 17:25	07/30/23 11:23	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		07/28/23 17:25	07/30/23 11:23	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		07/28/23 17:25	07/30/23 11:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*07/28/23 17:25*	*07/30/23 11:23*	*1*
o-Terphenyl	*100*		*70 - 130*	*07/28/23 17:25*	*07/30/23 11:23*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**697**		25.0		mg/Kg			07/28/23 12:13	5

Client Sample ID: TP20-2
Lab Sample ID: 890-5000-3
Date Collected: 07/26/23 09:45
Matrix: Solid
Date Received: 07/27/23 09:50
Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:01	07/28/23 19:03	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:01	07/28/23 19:03	1
Ethylbenzene	<0.00200	U *+	0.00200		mg/Kg		07/28/23 13:01	07/28/23 19:03	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/28/23 13:01	07/28/23 19:03	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:01	07/28/23 19:03	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/28/23 13:01	07/28/23 19:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*150*	*S1+*	*70 - 130*	*07/28/23 13:01*	*07/28/23 19:03*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*07/28/23 13:01*	*07/28/23 19:03*	*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			07/31/23 11:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			07/31/23 15:38	1

Client Sample Results

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: TP20-2 Lab Sample ID: 890-5000-3

Date Collected: 07/26/23 09:45 **Matrix: Solid**
Date Received: 07/27/23 09:50
Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3		mg/Kg		07/28/23 17:25	07/30/23 11:55	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		07/28/23 17:25	07/30/23 11:55	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		07/28/23 17:25	07/30/23 11:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*07/28/23 17:25*	*07/30/23 11:55*	*1*
o-Terphenyl	*93*		*70 - 130*	*07/28/23 17:25*	*07/30/23 11:55*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**250**		4.95		mg/Kg			07/28/23 12:19	1

Client Sample ID: TP20-4 Lab Sample ID: 890-5000-4

Date Collected: 07/26/23 10:00 **Matrix: Solid**
Date Received: 07/27/23 09:50
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		07/28/23 13:01	07/28/23 19:29	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/28/23 13:01	07/28/23 19:29	1
Ethylbenzene	<0.00199	U *+	0.00199		mg/Kg		07/28/23 13:01	07/28/23 19:29	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/28/23 13:01	07/28/23 19:29	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/28/23 13:01	07/28/23 19:29	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/28/23 13:01	07/28/23 19:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*141*	*S1+*	*70 - 130*	*07/28/23 13:01*	*07/28/23 19:29*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*07/28/23 13:01*	*07/28/23 19:29*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			07/31/23 11:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			07/31/23 15:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		07/28/23 17:25	07/30/23 12:17	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		07/28/23 17:25	07/30/23 12:17	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		07/28/23 17:25	07/30/23 12:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*07/28/23 17:25*	*07/30/23 12:17*	*1*
o-Terphenyl	*106*		*70 - 130*	*07/28/23 17:25*	*07/30/23 12:17*	*1*

Client Sample Results

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: TP20-4 Lab Sample ID: 890-5000-4

Date Collected: 07/26/23 10:00 **Matrix: Solid**
Date Received: 07/27/23 09:50
Sample Depth: 4

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	433		5.05		mg/Kg			07/28/23 12:26	1

Client Sample ID: TP25-1 Lab Sample ID: 890-5000-5

Date Collected: 07/26/23 10:05 **Matrix: Solid**
Date Received: 07/27/23 09:50
Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		07/28/23 13:01	07/28/23 19:54	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/28/23 13:01	07/28/23 19:54	1
Ethylbenzene	<0.00201	U *+	0.00201		mg/Kg		07/28/23 13:01	07/28/23 19:54	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/28/23 13:01	07/28/23 19:54	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/28/23 13:01	07/28/23 19:54	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/28/23 13:01	07/28/23 19:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*150*	*S1+*	*70 - 130*	*07/28/23 13:01*	*07/28/23 19:54*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*07/28/23 13:01*	*07/28/23 19:54*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			07/31/23 11:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			07/31/23 15:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		07/28/23 17:25	07/30/23 14:17	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/28/23 17:25	07/30/23 14:17	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/28/23 17:25	07/30/23 14:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*79*		*70 - 130*	*07/28/23 17:25*	*07/30/23 14:17*	*1*
o-Terphenyl	*88*		*70 - 130*	*07/28/23 17:25*	*07/30/23 14:17*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	808		5.01		mg/Kg			07/28/23 12:32	1

Client Sample Results

Client: GHD Services Inc.
Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Client Sample ID: TP25-2
Lab Sample ID: 890-5000-6
Date Collected: 07/26/23 10:10
Matrix: Solid
Date Received: 07/27/23 09:50
Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		07/28/23 13:01	07/28/23 20:20	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/28/23 13:01	07/28/23 20:20	1
Ethylbenzene	<0.00202	U *+	0.00202		mg/Kg		07/28/23 13:01	07/28/23 20:20	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/28/23 13:01	07/28/23 20:20	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/28/23 13:01	07/28/23 20:20	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/28/23 13:01	07/28/23 20:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*175*	*S1+*	*70 - 130*	*07/28/23 13:01*	*07/28/23 20:20*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*07/28/23 13:01*	*07/28/23 20:20*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			07/31/23 11:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			07/31/23 15:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/28/23 17:25	07/30/23 14:39	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/28/23 17:25	07/30/23 14:39	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/28/23 17:25	07/30/23 14:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*07/28/23 17:25*	*07/30/23 14:39*	*1*
o-Terphenyl	*107*		*70 - 130*	*07/28/23 17:25*	*07/30/23 14:39*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**79.9**		4.99		mg/Kg			07/28/23 12:50	1

Client Sample ID: TP22-1
Lab Sample ID: 890-5000-7
Date Collected: 07/26/23 10:25
Matrix: Solid
Date Received: 07/27/23 09:50
Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/28/23 13:01	07/28/23 20:45	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/28/23 13:01	07/28/23 20:45	1
Ethylbenzene	<0.00199	U *+	0.00199		mg/Kg		07/28/23 13:01	07/28/23 20:45	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/28/23 13:01	07/28/23 20:45	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/28/23 13:01	07/28/23 20:45	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/28/23 13:01	07/28/23 20:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*07/28/23 13:01*	*07/28/23 20:45*	*1*

Client Sample Results

Client: GHD Services Inc.
Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Client Sample ID: TP22-1
Lab Sample ID: 890-5000-7
Date Collected: 07/26/23 10:25
Matrix: Solid
Date Received: 07/27/23 09:50
Sample Depth: 1

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*07/28/23 13:01*	*07/28/23 20:45*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			07/31/23 11:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			07/31/23 15:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/28/23 17:25	07/30/23 15:01	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/28/23 17:25	07/30/23 15:01	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/28/23 17:25	07/30/23 15:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*78*		*70 - 130*	*07/28/23 17:25*	*07/30/23 15:01*	*1*
o-Terphenyl	*89*		*70 - 130*	*07/28/23 17:25*	*07/30/23 15:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**63.7**		4.95		mg/Kg			07/28/23 12:56	1

Client Sample ID: TP22-2
Lab Sample ID: 890-5000-8
Date Collected: 07/26/23 10:35
Matrix: Solid
Date Received: 07/27/23 09:50
Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/28/23 13:01	07/28/23 21:10	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/28/23 13:01	07/28/23 21:10	1
Ethylbenzene	<0.00198	U *+	0.00198		mg/Kg		07/28/23 13:01	07/28/23 21:10	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		07/28/23 13:01	07/28/23 21:10	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/28/23 13:01	07/28/23 21:10	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		07/28/23 13:01	07/28/23 21:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*148*	*S1+*	*70 - 130*	*07/28/23 13:01*	*07/28/23 21:10*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*07/28/23 13:01*	*07/28/23 21:10*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			07/31/23 11:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			07/31/23 15:38	1

Client Sample Results

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: TP22-2 Lab Sample ID: 890-5000-8

Date Collected: 07/26/23 10:35 **Matrix: Solid**
Date Received: 07/27/23 09:50
Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/28/23 17:25	07/30/23 15:23	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/28/23 17:25	07/30/23 15:23	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/28/23 17:25	07/30/23 15:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*79*		*70 - 130*	*07/28/23 17:25*	*07/30/23 15:23*	*1*
o-Terphenyl	*89*		*70 - 130*	*07/28/23 17:25*	*07/30/23 15:23*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**63.5**		4.98		mg/Kg			07/28/23 13:02	1

Client Sample ID: TP19-3 Lab Sample ID: 890-5000-9

Date Collected: 07/26/23 11:30 **Matrix: Solid**
Date Received: 07/27/23 09:50
Sample Depth: 3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:01	07/28/23 21:36	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:01	07/28/23 21:36	1
Ethylbenzene	<0.00200	U *+	0.00200		mg/Kg		07/28/23 13:01	07/28/23 21:36	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/28/23 13:01	07/28/23 21:36	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:01	07/28/23 21:36	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/28/23 13:01	07/28/23 21:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*140*	*S1+*	*70 - 130*	*07/28/23 13:01*	*07/28/23 21:36*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*07/28/23 13:01*	*07/28/23 21:36*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			07/31/23 11:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			07/31/23 15:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/28/23 17:25	07/30/23 15:45	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/28/23 17:25	07/30/23 15:45	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/28/23 17:25	07/30/23 15:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*07/28/23 17:25*	*07/30/23 15:45*	*1*
o-Terphenyl	*94*		*70 - 130*	*07/28/23 17:25*	*07/30/23 15:45*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-5000-1
SDG: 12618492

Client Sample ID: TP19-3

Date Collected: 07/26/23 11:30
Date Received: 07/27/23 09:50
Sample Depth: 3

Lab Sample ID: 890-5000-9

Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	643		25.2		mg/Kg			07/28/23 13:09	5

Client Sample ID: TP19-5

Date Collected: 07/26/23 11:45
Date Received: 07/27/23 09:50
Sample Depth: 5

Lab Sample ID: 890-5000-10

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		07/28/23 13:01	07/28/23 22:01	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/28/23 13:01	07/28/23 22:01	1
Ethylbenzene	<0.00201	U *+	0.00201		mg/Kg		07/28/23 13:01	07/28/23 22:01	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/28/23 13:01	07/28/23 22:01	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/28/23 13:01	07/28/23 22:01	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/28/23 13:01	07/28/23 22:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*153*	*S1+*	*70 - 130*	*07/28/23 13:01*	*07/28/23 22:01*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*07/28/23 13:01*	*07/28/23 22:01*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			07/31/23 11:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			07/31/23 15:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3		mg/Kg		07/28/23 17:25	07/30/23 16:07	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		07/28/23 17:25	07/30/23 16:07	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		07/28/23 17:25	07/30/23 16:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*07/28/23 17:25*	*07/30/23 16:07*	*1*
o-Terphenyl	*92*		*70 - 130*	*07/28/23 17:25*	*07/30/23 16:07*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	643		24.9		mg/Kg			07/28/23 13:15	5

Client Sample Results

Client: GHD Services Inc.
Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Client Sample ID: TP18-2
Lab Sample ID: 890-5000-11
Date Collected: 07/26/23 12:10
Matrix: Solid
Date Received: 07/27/23 09:50
Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/29/23 15:19	07/29/23 18:32	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/29/23 15:19	07/29/23 18:32	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/29/23 15:19	07/29/23 18:32	1
m-Xylene & p-Xylene	<0.00399	U *+	0.00399		mg/Kg		07/29/23 15:19	07/29/23 18:32	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/29/23 15:19	07/29/23 18:32	1
Xylenes, Total	<0.00399	U *+	0.00399		mg/Kg		07/29/23 15:19	07/29/23 18:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*07/29/23 15:19*	*07/29/23 18:32*	*1*
1,4-Difluorobenzene (Surr)	*58*	*S1-*	*70 - 130*	*07/29/23 15:19*	*07/29/23 18:32*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			07/31/23 11:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			07/31/23 15:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		07/28/23 17:25	07/30/23 17:58	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		07/28/23 17:25	07/30/23 17:58	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		07/28/23 17:25	07/30/23 17:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*07/28/23 17:25*	*07/30/23 17:58*	*1*
o-Terphenyl	*92*		*70 - 130*	*07/28/23 17:25*	*07/30/23 17:58*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**88.3**		4.95		mg/Kg			07/28/23 13:21	1

Client Sample ID: TP18-1
Lab Sample ID: 890-5000-12
Date Collected: 07/26/23 12:00
Matrix: Solid
Date Received: 07/27/23 09:50
Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		07/29/23 15:19	07/29/23 18:53	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/29/23 15:19	07/29/23 18:53	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/29/23 15:19	07/29/23 18:53	1
m-Xylene & p-Xylene	<0.00403	U *+	0.00403		mg/Kg		07/29/23 15:19	07/29/23 18:53	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/29/23 15:19	07/29/23 18:53	1
Xylenes, Total	<0.00403	U *+	0.00403		mg/Kg		07/29/23 15:19	07/29/23 18:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*07/29/23 15:19*	*07/29/23 18:53*	*1*

Client Sample Results

Client: GHD Services Inc.
Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Client Sample ID: TP18-1
Lab Sample ID: 890-5000-12
Date Collected: 07/26/23 12:00
Matrix: Solid
Date Received: 07/27/23 09:50
Sample Depth: 1

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*61*	*S1-*	*70 - 130*	*07/29/23 15:19*	*07/29/23 18:53*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			07/31/23 11:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			07/31/23 15:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		07/28/23 17:25	07/30/23 18:20	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		07/28/23 17:25	07/30/23 18:20	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		07/28/23 17:25	07/30/23 18:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*79*		*70 - 130*	*07/28/23 17:25*	*07/30/23 18:20*	*1*
o-Terphenyl	*90*		*70 - 130*	*07/28/23 17:25*	*07/30/23 18:20*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**157**		4.99		mg/Kg			07/28/23 13:39	1

Client Sample ID: TP17-1
Lab Sample ID: 890-5000-13
Date Collected: 07/26/23 13:15
Matrix: Solid
Date Received: 07/27/23 09:50
Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		07/29/23 15:19	07/29/23 19:13	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/29/23 15:19	07/29/23 19:13	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/29/23 15:19	07/29/23 19:13	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402		mg/Kg		07/29/23 15:19	07/29/23 19:13	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/29/23 15:19	07/29/23 19:13	1
Xylenes, Total	<0.00402	U *+	0.00402		mg/Kg		07/29/23 15:19	07/29/23 19:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*07/29/23 15:19*	*07/29/23 19:13*	*1*
1,4-Difluorobenzene (Surr)	*66*	*S1-*	*70 - 130*	*07/29/23 15:19*	*07/29/23 19:13*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			07/31/23 11:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			07/31/23 15:38	1

Client Sample Results

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: TP17-1 Lab Sample ID: 890-5000-13

Date Collected: 07/26/23 13:15 **Matrix: Solid**
Date Received: 07/27/23 09:50
Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		07/28/23 17:25	07/30/23 18:42	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/28/23 17:25	07/30/23 18:42	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/28/23 17:25	07/30/23 18:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*79*		*70 - 130*	*07/28/23 17:25*	*07/30/23 18:42*	*1*
o-Terphenyl	*87*		*70 - 130*	*07/28/23 17:25*	*07/30/23 18:42*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**659**		4.97		mg/Kg			07/28/23 13:45	1

Client Sample ID: TP17-2 Lab Sample ID: 890-5000-14

Date Collected: 07/26/23 13:30 **Matrix: Solid**
Date Received: 07/27/23 09:50
Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/29/23 15:19	07/29/23 19:34	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/29/23 15:19	07/29/23 19:34	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/29/23 15:19	07/29/23 19:34	1
m-Xylene & p-Xylene	<0.00401	U *+	0.00401		mg/Kg		07/29/23 15:19	07/29/23 19:34	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/29/23 15:19	07/29/23 19:34	1
Xylenes, Total	<0.00401	U *+	0.00401		mg/Kg		07/29/23 15:19	07/29/23 19:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*07/29/23 15:19*	*07/29/23 19:34*	*1*
1,4-Difluorobenzene (Surr)	*57*	*S1-*	*70 - 130*	*07/29/23 15:19*	*07/29/23 19:34*	*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			07/31/23 11:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			07/31/23 15:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		07/28/23 17:25	07/30/23 19:05	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		07/28/23 17:25	07/30/23 19:05	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		07/28/23 17:25	07/30/23 19:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*79*		*70 - 130*	*07/28/23 17:25*	*07/30/23 19:05*	*1*
o-Terphenyl	*88*		*70 - 130*	*07/28/23 17:25*	*07/30/23 19:05*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-5000-1
SDG: 12618492

Client Sample ID: TP17-2

Lab Sample ID: 890-5000-14
Matrix: Solid
Date Collected: 07/26/23 13:30
Date Received: 07/27/23 09:50
Sample Depth: 2

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	85.3		5.00		mg/Kg			07/28/23 14:04	1

Client Sample ID: TP13-1

Lab Sample ID: 890-5000-15
Matrix: Solid
Date Collected: 07/26/23 13:35
Date Received: 07/27/23 09:50
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		07/29/23 15:19	07/29/23 19:54	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/29/23 15:19	07/29/23 19:54	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/29/23 15:19	07/29/23 19:54	1
m-Xylene & p-Xylene	<0.00399	U *+	0.00399		mg/Kg		07/29/23 15:19	07/29/23 19:54	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/29/23 15:19	07/29/23 19:54	1
Xylenes, Total	<0.00399	U *+	0.00399		mg/Kg		07/29/23 15:19	07/29/23 19:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*07/29/23 15:19*	*07/29/23 19:54*	*1*
1,4-Difluorobenzene (Surr)	*57*	*S1-*	*70 - 130*	*07/29/23 15:19*	*07/29/23 19:54*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			07/31/23 11:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.5	U	49.5		mg/Kg			07/31/23 15:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.5	U	49.5		mg/Kg		07/28/23 17:25	07/30/23 19:27	1
Diesel Range Organics (Over C10-C28)	<49.5	U	49.5		mg/Kg		07/28/23 17:25	07/30/23 19:27	1
OII Range Organics (Over C28-C36)	<49.5	U	49.5		mg/Kg		07/28/23 17:25	07/30/23 19:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*80*		*70 - 130*	*07/28/23 17:25*	*07/30/23 19:27*	*1*
o-Terphenyl	*89*		*70 - 130*	*07/28/23 17:25*	*07/30/23 19:27*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	72.2		4.98		mg/Kg			07/28/23 14:10	1

Client Sample Results

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: TP13-2 Lab Sample ID: 890-5000-16

Date Collected: 07/26/23 13:40 **Matrix: Solid**
Date Received: 07/27/23 09:50
Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/29/23 15:19	07/29/23 20:15	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/29/23 15:19	07/29/23 20:15	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/29/23 15:19	07/29/23 20:15	1
m-Xylene & p-Xylene	<0.00396	U *+	0.00396		mg/Kg		07/29/23 15:19	07/29/23 20:15	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/29/23 15:19	07/29/23 20:15	1
Xylenes, Total	<0.00396	U *+	0.00396		mg/Kg		07/29/23 15:19	07/29/23 20:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*07/29/23 15:19*	*07/29/23 20:15*	*1*
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*	*07/29/23 15:19*	*07/29/23 20:15*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			07/31/23 11:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			07/31/23 15:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		07/28/23 17:25	07/30/23 19:50	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		07/28/23 17:25	07/30/23 19:50	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		07/28/23 17:25	07/30/23 19:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*07/28/23 17:25*	*07/30/23 19:50*	*1*
o-Terphenyl	*108*		*70 - 130*	*07/28/23 17:25*	*07/30/23 19:50*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**94.7**		4.95		mg/Kg			07/28/23 14:16	1

Client Sample ID: TP14-3 Lab Sample ID: 890-5000-17

Date Collected: 07/26/23 14:00 **Matrix: Solid**
Date Received: 07/27/23 09:50
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	0.00202		mg/Kg		07/29/23 15:19	07/29/23 20:35	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/29/23 15:19	07/29/23 20:35	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/29/23 15:19	07/29/23 20:35	1
m-Xylene & p-Xylene	<0.00403	U *+	0.00403		mg/Kg		07/29/23 15:19	07/29/23 20:35	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/29/23 15:19	07/29/23 20:35	1
Xylenes, Total	<0.00403	U *+	0.00403		mg/Kg		07/29/23 15:19	07/29/23 20:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*07/29/23 15:19*	*07/29/23 20:35*	*1*

Client Sample Results

Client: GHD Services Inc.
Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Client Sample ID: TP14-3
Lab Sample ID: 890-5000-17
Date Collected: 07/26/23 14:00
Matrix: Solid
Date Received: 07/27/23 09:50
Sample Depth: 3

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*07/29/23 15:19*	*07/29/23 20:35*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			07/31/23 11:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			07/31/23 15:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		07/28/23 17:25	07/30/23 20:13	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/28/23 17:25	07/30/23 20:13	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/28/23 17:25	07/30/23 20:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*07/28/23 17:25*	*07/30/23 20:13*	*1*
o-Terphenyl	*103*		*70 - 130*	*07/28/23 17:25*	*07/30/23 20:13*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1050**		25.2		mg/Kg			07/28/23 14:22	5

Client Sample ID: TP14-6
Lab Sample ID: 890-5000-18
Date Collected: 07/26/23 14:20
Matrix: Solid
Date Received: 07/27/23 09:50
Sample Depth: 6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/29/23 15:19	07/29/23 20:55	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/29/23 15:19	07/29/23 20:55	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/29/23 15:19	07/29/23 20:55	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398		mg/Kg		07/29/23 15:19	07/29/23 20:55	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/29/23 15:19	07/29/23 20:55	1
Xylenes, Total	<0.00398	U *+	0.00398		mg/Kg		07/29/23 15:19	07/29/23 20:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*07/29/23 15:19*	*07/29/23 20:55*	*1*
1,4-Difluorobenzene (Surr)	*57*	*S1-*	*70 - 130*	*07/29/23 15:19*	*07/29/23 20:55*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			07/31/23 11:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			07/31/23 15:38	1

Client Sample Results

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: TP14-6 Lab Sample ID: 890-5000-18

Date Collected: 07/26/23 14:20 **Matrix: Solid**
Date Received: 07/27/23 09:50
Sample Depth: 6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		07/28/23 17:25	07/30/23 20:35	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/28/23 17:25	07/30/23 20:35	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/28/23 17:25	07/30/23 20:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*81*		*70 - 130*	*07/28/23 17:25*	*07/30/23 20:35*	*1*
o-Terphenyl	*91*		*70 - 130*	*07/28/23 17:25*	*07/30/23 20:35*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**887**		24.8		mg/Kg			07/28/23 14:28	5

Surrogate Summary

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

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)										
890-5000-1	TP16-1	144 S1+	90										
890-5000-1 MS	TP16-1	136 S1+	89										
890-5000-1 MSD	TP16-1	141 S1+	95										
890-5000-2	TP16-3	147 S1+	101										
890-5000-3	TP20-2	150 S1+	90										
890-5000-4	TP20-4	141 S1+	96										
890-5000-5	TP25-1	150 S1+	104										
890-5000-6	TP25-2	175 S1+	105										
890-5000-7	TP22-1	127	86										
890-5000-8	TP22-2	148 S1+	96										
890-5000-9	TP19-3	140 S1+	83										
890-5000-10	TP19-5	153 S1+	83										
890-5000-11	TP18-2	84	58 S1-										
890-5000-11 MS	TP18-2	114	115										
890-5000-11 MSD	TP18-2	109	103										
890-5000-12	TP18-1	88	61 S1-										
890-5000-13	TP17-1	88	66 S1-										
890-5000-14	TP17-2	85	57 S1-										
890-5000-15	TP13-1	87	57 S1-										
890-5000-16	TP13-2	112	71										
890-5000-17	TP14-3	112	75										
890-5000-18	TP14-6	88	57 S1-										
LCS 880-58728/1-A	Lab Control Sample	128	84										
LCS 880-58784/1-A	Lab Control Sample	108	121										
LCSD 880-58728/2-A	Lab Control Sample Dup	140 S1+	98										
LCSD 880-58784/2-A	Lab Control Sample Dup	120	115										
MB 880-58728/5-A	Method Blank	77	81										
MB 880-58784/5-A	Method Blank	72	84										

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)										
890-5000-1	TP16-1	88	97										
890-5000-1 MS	TP16-1	92	86										
890-5000-1 MSD	TP16-1	90	85										
890-5000-2	TP16-3	89	100										
890-5000-3	TP20-2	84	93										
890-5000-4	TP20-4	96	106										
890-5000-5	TP25-1	79	88										
890-5000-6	TP25-2	95	107										
890-5000-7	TP22-1	78	89										
890-5000-8	TP22-2	79	89										
890-5000-9	TP19-3	85	94										

Surrogate Summary

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

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)								
890-5000-10	TP19-5	82	92								
890-5000-11	TP18-2	82	92								
890-5000-12	TP18-1	79	90								
890-5000-13	TP17-1	79	87								
890-5000-14	TP17-2	79	88								
890-5000-15	TP13-1	80	89								
890-5000-16	TP13-2	95	108								
890-5000-17	TP14-3	95	103								
890-5000-18	TP14-6	81	91								
LCS 880-58767/2-A	Lab Control Sample	98	96								
LCSD 880-58767/3-A	Lab Control Sample Dup	96	93								
MB 880-58767/1-A	Method Blank	91	101								

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-58728/5-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58690 **Prep Batch: 58728**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:01	07/28/23 17:46	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:01	07/28/23 17:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:01	07/28/23 17:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/28/23 13:01	07/28/23 17:46	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:01	07/28/23 17:46	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/28/23 13:01	07/28/23 17:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*77*		*70 - 130*	*07/28/23 13:01*	*07/28/23 17:46*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*07/28/23 13:01*	*07/28/23 17:46*	*1*

Lab Sample ID: LCS 880-58728/1-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58690 **Prep Batch: 58728**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1186		mg/Kg		119	70 - 130
Toluene	0.100	0.1220		mg/Kg		122	70 - 130
Ethylbenzene	0.100	0.1300		mg/Kg		130	70 - 130
m-Xylene & p-Xylene	0.200	0.2511		mg/Kg		126	70 - 130
o-Xylene	0.100	0.1178		mg/Kg		118	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*

Lab Sample ID: LCSD 880-58728/2-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58690 **Prep Batch: 58728**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1244		mg/Kg		124	70 - 130	5	35
Toluene	0.100	0.1294		mg/Kg		129	70 - 130	6	35
Ethylbenzene	0.100	0.1376	*+	mg/Kg		138	70 - 130	6	35
m-Xylene & p-Xylene	0.200	0.2571		mg/Kg		129	70 - 130	2	35
o-Xylene	0.100	0.1219		mg/Kg		122	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*140*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: 890-5000-1 MS **Client Sample ID: TP16-1**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58690 **Prep Batch: 58728**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00198	U	0.0994	0.1011		mg/Kg		101	70 - 130
Toluene	<0.00198	U	0.0994	0.09836		mg/Kg		99	70 - 130

QC Sample Results

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

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

Lab Sample ID: 890-5000-1 MS **Client Sample ID: TP16-1**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58690 **Prep Batch: 58728**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00198	U *+	0.0994	0.1105		mg/Kg		111	70 - 130
m-Xylene & p-Xylene	<0.00397	U	0.199	0.2070		mg/Kg		104	70 - 130
o-Xylene	<0.00198	U	0.0994	0.1032		mg/Kg		104	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*136*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: 890-5000-1 MSD **Client Sample ID: TP16-1**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58690 **Prep Batch: 58728**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.0998	0.1055		mg/Kg		105	70 - 130	4	35
Toluene	<0.00198	U	0.0998	0.1063		mg/Kg		107	70 - 130	8	35
Ethylbenzene	<0.00198	U *+	0.0998	0.1124		mg/Kg		113	70 - 130	2	35
m-Xylene & p-Xylene	<0.00397	U	0.200	0.2068		mg/Kg		104	70 - 130	0	35
o-Xylene	<0.00198	U	0.0998	0.1012		mg/Kg		101	70 - 130	2	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*141*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: MB 880-58784/5-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58783 **Prep Batch: 58784**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/29/23 15:19	07/29/23 18:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/29/23 15:19	07/29/23 18:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/29/23 15:19	07/29/23 18:11	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/29/23 15:19	07/29/23 18:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/29/23 15:19	07/29/23 18:11	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/29/23 15:19	07/29/23 18:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*72*		*70 - 130*	*07/29/23 15:19*	*07/29/23 18:11*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*07/29/23 15:19*	*07/29/23 18:11*	*1*

Lab Sample ID: LCS 880-58784/1-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58783 **Prep Batch: 58784**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1044		mg/Kg		104	70 - 130
Toluene	0.100	0.1099		mg/Kg		110	70 - 130
Ethylbenzene	0.100	0.1159		mg/Kg		116	70 - 130
m-Xylene & p-Xylene	0.200	0.2458		mg/Kg		123	70 - 130

QC Sample Results

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

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

Lab Sample ID: LCS 880-58784/1-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58783 **Prep Batch: 58784**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.1201		mg/Kg		120	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*121*		*70 - 130*

Lab Sample ID: LCSD 880-58784/2-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58783 **Prep Batch: 58784**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1069		mg/Kg		107	70 - 130	2	35
Toluene			0.100	0.1117		mg/Kg		112	70 - 130	2	35
Ethylbenzene			0.100	0.1249		mg/Kg		125	70 - 130	7	35
m-Xylene & p-Xylene			0.200	0.2649	*+	mg/Kg		132	70 - 130	7	35
o-Xylene			0.100	0.1302		mg/Kg		130	70 - 130	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*

Lab Sample ID: 890-5000-11 MS **Client Sample ID: TP18-2**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58783 **Prep Batch: 58784**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.100	0.1020		mg/Kg		101	70 - 130		
Toluene	<0.00200	U	0.100	0.1086		mg/Kg		109	70 - 130		
Ethylbenzene	<0.00200	U	0.100	0.1183		mg/Kg		118	70 - 130		
m-Xylene & p-Xylene	<0.00399	U *+	0.200	0.2478		mg/Kg		124	70 - 130		
o-Xylene	<0.00200	U	0.100	0.1236		mg/Kg		124	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*

Lab Sample ID: 890-5000-11 MSD **Client Sample ID: TP18-2**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58783 **Prep Batch: 58784**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0996	0.09195		mg/Kg		91	70 - 130	10	35
Toluene	<0.00200	U	0.0996	0.09811		mg/Kg		99	70 - 130	10	35
Ethylbenzene	<0.00200	U	0.0996	0.1049		mg/Kg		105	70 - 130	12	35
m-Xylene & p-Xylene	<0.00399	U *+	0.199	0.2183		mg/Kg		110	70 - 130	13	35
o-Xylene	<0.00200	U	0.0996	0.1097		mg/Kg		110	70 - 130	12	35

QC Sample Results

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

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

Lab Sample ID: 890-5000-11 MSD **Client Sample ID: TP18-2**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58783 **Prep Batch: 58784**

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

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

Lab Sample ID: MB 880-58767/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58798 **Prep Batch: 58767**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/28/23 17:25	07/30/23 07:40	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/28/23 17:25	07/30/23 07:40	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/28/23 17:25	07/30/23 07:40	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130	07/28/23 17:25	07/30/23 07:40	1
o-Terphenyl	101		70 - 130	07/28/23 17:25	07/30/23 07:40	1

Lab Sample ID: LCS 880-58767/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58798 **Prep Batch: 58767**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	728.0		mg/Kg		73	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	994.0		mg/Kg		99	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	98		70 - 130
o-Terphenyl	96		70 - 130

Lab Sample ID: LCSD 880-58767/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58798 **Prep Batch: 58767**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	708.3		mg/Kg		71	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	920.6		mg/Kg		92	70 - 130	8	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	96		70 - 130
o-Terphenyl	93		70 - 130

QC Sample Results

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

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

Lab Sample ID: 890-5000-1 MS **Client Sample ID: TP16-1**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58798 **Prep Batch: 58767**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	991	761.7		mg/Kg		77	70 - 130
Diesel Range Organics (Over C10-C28)	<49.8	U	991	956.1		mg/Kg		94	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*92*		*70 - 130*
o-Terphenyl	*86*		*70 - 130*

Lab Sample ID: 890-5000-1 MSD **Client Sample ID: TP16-1**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58798 **Prep Batch: 58767**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	991	755.9		mg/Kg		76	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<49.8	U	991	943.2		mg/Kg		93	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*90*		*70 - 130*
o-Terphenyl	*85*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-58705/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 58737

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/28/23 11:37	1

Lab Sample ID: LCS 880-58705/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 58737

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	239.9		mg/Kg		96	90 - 110

Lab Sample ID: LCSD 880-58705/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 58737

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	239.8		mg/Kg		96	90 - 110	0	20

QC Sample Results

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-5000-1 MS **Client Sample ID: TP16-1**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 58737

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	574		250	814.2		mg/Kg		96	90 - 110		

Lab Sample ID: 890-5000-1 MSD **Client Sample ID: TP16-1**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 58737

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	574		250	815.9		mg/Kg		97	90 - 110	0	20

Lab Sample ID: 890-5000-11 MS **Client Sample ID: TP18-2**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 58737

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	88.3		248	323.5		mg/Kg		95	90 - 110		

Lab Sample ID: 890-5000-11 MSD **Client Sample ID: TP18-2**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 58737

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	88.3		248	323.8		mg/Kg		95	90 - 110	0	20

QC Association Summary

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

GC VOA

Analysis Batch: 58690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5000-1	TP16-1	Total/NA	Solid	8021B	58728
890-5000-2	TP16-3	Total/NA	Solid	8021B	58728
890-5000-3	TP20-2	Total/NA	Solid	8021B	58728
890-5000-4	TP20-4	Total/NA	Solid	8021B	58728
890-5000-5	TP25-1	Total/NA	Solid	8021B	58728
890-5000-6	TP25-2	Total/NA	Solid	8021B	58728
890-5000-7	TP22-1	Total/NA	Solid	8021B	58728
890-5000-8	TP22-2	Total/NA	Solid	8021B	58728
890-5000-9	TP19-3	Total/NA	Solid	8021B	58728
890-5000-10	TP19-5	Total/NA	Solid	8021B	58728
MB 880-58728/5-A	Method Blank	Total/NA	Solid	8021B	58728
LCS 880-58728/1-A	Lab Control Sample	Total/NA	Solid	8021B	58728
LCSD 880-58728/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	58728
890-5000-1 MS	TP16-1	Total/NA	Solid	8021B	58728
890-5000-1 MSD	TP16-1	Total/NA	Solid	8021B	58728

Prep Batch: 58728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5000-1	TP16-1	Total/NA	Solid	5035	
890-5000-2	TP16-3	Total/NA	Solid	5035	
890-5000-3	TP20-2	Total/NA	Solid	5035	
890-5000-4	TP20-4	Total/NA	Solid	5035	
890-5000-5	TP25-1	Total/NA	Solid	5035	
890-5000-6	TP25-2	Total/NA	Solid	5035	
890-5000-7	TP22-1	Total/NA	Solid	5035	
890-5000-8	TP22-2	Total/NA	Solid	5035	
890-5000-9	TP19-3	Total/NA	Solid	5035	
890-5000-10	TP19-5	Total/NA	Solid	5035	
MB 880-58728/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-58728/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-58728/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5000-1 MS	TP16-1	Total/NA	Solid	5035	
890-5000-1 MSD	TP16-1	Total/NA	Solid	5035	

Analysis Batch: 58783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5000-11	TP18-2	Total/NA	Solid	8021B	58784
890-5000-12	TP18-1	Total/NA	Solid	8021B	58784
890-5000-13	TP17-1	Total/NA	Solid	8021B	58784
890-5000-14	TP17-2	Total/NA	Solid	8021B	58784
890-5000-15	TP13-1	Total/NA	Solid	8021B	58784
890-5000-16	TP13-2	Total/NA	Solid	8021B	58784
890-5000-17	TP14-3	Total/NA	Solid	8021B	58784
890-5000-18	TP14-6	Total/NA	Solid	8021B	58784
MB 880-58784/5-A	Method Blank	Total/NA	Solid	8021B	58784
LCS 880-58784/1-A	Lab Control Sample	Total/NA	Solid	8021B	58784
LCSD 880-58784/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	58784
890-5000-11 MS	TP18-2	Total/NA	Solid	8021B	58784
890-5000-11 MSD	TP18-2	Total/NA	Solid	8021B	58784

QC Association Summary

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

GC VOA

Prep Batch: 58784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5000-11	TP18-2	Total/NA	Solid	5035	
890-5000-12	TP18-1	Total/NA	Solid	5035	
890-5000-13	TP17-1	Total/NA	Solid	5035	
890-5000-14	TP17-2	Total/NA	Solid	5035	
890-5000-15	TP13-1	Total/NA	Solid	5035	
890-5000-16	TP13-2	Total/NA	Solid	5035	
890-5000-17	TP14-3	Total/NA	Solid	5035	
890-5000-18	TP14-6	Total/NA	Solid	5035	
MB 880-58784/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-58784/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-58784/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5000-11 MS	TP18-2	Total/NA	Solid	5035	
890-5000-11 MSD	TP18-2	Total/NA	Solid	5035	

Analysis Batch: 58850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5000-1	TP16-1	Total/NA	Solid	Total BTEX	
890-5000-2	TP16-3	Total/NA	Solid	Total BTEX	
890-5000-3	TP20-2	Total/NA	Solid	Total BTEX	
890-5000-4	TP20-4	Total/NA	Solid	Total BTEX	
890-5000-5	TP25-1	Total/NA	Solid	Total BTEX	
890-5000-6	TP25-2	Total/NA	Solid	Total BTEX	
890-5000-7	TP22-1	Total/NA	Solid	Total BTEX	
890-5000-8	TP22-2	Total/NA	Solid	Total BTEX	
890-5000-9	TP19-3	Total/NA	Solid	Total BTEX	
890-5000-10	TP19-5	Total/NA	Solid	Total BTEX	
890-5000-11	TP18-2	Total/NA	Solid	Total BTEX	
890-5000-12	TP18-1	Total/NA	Solid	Total BTEX	
890-5000-13	TP17-1	Total/NA	Solid	Total BTEX	
890-5000-14	TP17-2	Total/NA	Solid	Total BTEX	
890-5000-15	TP13-1	Total/NA	Solid	Total BTEX	
890-5000-16	TP13-2	Total/NA	Solid	Total BTEX	
890-5000-17	TP14-3	Total/NA	Solid	Total BTEX	
890-5000-18	TP14-6	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 58767

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5000-1	TP16-1	Total/NA	Solid	8015NM Prep	
890-5000-2	TP16-3	Total/NA	Solid	8015NM Prep	
890-5000-3	TP20-2	Total/NA	Solid	8015NM Prep	
890-5000-4	TP20-4	Total/NA	Solid	8015NM Prep	
890-5000-5	TP25-1	Total/NA	Solid	8015NM Prep	
890-5000-6	TP25-2	Total/NA	Solid	8015NM Prep	
890-5000-7	TP22-1	Total/NA	Solid	8015NM Prep	
890-5000-8	TP22-2	Total/NA	Solid	8015NM Prep	
890-5000-9	TP19-3	Total/NA	Solid	8015NM Prep	
890-5000-10	TP19-5	Total/NA	Solid	8015NM Prep	
890-5000-11	TP18-2	Total/NA	Solid	8015NM Prep	
890-5000-12	TP18-1	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

GC Semi VOA (Continued)

Prep Batch: 58767 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5000-13	TP17-1	Total/NA	Solid	8015NM Prep	
890-5000-14	TP17-2	Total/NA	Solid	8015NM Prep	
890-5000-15	TP13-1	Total/NA	Solid	8015NM Prep	
890-5000-16	TP13-2	Total/NA	Solid	8015NM Prep	
890-5000-17	TP14-3	Total/NA	Solid	8015NM Prep	
890-5000-18	TP14-6	Total/NA	Solid	8015NM Prep	
MB 880-58767/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-58767/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-58767/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5000-1 MS	TP16-1	Total/NA	Solid	8015NM Prep	
890-5000-1 MSD	TP16-1	Total/NA	Solid	8015NM Prep	

Analysis Batch: 58798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5000-1	TP16-1	Total/NA	Solid	8015B NM	58767
890-5000-2	TP16-3	Total/NA	Solid	8015B NM	58767
890-5000-3	TP20-2	Total/NA	Solid	8015B NM	58767
890-5000-4	TP20-4	Total/NA	Solid	8015B NM	58767
890-5000-5	TP25-1	Total/NA	Solid	8015B NM	58767
890-5000-6	TP25-2	Total/NA	Solid	8015B NM	58767
890-5000-7	TP22-1	Total/NA	Solid	8015B NM	58767
890-5000-8	TP22-2	Total/NA	Solid	8015B NM	58767
890-5000-9	TP19-3	Total/NA	Solid	8015B NM	58767
890-5000-10	TP19-5	Total/NA	Solid	8015B NM	58767
890-5000-11	TP18-2	Total/NA	Solid	8015B NM	58767
890-5000-12	TP18-1	Total/NA	Solid	8015B NM	58767
890-5000-13	TP17-1	Total/NA	Solid	8015B NM	58767
890-5000-14	TP17-2	Total/NA	Solid	8015B NM	58767
890-5000-15	TP13-1	Total/NA	Solid	8015B NM	58767
890-5000-16	TP13-2	Total/NA	Solid	8015B NM	58767
890-5000-17	TP14-3	Total/NA	Solid	8015B NM	58767
890-5000-18	TP14-6	Total/NA	Solid	8015B NM	58767
MB 880-58767/1-A	Method Blank	Total/NA	Solid	8015B NM	58767
LCS 880-58767/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	58767
LCSD 880-58767/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	58767
890-5000-1 MS	TP16-1	Total/NA	Solid	8015B NM	58767
890-5000-1 MSD	TP16-1	Total/NA	Solid	8015B NM	58767

Analysis Batch: 58903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5000-1	TP16-1	Total/NA	Solid	8015 NM	
890-5000-2	TP16-3	Total/NA	Solid	8015 NM	
890-5000-3	TP20-2	Total/NA	Solid	8015 NM	
890-5000-4	TP20-4	Total/NA	Solid	8015 NM	
890-5000-5	TP25-1	Total/NA	Solid	8015 NM	
890-5000-6	TP25-2	Total/NA	Solid	8015 NM	
890-5000-7	TP22-1	Total/NA	Solid	8015 NM	
890-5000-8	TP22-2	Total/NA	Solid	8015 NM	
890-5000-9	TP19-3	Total/NA	Solid	8015 NM	
890-5000-10	TP19-5	Total/NA	Solid	8015 NM	
890-5000-11	TP18-2	Total/NA	Solid	8015 NM	

QC Association Summary

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

GC Semi VOA (Continued)

Analysis Batch: 58903 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5000-12	TP18-1	Total/NA	Solid	8015 NM	
890-5000-13	TP17-1	Total/NA	Solid	8015 NM	
890-5000-14	TP17-2	Total/NA	Solid	8015 NM	
890-5000-15	TP13-1	Total/NA	Solid	8015 NM	
890-5000-16	TP13-2	Total/NA	Solid	8015 NM	
890-5000-17	TP14-3	Total/NA	Solid	8015 NM	
890-5000-18	TP14-6	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 58705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5000-1	TP16-1	Soluble	Solid	DI Leach	
890-5000-2	TP16-3	Soluble	Solid	DI Leach	
890-5000-3	TP20-2	Soluble	Solid	DI Leach	
890-5000-4	TP20-4	Soluble	Solid	DI Leach	
890-5000-5	TP25-1	Soluble	Solid	DI Leach	
890-5000-6	TP25-2	Soluble	Solid	DI Leach	
890-5000-7	TP22-1	Soluble	Solid	DI Leach	
890-5000-8	TP22-2	Soluble	Solid	DI Leach	
890-5000-9	TP19-3	Soluble	Solid	DI Leach	
890-5000-10	TP19-5	Soluble	Solid	DI Leach	
890-5000-11	TP18-2	Soluble	Solid	DI Leach	
890-5000-12	TP18-1	Soluble	Solid	DI Leach	
890-5000-13	TP17-1	Soluble	Solid	DI Leach	
890-5000-14	TP17-2	Soluble	Solid	DI Leach	
890-5000-15	TP13-1	Soluble	Solid	DI Leach	
890-5000-16	TP13-2	Soluble	Solid	DI Leach	
890-5000-17	TP14-3	Soluble	Solid	DI Leach	
890-5000-18	TP14-6	Soluble	Solid	DI Leach	
MB 880-58705/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-58705/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-58705/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5000-1 MS	TP16-1	Soluble	Solid	DI Leach	
890-5000-1 MSD	TP16-1	Soluble	Solid	DI Leach	
890-5000-11 MS	TP18-2	Soluble	Solid	DI Leach	
890-5000-11 MSD	TP18-2	Soluble	Solid	DI Leach	

Analysis Batch: 58737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5000-1	TP16-1	Soluble	Solid	300.0	58705
890-5000-2	TP16-3	Soluble	Solid	300.0	58705
890-5000-3	TP20-2	Soluble	Solid	300.0	58705
890-5000-4	TP20-4	Soluble	Solid	300.0	58705
890-5000-5	TP25-1	Soluble	Solid	300.0	58705
890-5000-6	TP25-2	Soluble	Solid	300.0	58705
890-5000-7	TP22-1	Soluble	Solid	300.0	58705
890-5000-8	TP22-2	Soluble	Solid	300.0	58705
890-5000-9	TP19-3	Soluble	Solid	300.0	58705
890-5000-10	TP19-5	Soluble	Solid	300.0	58705
890-5000-11	TP18-2	Soluble	Solid	300.0	58705

QC Association Summary

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

HPLC/IC (Continued)

Analysis Batch: 58737 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5000-12	TP18-1	Soluble	Solid	300.0	58705
890-5000-13	TP17-1	Soluble	Solid	300.0	58705
890-5000-14	TP17-2	Soluble	Solid	300.0	58705
890-5000-15	TP13-1	Soluble	Solid	300.0	58705
890-5000-16	TP13-2	Soluble	Solid	300.0	58705
890-5000-17	TP14-3	Soluble	Solid	300.0	58705
890-5000-18	TP14-6	Soluble	Solid	300.0	58705
MB 880-58705/1-A	Method Blank	Soluble	Solid	300.0	58705
LCS 880-58705/2-A	Lab Control Sample	Soluble	Solid	300.0	58705
LCSD 880-58705/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	58705
890-5000-1 MS	TP16-1	Soluble	Solid	300.0	58705
890-5000-1 MSD	TP16-1	Soluble	Solid	300.0	58705
890-5000-11 MS	TP18-2	Soluble	Solid	300.0	58705
890-5000-11 MSD	TP18-2	Soluble	Solid	300.0	58705

Lab Chronicle

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: TP16-1 Lab Sample ID: 890-5000-1

Date Collected: 07/26/23 09:15 **Matrix: Solid**
Date Received: 07/27/23 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	58728	07/28/23 13:01	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58690	07/28/23 18:12	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58850	07/31/23 11:36	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58903	07/31/23 15:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	58767	07/28/23 17:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58798	07/30/23 10:15	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	58705	07/28/23 10:28	KS	EET MID
Soluble	Analysis	300.0		1			58737	07/28/23 11:55	CH	EET MID

Client Sample ID: TP16-3 Lab Sample ID: 890-5000-2

Date Collected: 07/26/23 09:30 **Matrix: Solid**
Date Received: 07/27/23 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	58728	07/28/23 13:01	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58690	07/28/23 18:37	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58850	07/31/23 11:36	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58903	07/31/23 15:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	58767	07/28/23 17:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58798	07/30/23 11:23	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	58705	07/28/23 10:28	KS	EET MID
Soluble	Analysis	300.0		5			58737	07/28/23 12:13	CH	EET MID

Client Sample ID: TP20-2 Lab Sample ID: 890-5000-3

Date Collected: 07/26/23 09:45 **Matrix: Solid**
Date Received: 07/27/23 09:50

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	58728	07/28/23 13:01	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58690	07/28/23 19:03	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58850	07/31/23 11:36	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58903	07/31/23 15:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.95 g	10 mL	58767	07/28/23 17:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58798	07/30/23 11:55	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	58705	07/28/23 10:28	KS	EET MID
Soluble	Analysis	300.0		1			58737	07/28/23 12:19	CH	EET MID

Client Sample ID: TP20-4 Lab Sample ID: 890-5000-4

Date Collected: 07/26/23 10:00 **Matrix: Solid**
Date Received: 07/27/23 09:50

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	58728	07/28/23 13:01	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58690	07/28/23 19:29	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58850	07/31/23 11:36	AJ	EET MID

Lab Chronicle

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: TP20-4 Lab Sample ID: 890-5000-4

Date Collected: 07/26/23 10:00 **Matrix: Solid**
Date Received: 07/27/23 09:50

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			58903	07/31/23 15:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	58767	07/28/23 17:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58798	07/30/23 12:17	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	58705	07/28/23 10:28	KS	EET MID
Soluble	Analysis	300.0		1			58737	07/28/23 12:26	CH	EET MID

Client Sample ID: TP25-1 Lab Sample ID: 890-5000-5

Date Collected: 07/26/23 10:05 **Matrix: Solid**
Date Received: 07/27/23 09:50

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	58728	07/28/23 13:01	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58690	07/28/23 19:54	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58850	07/31/23 11:36	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58903	07/31/23 15:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	58767	07/28/23 17:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58798	07/30/23 14:17	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	58705	07/28/23 10:28	KS	EET MID
Soluble	Analysis	300.0		1			58737	07/28/23 12:32	CH	EET MID

Client Sample ID: TP25-2 Lab Sample ID: 890-5000-6

Date Collected: 07/26/23 10:10 **Matrix: Solid**
Date Received: 07/27/23 09:50

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	58728	07/28/23 13:01	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58690	07/28/23 20:20	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58850	07/31/23 11:36	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58903	07/31/23 15:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	58767	07/28/23 17:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58798	07/30/23 14:39	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	58705	07/28/23 10:28	KS	EET MID
Soluble	Analysis	300.0		1			58737	07/28/23 12:50	CH	EET MID

Client Sample ID: TP22-1 Lab Sample ID: 890-5000-7

Date Collected: 07/26/23 10:25 **Matrix: Solid**
Date Received: 07/27/23 09:50

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	58728	07/28/23 13:01	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58690	07/28/23 20:45	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58850	07/31/23 11:36	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58903	07/31/23 15:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	58767	07/28/23 17:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58798	07/30/23 15:01	AJ	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: TP22-1 Lab Sample ID: 890-5000-7

Date Collected: 07/26/23 10:25 **Matrix: Solid**
Date Received: 07/27/23 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.05 g	50 mL	58705	07/28/23 10:28	KS	EET MID
Soluble	Analysis	300.0		1			58737	07/28/23 12:56	CH	EET MID

Client Sample ID: TP22-2 Lab Sample ID: 890-5000-8

Date Collected: 07/26/23 10:35 **Matrix: Solid**
Date Received: 07/27/23 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	58728	07/28/23 13:01	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58690	07/28/23 21:10	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58850	07/31/23 11:36	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58903	07/31/23 15:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	58767	07/28/23 17:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58798	07/30/23 15:23	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	58705	07/28/23 10:28	KS	EET MID
Soluble	Analysis	300.0		1			58737	07/28/23 13:02	CH	EET MID

Client Sample ID: TP19-3 Lab Sample ID: 890-5000-9

Date Collected: 07/26/23 11:30 **Matrix: Solid**
Date Received: 07/27/23 09:50

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	58728	07/28/23 13:01	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58690	07/28/23 21:36	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58850	07/31/23 11:36	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58903	07/31/23 15:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	58767	07/28/23 17:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58798	07/30/23 15:45	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	58705	07/28/23 10:28	KS	EET MID
Soluble	Analysis	300.0		5			58737	07/28/23 13:09	CH	EET MID

Client Sample ID: TP19-5 Lab Sample ID: 890-5000-10

Date Collected: 07/26/23 11:45 **Matrix: Solid**
Date Received: 07/27/23 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	58728	07/28/23 13:01	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58690	07/28/23 22:01	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58850	07/31/23 11:36	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58903	07/31/23 15:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.95 g	10 mL	58767	07/28/23 17:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58798	07/30/23 16:07	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	58705	07/28/23 10:28	KS	EET MID
Soluble	Analysis	300.0		5			58737	07/28/23 13:15	CH	EET MID

Lab Chronicle

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: TP18-2 Lab Sample ID: 890-5000-11

Date Collected: 07/26/23 12:10 **Matrix: Solid**
Date Received: 07/27/23 09:50

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	58784	07/29/23 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58783	07/29/23 18:32	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58850	07/31/23 11:01	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58903	07/31/23 15:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	58767	07/28/23 17:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58798	07/30/23 17:58	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	58705	07/28/23 10:28	KS	EET MID
Soluble	Analysis	300.0		1			58737	07/28/23 13:21	CH	EET MID

Client Sample ID: TP18-1 Lab Sample ID: 890-5000-12

Date Collected: 07/26/23 12:00 **Matrix: Solid**
Date Received: 07/27/23 09:50

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	58784	07/29/23 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58783	07/29/23 18:53	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58850	07/31/23 11:01	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58903	07/31/23 15:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	58767	07/28/23 17:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58798	07/30/23 18:20	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	58705	07/28/23 10:28	KS	EET MID
Soluble	Analysis	300.0		1			58737	07/28/23 13:39	CH	EET MID

Client Sample ID: TP17-1 Lab Sample ID: 890-5000-13

Date Collected: 07/26/23 13:15 **Matrix: Solid**
Date Received: 07/27/23 09:50

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	58784	07/29/23 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58783	07/29/23 19:13	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58850	07/31/23 11:01	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58903	07/31/23 15:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	58767	07/28/23 17:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58798	07/30/23 18:42	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	58705	07/28/23 10:28	KS	EET MID
Soluble	Analysis	300.0		1			58737	07/28/23 13:45	CH	EET MID

Client Sample ID: TP17-2 Lab Sample ID: 890-5000-14

Date Collected: 07/26/23 13:30 **Matrix: Solid**
Date Received: 07/27/23 09:50

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	58784	07/29/23 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58783	07/29/23 19:34	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58850	07/31/23 11:01	AJ	EET MID

Lab Chronicle

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: TP17-2
Date Collected: 07/26/23 13:30
Date Received: 07/27/23 09:50

Lab Sample ID: 890-5000-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			58903	07/31/23 15:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	58767	07/28/23 17:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58798	07/30/23 19:05	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	58705	07/28/23 10:28	KS	EET MID
Soluble	Analysis	300.0		1			58737	07/28/23 14:04	CH	EET MID

Client Sample ID: TP13-1
Date Collected: 07/26/23 13:35
Date Received: 07/27/23 09:50

Lab Sample ID: 890-5000-15
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	58784	07/29/23 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58783	07/29/23 19:54	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58850	07/31/23 11:01	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58903	07/31/23 15:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.10 g	10 mL	58767	07/28/23 17:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58798	07/30/23 19:27	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	58705	07/28/23 10:28	KS	EET MID
Soluble	Analysis	300.0		1			58737	07/28/23 14:10	CH	EET MID

Client Sample ID: TP13-2
Date Collected: 07/26/23 13:40
Date Received: 07/27/23 09:50

Lab Sample ID: 890-5000-16
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	58784	07/29/23 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58783	07/29/23 20:15	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58850	07/31/23 11:01	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58903	07/31/23 15:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	58767	07/28/23 17:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58798	07/30/23 19:50	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	58705	07/28/23 10:28	KS	EET MID
Soluble	Analysis	300.0		1			58737	07/28/23 14:16	CH	EET MID

Client Sample ID: TP14-3
Date Collected: 07/26/23 14:00
Date Received: 07/27/23 09:50

Lab Sample ID: 890-5000-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	58784	07/29/23 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58783	07/29/23 20:35	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58850	07/31/23 11:01	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58903	07/31/23 15:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	58767	07/28/23 17:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58798	07/30/23 20:13	AJ	EET MID

Lab Chronicle

Client: GHD Services Inc.
Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release
SDG: 12618492

Client Sample ID: TP14-3
Lab Sample ID: 890-5000-17
Date Collected: 07/26/23 14:00
Matrix: Solid
Date Received: 07/27/23 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.96 g	50 mL	58705	07/28/23 10:28	KS	EET MID
Soluble	Analysis	300.0		5			58737	07/28/23 14:22	CH	EET MID

Client Sample ID: TP14-6
Lab Sample ID: 890-5000-18
Date Collected: 07/26/23 14:20
Matrix: Solid
Date Received: 07/27/23 09:50

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	58784	07/29/23 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58783	07/29/23 20:55	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58850	07/31/23 11:01	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58903	07/31/23 15:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	58767	07/28/23 17:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58798	07/30/23 20:35	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	58705	07/28/23 10:28	KS	EET MID
Soluble	Analysis	300.0		5			58737	07/28/23 14:28	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: GHD Services Inc. Job ID: 890-5000-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-5000-1
SDG: 12618492

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5000-1	TP16-1	Solid	07/26/23 09:15	07/27/23 09:50	1
890-5000-2	TP16-3	Solid	07/26/23 09:30	07/27/23 09:50	3
890-5000-3	TP20-2	Solid	07/26/23 09:45	07/27/23 09:50	2
890-5000-4	TP20-4	Solid	07/26/23 10:00	07/27/23 09:50	4
890-5000-5	TP25-1	Solid	07/26/23 10:05	07/27/23 09:50	1
890-5000-6	TP25-2	Solid	07/26/23 10:10	07/27/23 09:50	2
890-5000-7	TP22-1	Solid	07/26/23 10:25	07/27/23 09:50	1
890-5000-8	TP22-2	Solid	07/26/23 10:35	07/27/23 09:50	2
890-5000-9	TP19-3	Solid	07/26/23 11:30	07/27/23 09:50	3
890-5000-10	TP19-5	Solid	07/26/23 11:45	07/27/23 09:50	5
890-5000-11	TP18-2	Solid	07/26/23 12:10	07/27/23 09:50	2
890-5000-12	TP18-1	Solid	07/26/23 12:00	07/27/23 09:50	1
890-5000-13	TP17-1	Solid	07/26/23 13:15	07/27/23 09:50	1
890-5000-14	TP17-2	Solid	07/26/23 13:30	07/27/23 09:50	2
890-5000-15	TP13-1	Solid	07/26/23 13:35	07/27/23 09:50	1
890-5000-16	TP13-2	Solid	07/26/23 13:40	07/27/23 09:50	2
890-5000-17	TP14-3	Solid	07/26/23 14:00	07/27/23 09:50	3
890-5000-18	TP14-6	Solid	07/26/23 14:20	07/27/23 09:50	6

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 2

Project Manager:	Nate Reece	Bill to: (if different)	
Company Name:	GHD Services Inc.	Company Name:	
Address:	11451 W. Katy FWY. #400	Address:	
City, State ZIP:	Houston, Tx 77079	City, State ZIP:	
Phone:	(281) 286-7158	Email:	nate.reece@ghd.com

Work Order Comments

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

Project Name:	Delek Matador produced water release	Turn Around	24hr
Project Number:	126018492	☐ Routine ☑ Rush	Pres. Code
Project Location:	32.578378, -103.66405	Due Date:	
Sampler's Name:	Tristanna Crapo	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	IR#0007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.8
Total Containers:		Corrected Temperature:	1.6

ANALYSIS REQUEST

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HNO_3: HN
NaOH: Na
OH: Zn
NaOH+Ascorbic Acid: SAPC

890-5000 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	BTEX 8021B	TPH/DRO 8015	TPH/GRO 8015	Chloride 300	Sample Comments
TP16-1	S	7-26-23	0915	1ft	G	1	X	X	X	X	
TP16-3			0930	3ft							
TP20-2			0945	2ft							
TP20-4			1000	4ft							
TP25-1			1005	1ft							
TP25-2			1015	2ft							
TP22-1			1025	1ft							
TP22-2			1035	2ft							
TP19-3			1130	3ft							
TP19-5			1145	5ft							

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		7.27.23 950	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Received by OCD: 12/4/2024 10:43:20 AM

Released to Imaging: 3/12/2025 11:29:45 AM

7/31/2023

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Nate Reece	Bill to: (if different)	
Company Name:	GHD Services Inc.	Company Name:	
Address:	11451 W. Katy FWY. #400	Address:	
City, State ZIP:	Houston, Tx 77079	City, State ZIP:	
Phone:	(281) 286-7158 Email:	nate.reece@ghd.com	

Work Order Comments

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

Project Name:	Delek Matador produced water release	Turn Around	☐ Routine ☑ Rush 24hr
Project Number:	126018492		
Project Location:	32.578378, -103.66405	Due Date:	
Sampler's Name:	Tristanna Crapo	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

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

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2SO_4: H_2 | NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX 8021B	TPH/DRO 8015	TPH/GRO 8015	Chloride 300	Sample Comments
TP18-2	S	7-26-23	1210	2ft	G	1		x	x	x	x	
TP18-1			1200	1ft								
TP17-1			1315	1ft								
TP17-2			1330	2ft								
TP13-1			1335	1ft								
TP13-2			1340	2ft								
TP14-3			1400	3ft								
TP14-6			1420	6ft								

Parameters

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Cloe Clay	7.27.23 956	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

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Received by OCD: 12/4/2024 10:43:20 AM

Released to Imaging: 3/12/2025 11:29:45 AM

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 890-5000-1
SDG Number: 12618492

Login Number: 5000
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: GHD Services Inc.

Job Number: 890-5000-1
SDG Number: 12618492

Login Number: 5000
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 07/28/23 10:48 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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Nate Reece
GHD Services Inc.
2135 South Loop 250 West
Midland, Texas 79703

Generated 8/3/2023 9:12:05 AM

JOB DESCRIPTION

Delek Matador Produced Water Release
SDG NUMBER 12618492

JOB NUMBER

890-5010-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 5/12/2023 11:29:43 AM

my EOL

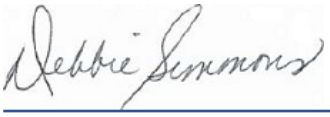
Eurofins Carlsbad

Job Notes

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

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

Authorization



Generated
8/3/2023 9:12:05 AM

Authorized for release by
Debbie Simmons, Project Manager
Debbie.Simmons@et.eurofinsus.com
(832)986-6768

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Definitions/Glossary

Client: GHD Services Inc. Job ID: 890-5010-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

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: GHD Services Inc. Job ID: 890-5010-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Job ID: 890-5010-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5010-1

Receipt
The samples were received on 7/31/2023 9:45 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 2.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BH-1 (890-5010-1), BH-2 (890-5010-2), BH-3 (890-5010-3), BH-4 (890-5010-4), BH-5 (890-5010-5), BH-6 (890-5010-6), BH-7 (890-5010-7), BH-8 (890-5010-8), BG-1 (890-5010-9), BG-2 (890-5010-10), BH-9 (890-5010-11), BH-10 (890-5010-12), BH-11 (890-5010-13), BH-12 (890-5010-14), BH-13 (890-5010-15), BH-14 (890-5010-16), BH-15 (890-5010-17) and BH-16 (890-5010-18).

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: The continuing calibration verification (CCV) associated with batch 880-59067 recovered above the upper control limit for Gasoline Range Organics (GRO)-C6-C10. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: (CCV 880-59067/20) and (CCV 880-59067/31).

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: BH-14 (890-5010-16), BH-16 (890-5010-18) and (MB 880-59046/1-A). Evidence of matrix interferences is not obvious.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-58954 and analytical batch 880-59013 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

Client Sample Results

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-5010-1
SDG: 12618492

Client Sample ID: BH-1

Date Collected: 07/28/23 09:20
Date Received: 07/31/23 09:45
Sample Depth: 5.5

Lab Sample ID: 890-5010-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		08/01/23 10:39	08/01/23 14:39	1
Toluene	<0.00198	U	0.00198		mg/Kg		08/01/23 10:39	08/01/23 14:39	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		08/01/23 10:39	08/01/23 14:39	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		08/01/23 10:39	08/01/23 14:39	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		08/01/23 10:39	08/01/23 14:39	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		08/01/23 10:39	08/01/23 14:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*08/01/23 10:39*	*08/01/23 14:39*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*08/01/23 10:39*	*08/01/23 14:39*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			08/02/23 11:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			08/02/23 19:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3		mg/Kg		08/01/23 17:08	08/02/23 10:14	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		08/01/23 17:08	08/02/23 10:14	1
Oil Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		08/01/23 17:08	08/02/23 10:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*117*		*70 - 130*	*08/01/23 17:08*	*08/02/23 10:14*	*1*
o-Terphenyl	*98*		*70 - 130*	*08/01/23 17:08*	*08/02/23 10:14*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**563**	**F1**	25.1		mg/Kg			08/01/23 14:24	5

Client Sample ID: BH-2

Date Collected: 07/28/23 09:22
Date Received: 07/31/23 09:45
Sample Depth: 5.5

Lab Sample ID: 890-5010-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		08/01/23 10:39	08/01/23 14:59	1
Toluene	<0.00202	U	0.00202		mg/Kg		08/01/23 10:39	08/01/23 14:59	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		08/01/23 10:39	08/01/23 14:59	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		08/01/23 10:39	08/01/23 14:59	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		08/01/23 10:39	08/01/23 14:59	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		08/01/23 10:39	08/01/23 14:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*08/01/23 10:39*	*08/01/23 14:59*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-5010-1
SDG: 12618492

Client Sample ID: BH-2

Date Collected: 07/28/23 09:22
Date Received: 07/31/23 09:45
Sample Depth: 5.5

Lab Sample ID: 890-5010-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*08/01/23 10:39*	*08/01/23 14:59*	*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			08/02/23 11:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			08/02/23 19:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		08/01/23 17:08	08/02/23 11:20	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		08/01/23 17:08	08/02/23 11:20	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		08/01/23 17:08	08/02/23 11:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*08/01/23 17:08*	*08/02/23 11:20*	*1*
o-Terphenyl	*94*		*70 - 130*	*08/01/23 17:08*	*08/02/23 11:20*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**606**		24.9		mg/Kg			08/01/23 14:39	5

Client Sample ID: BH-3

Date Collected: 07/28/23 09:24
Date Received: 07/31/23 09:45
Sample Depth: 5.5

Lab Sample ID: 890-5010-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		08/01/23 10:39	08/01/23 15:20	1
Toluene	<0.00201	U	0.00201		mg/Kg		08/01/23 10:39	08/01/23 15:20	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		08/01/23 10:39	08/01/23 15:20	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		08/01/23 10:39	08/01/23 15:20	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		08/01/23 10:39	08/01/23 15:20	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		08/01/23 10:39	08/01/23 15:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*08/01/23 10:39*	*08/01/23 15:20*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*08/01/23 10:39*	*08/01/23 15:20*	*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			08/02/23 11:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			08/02/23 19:38	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-5010-1
SDG: 12618492

Client Sample ID: BH-3

Date Collected: 07/28/23 09:24
Date Received: 07/31/23 09:45
Sample Depth: 5.5

Lab Sample ID: 890-5010-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		08/01/23 17:08	08/02/23 11:42	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		08/01/23 17:08	08/02/23 11:42	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		08/01/23 17:08	08/02/23 11:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*08/01/23 17:08*	*08/02/23 11:42*	*1*
o-Terphenyl	*91*		*70 - 130*	*08/01/23 17:08*	*08/02/23 11:42*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**732**		24.9		mg/Kg			08/01/23 14:44	5

Client Sample ID: BH-4

Date Collected: 07/28/23 09:26
Date Received: 07/31/23 09:45
Sample Depth: 5.5

Lab Sample ID: 890-5010-4

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:39	08/01/23 15:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:39	08/01/23 15:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:39	08/01/23 15:40	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		08/01/23 10:39	08/01/23 15:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:39	08/01/23 15:40	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		08/01/23 10:39	08/01/23 15:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*08/01/23 10:39*	*08/01/23 15:40*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*08/01/23 10:39*	*08/01/23 15:40*	*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			08/02/23 11:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			08/02/23 19:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		08/01/23 17:08	08/02/23 12:04	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		08/01/23 17:08	08/02/23 12:04	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		08/01/23 17:08	08/02/23 12:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*08/01/23 17:08*	*08/02/23 12:04*	*1*
o-Terphenyl	*92*		*70 - 130*	*08/01/23 17:08*	*08/02/23 12:04*	*1*

Client Sample Results

Client: GHD Services Inc. Job ID: 890-5010-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: BH-4 Lab Sample ID: 890-5010-4

Date Collected: 07/28/23 09:26 **Matrix: Solid**
Date Received: 07/31/23 09:45
Sample Depth: 5.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	558		25.1		mg/Kg			08/01/23 14:49	5

Client Sample ID: BH-5 Lab Sample ID: 890-5010-5

Date Collected: 07/28/23 09:28 **Matrix: Solid**
Date Received: 07/31/23 09:45
Sample Depth: 5.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		08/01/23 10:39	08/01/23 16:01	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/01/23 10:39	08/01/23 16:01	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		08/01/23 10:39	08/01/23 16:01	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		08/01/23 10:39	08/01/23 16:01	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		08/01/23 10:39	08/01/23 16:01	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		08/01/23 10:39	08/01/23 16:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*08/01/23 10:39*	*08/01/23 16:01*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*08/01/23 10:39*	*08/01/23 16:01*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			08/02/23 11:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			08/02/23 19:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		08/01/23 17:08	08/02/23 12:25	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		08/01/23 17:08	08/02/23 12:25	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		08/01/23 17:08	08/02/23 12:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*08/01/23 17:08*	*08/02/23 12:25*	*1*
o-Terphenyl	*90*		*70 - 130*	*08/01/23 17:08*	*08/02/23 12:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	420		24.8		mg/Kg			08/01/23 14:54	5

Client Sample Results

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-5010-1
SDG: 12618492

Client Sample ID: BH-6

Date Collected: 07/28/23 09:30
Date Received: 07/31/23 09:45
Sample Depth: 5.5

Lab Sample ID: 890-5010-6
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		08/01/23 10:39	08/01/23 16:21	1
Toluene	<0.00198	U	0.00198		mg/Kg		08/01/23 10:39	08/01/23 16:21	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		08/01/23 10:39	08/01/23 16:21	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		08/01/23 10:39	08/01/23 16:21	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		08/01/23 10:39	08/01/23 16:21	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		08/01/23 10:39	08/01/23 16:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*08/01/23 10:39*	*08/01/23 16:21*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*08/01/23 10:39*	*08/01/23 16:21*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			08/02/23 11:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2		mg/Kg			08/02/23 19:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2		mg/Kg		08/01/23 17:08	08/02/23 12:48	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		08/01/23 17:08	08/02/23 12:48	1
Oil Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		08/01/23 17:08	08/02/23 12:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*08/01/23 17:08*	*08/02/23 12:48*	*1*
o-Terphenyl	*92*		*70 - 130*	*08/01/23 17:08*	*08/02/23 12:48*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**517**		25.2		mg/Kg			08/01/23 15:09	5

Client Sample ID: BH-7

Date Collected: 07/28/23 09:32
Date Received: 07/31/23 09:45
Sample Depth: 5.5

Lab Sample ID: 890-5010-7
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:39	08/01/23 16:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:39	08/01/23 16:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:39	08/01/23 16:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/01/23 10:39	08/01/23 16:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:39	08/01/23 16:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/01/23 10:39	08/01/23 16:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*08/01/23 10:39*	*08/01/23 16:41*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-5010-1
SDG: 12618492

Client Sample ID: BH-7

Date Collected: 07/28/23 09:32
Date Received: 07/31/23 09:45
Sample Depth: 5.5

Lab Sample ID: 890-5010-7
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*08/01/23 10:39*	*08/01/23 16:41*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			08/02/23 11:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			08/02/23 19:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3		mg/Kg		08/01/23 17:08	08/02/23 13:09	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		08/01/23 17:08	08/02/23 13:09	1
Oil Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		08/01/23 17:08	08/02/23 13:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*08/01/23 17:08*	*08/02/23 13:09*	*1*
o-Terphenyl	*91*		*70 - 130*	*08/01/23 17:08*	*08/02/23 13:09*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**837**		25.0		mg/Kg			08/01/23 15:14	5

Client Sample ID: BH-8

Date Collected: 07/28/23 09:34
Date Received: 07/31/23 09:45
Sample Depth: 5.5

Lab Sample ID: 890-5010-8
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		08/01/23 10:39	08/01/23 17:02	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/01/23 10:39	08/01/23 17:02	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		08/01/23 10:39	08/01/23 17:02	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		08/01/23 10:39	08/01/23 17:02	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		08/01/23 10:39	08/01/23 17:02	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		08/01/23 10:39	08/01/23 17:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*08/01/23 10:39*	*08/01/23 17:02*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*08/01/23 10:39*	*08/01/23 17:02*	*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			08/02/23 11:04	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			08/02/23 19:38	1

Client Sample Results

Client: GHD Services Inc. Job ID: 890-5010-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: BH-8 Lab Sample ID: 890-5010-8

Date Collected: 07/28/23 09:34 **Matrix: Solid**
Date Received: 07/31/23 09:45
Sample Depth: 5.5

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		08/01/23 17:08	08/02/23 13:31	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		08/01/23 17:08	08/02/23 13:31	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/01/23 17:08	08/02/23 13:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*08/01/23 17:08*	*08/02/23 13:31*	*1*
o-Terphenyl	*90*		*70 - 130*	*08/01/23 17:08*	*08/02/23 13:31*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**541**		24.9		mg/Kg			08/01/23 15:19	5

Client Sample ID: BG-1 Lab Sample ID: 890-5010-9

Date Collected: 07/27/23 09:30 **Matrix: Solid**
Date Received: 07/31/23 09:45
Sample Depth: SURFACE

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		08/01/23 10:39	08/01/23 17:22	1
Toluene	<0.00201	U	0.00201		mg/Kg		08/01/23 10:39	08/01/23 17:22	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		08/01/23 10:39	08/01/23 17:22	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		08/01/23 10:39	08/01/23 17:22	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		08/01/23 10:39	08/01/23 17:22	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		08/01/23 10:39	08/01/23 17:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*08/01/23 10:39*	*08/01/23 17:22*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*08/01/23 10:39*	*08/01/23 17:22*	*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			08/02/23 11:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			08/02/23 19:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		08/01/23 17:08	08/02/23 13:53	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		08/01/23 17:08	08/02/23 13:53	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		08/01/23 17:08	08/02/23 13:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*08/01/23 17:08*	*08/02/23 13:53*	*1*
o-Terphenyl	*90*		*70 - 130*	*08/01/23 17:08*	*08/02/23 13:53*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-5010-1
SDG: 12618492

Client Sample ID: BG-1

Lab Sample ID: 890-5010-9
Matrix: Solid
Date Collected: 07/27/23 09:30
Date Received: 07/31/23 09:45
Sample Depth: SURFACE

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	49.9		4.96		mg/Kg			08/01/23 15:24	1

Client Sample ID: BG-2

Lab Sample ID: 890-5010-10
Matrix: Solid
Date Collected: 07/27/23 09:35
Date Received: 07/31/23 09:45
Sample Depth: SURFACE

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		08/01/23 10:39	08/01/23 17:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:39	08/01/23 17:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:39	08/01/23 17:43	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		08/01/23 10:39	08/01/23 17:43	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:39	08/01/23 17:43	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		08/01/23 10:39	08/01/23 17:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*08/01/23 10:39*	*08/01/23 17:43*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*08/01/23 10:39*	*08/01/23 17:43*	*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			08/02/23 11:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			08/02/23 19:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		08/01/23 17:08	08/02/23 14:14	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		08/01/23 17:08	08/02/23 14:14	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		08/01/23 17:08	08/02/23 14:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*08/01/23 17:08*	*08/02/23 14:14*	*1*
o-Terphenyl	*90*		*70 - 130*	*08/01/23 17:08*	*08/02/23 14:14*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	48.1		5.02		mg/Kg			08/01/23 15:29	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-5010-1
SDG: 12618492

Client Sample ID: BH-9

Lab Sample ID: 890-5010-11
Matrix: Solid
Date Collected: 07/28/23 14:40
Date Received: 07/31/23 09:45
Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:39	08/01/23 19:34	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:39	08/01/23 19:34	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:39	08/01/23 19:34	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		08/01/23 10:39	08/01/23 19:34	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:39	08/01/23 19:34	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		08/01/23 10:39	08/01/23 19:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*	*08/01/23 10:39*	*08/01/23 19:34*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*08/01/23 10:39*	*08/01/23 19:34*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			08/02/23 11:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			08/02/23 19:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		08/01/23 17:08	08/02/23 14:58	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		08/01/23 17:08	08/02/23 14:58	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		08/01/23 17:08	08/02/23 14:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*08/01/23 17:08*	*08/02/23 14:58*	*1*
o-Terphenyl	*94*		*70 - 130*	*08/01/23 17:08*	*08/02/23 14:58*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**367**		4.97		mg/Kg			08/01/23 15:34	1

Client Sample ID: BH-10

Lab Sample ID: 890-5010-12
Matrix: Solid
Date Collected: 07/28/23 14:42
Date Received: 07/31/23 09:45
Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		08/01/23 10:39	08/01/23 19:55	1
Toluene	<0.00198	U	0.00198		mg/Kg		08/01/23 10:39	08/01/23 19:55	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		08/01/23 10:39	08/01/23 19:55	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		08/01/23 10:39	08/01/23 19:55	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		08/01/23 10:39	08/01/23 19:55	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		08/01/23 10:39	08/01/23 19:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*08/01/23 10:39*	*08/01/23 19:55*	*1*

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Client Sample Results

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-5010-1
SDG: 12618492

Client Sample ID: BH-10

Date Collected: 07/28/23 14:42
Date Received: 07/31/23 09:45
Sample Depth: 2

Lab Sample ID: 890-5010-12
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*08/01/23 10:39*	*08/01/23 19:55*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			08/02/23 11:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			08/02/23 19:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		08/01/23 17:08	08/02/23 15:20	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		08/01/23 17:08	08/02/23 15:20	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		08/01/23 17:08	08/02/23 15:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*08/01/23 17:08*	*08/02/23 15:20*	*1*
o-Terphenyl	*86*		*70 - 130*	*08/01/23 17:08*	*08/02/23 15:20*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**184**		5.00		mg/Kg			08/01/23 15:49	1

Client Sample ID: BH-11

Date Collected: 07/28/23 14:44
Date Received: 07/31/23 09:45
Sample Depth: 2

Lab Sample ID: 890-5010-13
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		08/01/23 10:39	08/01/23 20:15	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/01/23 10:39	08/01/23 20:15	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		08/01/23 10:39	08/01/23 20:15	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		08/01/23 10:39	08/01/23 20:15	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		08/01/23 10:39	08/01/23 20:15	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		08/01/23 10:39	08/01/23 20:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*08/01/23 10:39*	*08/01/23 20:15*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*08/01/23 10:39*	*08/01/23 20:15*	*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			08/02/23 11:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			08/02/23 19:38	1

Client Sample Results

Client: GHD Services Inc. Job ID: 890-5010-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: BH-11 Lab Sample ID: 890-5010-13
Date Collected: 07/28/23 14:44 **Matrix: Solid**
Date Received: 07/31/23 09:45
Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		08/01/23 17:08	08/02/23 15:41	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		08/01/23 17:08	08/02/23 15:41	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		08/01/23 17:08	08/02/23 15:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*08/01/23 17:08*	*08/02/23 15:41*	*1*
o-Terphenyl	*95*		*70 - 130*	*08/01/23 17:08*	*08/02/23 15:41*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**300**		4.99		mg/Kg			08/01/23 15:54	1

Client Sample ID: BH-12 Lab Sample ID: 890-5010-14
Date Collected: 07/28/23 14:46 **Matrix: Solid**
Date Received: 07/31/23 09:45
Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		08/01/23 10:39	08/01/23 20:36	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/01/23 10:39	08/01/23 20:36	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		08/01/23 10:39	08/01/23 20:36	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		08/01/23 10:39	08/01/23 20:36	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		08/01/23 10:39	08/01/23 20:36	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		08/01/23 10:39	08/01/23 20:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*08/01/23 10:39*	*08/01/23 20:36*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*08/01/23 10:39*	*08/01/23 20:36*	*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			08/02/23 11:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			08/02/23 19:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		08/01/23 17:08	08/02/23 16:04	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		08/01/23 17:08	08/02/23 16:04	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		08/01/23 17:08	08/02/23 16:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*08/01/23 17:08*	*08/02/23 16:04*	*1*
o-Terphenyl	*88*		*70 - 130*	*08/01/23 17:08*	*08/02/23 16:04*	*1*

Client Sample Results

Client: GHD Services Inc. Job ID: 890-5010-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: BH-12
Lab Sample ID: 890-5010-14
Date Collected: 07/28/23 14:46
Matrix: Solid
Date Received: 07/31/23 09:45
Sample Depth: 2

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	207		5.01		mg/Kg			08/01/23 16:09	1

Client Sample ID: BH-13
Lab Sample ID: 890-5010-15
Date Collected: 07/28/23 14:48
Matrix: Solid
Date Received: 07/31/23 09:45
Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		08/01/23 10:39	08/01/23 20:56	1
Toluene	<0.00202	U	0.00202		mg/Kg		08/01/23 10:39	08/01/23 20:56	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		08/01/23 10:39	08/01/23 20:56	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		08/01/23 10:39	08/01/23 20:56	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		08/01/23 10:39	08/01/23 20:56	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		08/01/23 10:39	08/01/23 20:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*08/01/23 10:39*	*08/01/23 20:56*	*1*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*08/01/23 10:39*	*08/01/23 20:56*	*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			08/02/23 11:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			08/02/23 19:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		08/01/23 17:08	08/02/23 16:25	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		08/01/23 17:08	08/02/23 16:25	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		08/01/23 17:08	08/02/23 16:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*08/01/23 17:08*	*08/02/23 16:25*	*1*
o-Terphenyl	*93*		*70 - 130*	*08/01/23 17:08*	*08/02/23 16:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	333		5.03		mg/Kg			08/01/23 16:14	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-5010-1
SDG: 12618492

Client Sample ID: BH-14

Date Collected: 07/28/23 14:50
Date Received: 07/31/23 09:45
Sample Depth: 2

Lab Sample ID: 890-5010-16
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:39	08/01/23 21:16	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:39	08/01/23 21:16	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:39	08/01/23 21:16	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		08/01/23 10:39	08/01/23 21:16	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:39	08/01/23 21:16	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		08/01/23 10:39	08/01/23 21:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*08/01/23 10:39*	*08/01/23 21:16*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*08/01/23 10:39*	*08/01/23 21:16*	*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			08/02/23 11:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			08/02/23 19:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		08/01/23 17:08	08/02/23 16:47	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		08/01/23 17:08	08/02/23 16:47	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		08/01/23 17:08	08/02/23 16:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*132*	*S1+*	*70 - 130*	*08/01/23 17:08*	*08/02/23 16:47*	*1*
o-Terphenyl	*109*		*70 - 130*	*08/01/23 17:08*	*08/02/23 16:47*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**130**		5.00		mg/Kg			08/01/23 16:19	1

Client Sample ID: BH-15

Date Collected: 07/28/23 14:52
Date Received: 07/31/23 09:45
Sample Depth: 2

Lab Sample ID: 890-5010-17
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		08/01/23 10:39	08/01/23 21:37	1
Toluene	<0.00198	U	0.00198		mg/Kg		08/01/23 10:39	08/01/23 21:37	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		08/01/23 10:39	08/01/23 21:37	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		08/01/23 10:39	08/01/23 21:37	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		08/01/23 10:39	08/01/23 21:37	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		08/01/23 10:39	08/01/23 21:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*08/01/23 10:39*	*08/01/23 21:37*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-5010-1
SDG: 12618492

Client Sample ID: BH-15

Date Collected: 07/28/23 14:52
Date Received: 07/31/23 09:45
Sample Depth: 2

Lab Sample ID: 890-5010-17

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*08/01/23 10:39*	*08/01/23 21:37*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			08/02/23 11:04	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			08/02/23 19:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		08/01/23 17:08	08/02/23 17:10	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		08/01/23 17:08	08/02/23 17:10	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		08/01/23 17:08	08/02/23 17:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*08/01/23 17:08*	*08/02/23 17:10*	*1*
o-Terphenyl	*95*		*70 - 130*	*08/01/23 17:08*	*08/02/23 17:10*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**525**		5.01		mg/Kg			08/01/23 16:24	1

Client Sample ID: BH-16

Date Collected: 07/28/23 14:54
Date Received: 07/31/23 09:45
Sample Depth: 2

Lab Sample ID: 890-5010-18

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		08/01/23 10:39	08/01/23 21:57	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/01/23 10:39	08/01/23 21:57	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		08/01/23 10:39	08/01/23 21:57	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		08/01/23 10:39	08/01/23 21:57	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		08/01/23 10:39	08/01/23 21:57	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		08/01/23 10:39	08/01/23 21:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*08/01/23 10:39*	*08/01/23 21:57*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*08/01/23 10:39*	*08/01/23 21:57*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			08/02/23 11:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			08/02/23 19:38	1

Client Sample Results

Client: GHD Services Inc. Job ID: 890-5010-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: BH-16 Lab Sample ID: 890-5010-18

Date Collected: 07/28/23 14:54 **Matrix: Solid**
Date Received: 07/31/23 09:45
Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		08/01/23 17:08	08/02/23 17:32	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		08/01/23 17:08	08/02/23 17:32	1
Oil Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		08/01/23 17:08	08/02/23 17:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*140*	*S1+*	*70 - 130*	*08/01/23 17:08*	*08/02/23 17:32*	*1*
o-Terphenyl	*117*		*70 - 130*	*08/01/23 17:08*	*08/02/23 17:32*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**103**		4.99		mg/Kg			08/01/23 16:29	1

Surrogate Summary

Client: GHD Services Inc. Job ID: 890-5010-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

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)
890-5010-1	BH-1	82	95
890-5010-1 MS	BH-1	100	97
890-5010-1 MSD	BH-1	97	86
890-5010-2	BH-2	84	99
890-5010-3	BH-3	95	102
890-5010-4	BH-4	92	100
890-5010-5	BH-5	102	101
890-5010-6	BH-6	89	98
890-5010-7	BH-7	103	108
890-5010-8	BH-8	96	103
890-5010-9	BG-1	91	106
890-5010-10	BG-2	91	101
890-5010-11	BH-9	76	96
890-5010-12	BH-10	87	103
890-5010-13	BH-11	86	99
890-5010-14	BH-12	94	106
890-5010-15	BH-13	88	109
890-5010-16	BH-14	96	106
890-5010-17	BH-15	90	107
890-5010-18	BH-16	82	105
LCS 880-58995/1-A	Lab Control Sample	104	107
LCSD 880-58995/2-A	Lab Control Sample Dup	91	99
MB 880-58995/5-A	Method Blank	95	120

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)
890-5010-1	BH-1	117	98
890-5010-1 MS	BH-1	114	86
890-5010-1 MSD	BH-1	118	88
890-5010-2	BH-2	112	94
890-5010-3	BH-3	108	91
890-5010-4	BH-4	110	92
890-5010-5	BH-5	107	90
890-5010-6	BH-6	109	92
890-5010-7	BH-7	111	91
890-5010-8	BH-8	109	90
890-5010-9	BG-1	112	90
890-5010-10	BG-2	112	90
890-5010-11	BH-9	110	94
890-5010-12	BH-10	104	86
890-5010-13	BH-11	111	95
890-5010-14	BH-12	105	88

Surrogate Summary

Client: GHD Services Inc. Job ID: 890-5010-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-5010-15	BH-13	112	93
890-5010-16	BH-14	132 S1+	109
890-5010-17	BH-15	112	95
890-5010-18	BH-16	140 S1+	117
LCS 880-59046/2-A	Lab Control Sample	87	86
LCSD 880-59046/3-A	Lab Control Sample Dup	86	83
MB 880-59046/1-A	Method Blank	191 S1+	160 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: GHD Services Inc. Job ID: 890-5010-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-58995/5-A
Matrix: Solid
Analysis Batch: 58966

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58995

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:39	08/01/23 14:10	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:39	08/01/23 14:10	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:39	08/01/23 14:10	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/01/23 10:39	08/01/23 14:10	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:39	08/01/23 14:10	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/01/23 10:39	08/01/23 14:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*08/01/23 10:39*	*08/01/23 14:10*	*1*
1,4-Difluorobenzene (Surr)	*120*		*70 - 130*	*08/01/23 10:39*	*08/01/23 14:10*	*1*

Lab Sample ID: LCS 880-58995/1-A
Matrix: Solid
Analysis Batch: 58966

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58995

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1100		mg/Kg		110	70 - 130
Toluene	0.100	0.1193		mg/Kg		119	70 - 130
Ethylbenzene	0.100	0.1037		mg/Kg		104	70 - 130
m-Xylene & p-Xylene	0.200	0.2346		mg/Kg		117	70 - 130
o-Xylene	0.100	0.1121		mg/Kg		112	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 880-58995/2-A
Matrix: Solid
Analysis Batch: 58966

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58995

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1042		mg/Kg		104	70 - 130	5	35
Toluene	0.100	0.1115		mg/Kg		111	70 - 130	7	35
Ethylbenzene	0.100	0.09478		mg/Kg		95	70 - 130	9	35
m-Xylene & p-Xylene	0.200	0.2057		mg/Kg		103	70 - 130	13	35
o-Xylene	0.100	0.1001		mg/Kg		100	70 - 130	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-5010-1 MS
Matrix: Solid
Analysis Batch: 58966

Client Sample ID: BH-1
Prep Type: Total/NA
Prep Batch: 58995

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00198	U	0.0998	0.09861		mg/Kg		99	70 - 130
Toluene	<0.00198	U	0.0998	0.1015		mg/Kg		102	70 - 130

QC Sample Results

Client: GHD Services Inc. Job ID: 890-5010-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

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

Lab Sample ID: 890-5010-1 MS **Client Sample ID: BH-1**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58966 **Prep Batch: 58995**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00198	U	0.0998	0.09655		mg/Kg		97	70 - 130
m-Xylene & p-Xylene	<0.00397	U	0.200	0.2126		mg/Kg		107	70 - 130
o-Xylene	<0.00198	U	0.0998	0.1014		mg/Kg		102	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: 890-5010-1 MSD **Client Sample ID: BH-1**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 58966 **Prep Batch: 58995**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.0996	0.09145		mg/Kg		92	70 - 130	8	35
Toluene	<0.00198	U	0.0996	0.09687		mg/Kg		97	70 - 130	5	35
Ethylbenzene	<0.00198	U	0.0996	0.08883		mg/Kg		89	70 - 130	8	35
m-Xylene & p-Xylene	<0.00397	U	0.199	0.1950		mg/Kg		98	70 - 130	9	35
o-Xylene	<0.00198	U	0.0996	0.09516		mg/Kg		96	70 - 130	6	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*

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

Lab Sample ID: MB 880-59046/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 59067 **Prep Batch: 59046**

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		08/01/23 17:07	08/02/23 07:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/01/23 17:07	08/02/23 07:42	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/01/23 17:07	08/02/23 07:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*191*	*S1+*	*70 - 130*	*08/01/23 17:07*	*08/02/23 07:42*	*1*
o-Terphenyl	*160*	*S1+*	*70 - 130*	*08/01/23 17:07*	*08/02/23 07:42*	*1*

Lab Sample ID: LCS 880-59046/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 59067 **Prep Batch: 59046**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	868.8		mg/Kg		87	70 - 130
Diesel Range Organics (Over C10-C28)	1000	823.5		mg/Kg		82	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-5010-1
SDG: 12618492

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

Lab Sample ID: LCS 880-59046/2-A
Matrix: Solid
Analysis Batch: 59067

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 59046

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	87		70 - 130
o-Terphenyl	86		70 - 130

Lab Sample ID: LCSD 880-59046/3-A
Matrix: Solid
Analysis Batch: 59067

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 59046

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	899.6		mg/Kg		90	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	778.5		mg/Kg		78	70 - 130	6	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	86		70 - 130
o-Terphenyl	83		70 - 130

Lab Sample ID: 890-5010-1 MS
Matrix: Solid
Analysis Batch: 59067

Client Sample ID: BH-1
Prep Type: Total/NA
Prep Batch: 59046

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	1010	1179		mg/Kg		115	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.3	U	1010	1037		mg/Kg		101	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	114		70 - 130
o-Terphenyl	86		70 - 130

Lab Sample ID: 890-5010-1 MSD
Matrix: Solid
Analysis Batch: 59067

Client Sample ID: BH-1
Prep Type: Total/NA
Prep Batch: 59046

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	1010	1222		mg/Kg		119	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	<50.3	U	1010	1069		mg/Kg		104	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	118		70 - 130
o-Terphenyl	88		70 - 130

QC Sample Results

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-5010-1
SDG: 12618492

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-58954/1-A
Matrix: Solid
Analysis Batch: 59013

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			08/01/23 14:10	1

Lab Sample ID: LCS 880-58954/2-A
Matrix: Solid
Analysis Batch: 59013

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	235.8		mg/Kg		94	90 - 110		

Lab Sample ID: LCSD 880-58954/3-A
Matrix: Solid
Analysis Batch: 59013

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	236.2		mg/Kg		94	90 - 110	0	20

Lab Sample ID: 890-5010-1 MS
Matrix: Solid
Analysis Batch: 59013

Client Sample ID: BH-1
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	563	F1	1250	841.9	F1	mg/Kg		22	90 - 110		

Lab Sample ID: 890-5010-1 MSD
Matrix: Solid
Analysis Batch: 59013

Client Sample ID: BH-1
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	563	F1	1250	844.0	F1	mg/Kg		22	90 - 110	0	20

Lab Sample ID: 890-5010-11 MS
Matrix: Solid
Analysis Batch: 59013

Client Sample ID: BH-9
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	367		249	610.3		mg/Kg		98	90 - 110		

Lab Sample ID: 890-5010-11 MSD
Matrix: Solid
Analysis Batch: 59013

Client Sample ID: BH-9
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	367		249	609.0		mg/Kg		97	90 - 110	0	20

QC Association Summary

Client: GHD Services Inc. Job ID: 890-5010-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

GC VOA

Analysis Batch: 58966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5010-1	BH-1	Total/NA	Solid	8021B	58995
890-5010-2	BH-2	Total/NA	Solid	8021B	58995
890-5010-3	BH-3	Total/NA	Solid	8021B	58995
890-5010-4	BH-4	Total/NA	Solid	8021B	58995
890-5010-5	BH-5	Total/NA	Solid	8021B	58995
890-5010-6	BH-6	Total/NA	Solid	8021B	58995
890-5010-7	BH-7	Total/NA	Solid	8021B	58995
890-5010-8	BH-8	Total/NA	Solid	8021B	58995
890-5010-9	BG-1	Total/NA	Solid	8021B	58995
890-5010-10	BG-2	Total/NA	Solid	8021B	58995
890-5010-11	BH-9	Total/NA	Solid	8021B	58995
890-5010-12	BH-10	Total/NA	Solid	8021B	58995
890-5010-13	BH-11	Total/NA	Solid	8021B	58995
890-5010-14	BH-12	Total/NA	Solid	8021B	58995
890-5010-15	BH-13	Total/NA	Solid	8021B	58995
890-5010-16	BH-14	Total/NA	Solid	8021B	58995
890-5010-17	BH-15	Total/NA	Solid	8021B	58995
890-5010-18	BH-16	Total/NA	Solid	8021B	58995
MB 880-58995/5-A	Method Blank	Total/NA	Solid	8021B	58995
LCS 880-58995/1-A	Lab Control Sample	Total/NA	Solid	8021B	58995
LCSD 880-58995/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	58995
890-5010-1 MS	BH-1	Total/NA	Solid	8021B	58995
890-5010-1 MSD	BH-1	Total/NA	Solid	8021B	58995

Prep Batch: 58995

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5010-1	BH-1	Total/NA	Solid	5035	
890-5010-2	BH-2	Total/NA	Solid	5035	
890-5010-3	BH-3	Total/NA	Solid	5035	
890-5010-4	BH-4	Total/NA	Solid	5035	
890-5010-5	BH-5	Total/NA	Solid	5035	
890-5010-6	BH-6	Total/NA	Solid	5035	
890-5010-7	BH-7	Total/NA	Solid	5035	
890-5010-8	BH-8	Total/NA	Solid	5035	
890-5010-9	BG-1	Total/NA	Solid	5035	
890-5010-10	BG-2	Total/NA	Solid	5035	
890-5010-11	BH-9	Total/NA	Solid	5035	
890-5010-12	BH-10	Total/NA	Solid	5035	
890-5010-13	BH-11	Total/NA	Solid	5035	
890-5010-14	BH-12	Total/NA	Solid	5035	
890-5010-15	BH-13	Total/NA	Solid	5035	
890-5010-16	BH-14	Total/NA	Solid	5035	
890-5010-17	BH-15	Total/NA	Solid	5035	
890-5010-18	BH-16	Total/NA	Solid	5035	
MB 880-58995/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-58995/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-58995/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5010-1 MS	BH-1	Total/NA	Solid	5035	
890-5010-1 MSD	BH-1	Total/NA	Solid	5035	

QC Association Summary

Client: GHD Services Inc. Job ID: 890-5010-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

GC VOA

Analysis Batch: 59106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5010-1	BH-1	Total/NA	Solid	Total BTEX	
890-5010-2	BH-2	Total/NA	Solid	Total BTEX	
890-5010-3	BH-3	Total/NA	Solid	Total BTEX	
890-5010-4	BH-4	Total/NA	Solid	Total BTEX	
890-5010-5	BH-5	Total/NA	Solid	Total BTEX	
890-5010-6	BH-6	Total/NA	Solid	Total BTEX	
890-5010-7	BH-7	Total/NA	Solid	Total BTEX	
890-5010-8	BH-8	Total/NA	Solid	Total BTEX	
890-5010-9	BG-1	Total/NA	Solid	Total BTEX	
890-5010-10	BG-2	Total/NA	Solid	Total BTEX	
890-5010-11	BH-9	Total/NA	Solid	Total BTEX	
890-5010-12	BH-10	Total/NA	Solid	Total BTEX	
890-5010-13	BH-11	Total/NA	Solid	Total BTEX	
890-5010-14	BH-12	Total/NA	Solid	Total BTEX	
890-5010-15	BH-13	Total/NA	Solid	Total BTEX	
890-5010-16	BH-14	Total/NA	Solid	Total BTEX	
890-5010-17	BH-15	Total/NA	Solid	Total BTEX	
890-5010-18	BH-16	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 59046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5010-1	BH-1	Total/NA	Solid	8015NM Prep	
890-5010-2	BH-2	Total/NA	Solid	8015NM Prep	
890-5010-3	BH-3	Total/NA	Solid	8015NM Prep	
890-5010-4	BH-4	Total/NA	Solid	8015NM Prep	
890-5010-5	BH-5	Total/NA	Solid	8015NM Prep	
890-5010-6	BH-6	Total/NA	Solid	8015NM Prep	
890-5010-7	BH-7	Total/NA	Solid	8015NM Prep	
890-5010-8	BH-8	Total/NA	Solid	8015NM Prep	
890-5010-9	BG-1	Total/NA	Solid	8015NM Prep	
890-5010-10	BG-2	Total/NA	Solid	8015NM Prep	
890-5010-11	BH-9	Total/NA	Solid	8015NM Prep	
890-5010-12	BH-10	Total/NA	Solid	8015NM Prep	
890-5010-13	BH-11	Total/NA	Solid	8015NM Prep	
890-5010-14	BH-12	Total/NA	Solid	8015NM Prep	
890-5010-15	BH-13	Total/NA	Solid	8015NM Prep	
890-5010-16	BH-14	Total/NA	Solid	8015NM Prep	
890-5010-17	BH-15	Total/NA	Solid	8015NM Prep	
890-5010-18	BH-16	Total/NA	Solid	8015NM Prep	
MB 880-59046/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-59046/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-59046/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5010-1 MS	BH-1	Total/NA	Solid	8015NM Prep	
890-5010-1 MSD	BH-1	Total/NA	Solid	8015NM Prep	

Analysis Batch: 59067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5010-1	BH-1	Total/NA	Solid	8015B NM	59046
890-5010-2	BH-2	Total/NA	Solid	8015B NM	59046

QC Association Summary

Client: GHD Services Inc. Job ID: 890-5010-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

GC Semi VOA (Continued)

Analysis Batch: 59067 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5010-3	BH-3	Total/NA	Solid	8015B NM	59046
890-5010-4	BH-4	Total/NA	Solid	8015B NM	59046
890-5010-5	BH-5	Total/NA	Solid	8015B NM	59046
890-5010-6	BH-6	Total/NA	Solid	8015B NM	59046
890-5010-7	BH-7	Total/NA	Solid	8015B NM	59046
890-5010-8	BH-8	Total/NA	Solid	8015B NM	59046
890-5010-9	BG-1	Total/NA	Solid	8015B NM	59046
890-5010-10	BG-2	Total/NA	Solid	8015B NM	59046
890-5010-11	BH-9	Total/NA	Solid	8015B NM	59046
890-5010-12	BH-10	Total/NA	Solid	8015B NM	59046
890-5010-13	BH-11	Total/NA	Solid	8015B NM	59046
890-5010-14	BH-12	Total/NA	Solid	8015B NM	59046
890-5010-15	BH-13	Total/NA	Solid	8015B NM	59046
890-5010-16	BH-14	Total/NA	Solid	8015B NM	59046
890-5010-17	BH-15	Total/NA	Solid	8015B NM	59046
890-5010-18	BH-16	Total/NA	Solid	8015B NM	59046
MB 880-59046/1-A	Method Blank	Total/NA	Solid	8015B NM	59046
LCS 880-59046/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	59046
LCSD 880-59046/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	59046
890-5010-1 MS	BH-1	Total/NA	Solid	8015B NM	59046
890-5010-1 MSD	BH-1	Total/NA	Solid	8015B NM	59046

Analysis Batch: 59160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5010-1	BH-1	Total/NA	Solid	8015 NM	
890-5010-2	BH-2	Total/NA	Solid	8015 NM	
890-5010-3	BH-3	Total/NA	Solid	8015 NM	
890-5010-4	BH-4	Total/NA	Solid	8015 NM	
890-5010-5	BH-5	Total/NA	Solid	8015 NM	
890-5010-6	BH-6	Total/NA	Solid	8015 NM	
890-5010-7	BH-7	Total/NA	Solid	8015 NM	
890-5010-8	BH-8	Total/NA	Solid	8015 NM	
890-5010-9	BG-1	Total/NA	Solid	8015 NM	
890-5010-10	BG-2	Total/NA	Solid	8015 NM	
890-5010-11	BH-9	Total/NA	Solid	8015 NM	
890-5010-12	BH-10	Total/NA	Solid	8015 NM	
890-5010-13	BH-11	Total/NA	Solid	8015 NM	
890-5010-14	BH-12	Total/NA	Solid	8015 NM	
890-5010-15	BH-13	Total/NA	Solid	8015 NM	
890-5010-16	BH-14	Total/NA	Solid	8015 NM	
890-5010-17	BH-15	Total/NA	Solid	8015 NM	
890-5010-18	BH-16	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 58954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5010-1	BH-1	Soluble	Solid	DI Leach	
890-5010-2	BH-2	Soluble	Solid	DI Leach	
890-5010-3	BH-3	Soluble	Solid	DI Leach	
890-5010-4	BH-4	Soluble	Solid	DI Leach	

QC Association Summary

Client: GHD Services Inc. Job ID: 890-5010-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

HPLC/IC (Continued)

Leach Batch: 58954 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5010-5	BH-5	Soluble	Solid	DI Leach	
890-5010-6	BH-6	Soluble	Solid	DI Leach	
890-5010-7	BH-7	Soluble	Solid	DI Leach	
890-5010-8	BH-8	Soluble	Solid	DI Leach	
890-5010-9	BG-1	Soluble	Solid	DI Leach	
890-5010-10	BG-2	Soluble	Solid	DI Leach	
890-5010-11	BH-9	Soluble	Solid	DI Leach	
890-5010-12	BH-10	Soluble	Solid	DI Leach	
890-5010-13	BH-11	Soluble	Solid	DI Leach	
890-5010-14	BH-12	Soluble	Solid	DI Leach	
890-5010-15	BH-13	Soluble	Solid	DI Leach	
890-5010-16	BH-14	Soluble	Solid	DI Leach	
890-5010-17	BH-15	Soluble	Solid	DI Leach	
890-5010-18	BH-16	Soluble	Solid	DI Leach	
MB 880-58954/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-58954/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-58954/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5010-1 MS	BH-1	Soluble	Solid	DI Leach	
890-5010-1 MSD	BH-1	Soluble	Solid	DI Leach	
890-5010-11 MS	BH-9	Soluble	Solid	DI Leach	
890-5010-11 MSD	BH-9	Soluble	Solid	DI Leach	

Analysis Batch: 59013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5010-1	BH-1	Soluble	Solid	300.0	58954
890-5010-2	BH-2	Soluble	Solid	300.0	58954
890-5010-3	BH-3	Soluble	Solid	300.0	58954
890-5010-4	BH-4	Soluble	Solid	300.0	58954
890-5010-5	BH-5	Soluble	Solid	300.0	58954
890-5010-6	BH-6	Soluble	Solid	300.0	58954
890-5010-7	BH-7	Soluble	Solid	300.0	58954
890-5010-8	BH-8	Soluble	Solid	300.0	58954
890-5010-9	BG-1	Soluble	Solid	300.0	58954
890-5010-10	BG-2	Soluble	Solid	300.0	58954
890-5010-11	BH-9	Soluble	Solid	300.0	58954
890-5010-12	BH-10	Soluble	Solid	300.0	58954
890-5010-13	BH-11	Soluble	Solid	300.0	58954
890-5010-14	BH-12	Soluble	Solid	300.0	58954
890-5010-15	BH-13	Soluble	Solid	300.0	58954
890-5010-16	BH-14	Soluble	Solid	300.0	58954
890-5010-17	BH-15	Soluble	Solid	300.0	58954
890-5010-18	BH-16	Soluble	Solid	300.0	58954
MB 880-58954/1-A	Method Blank	Soluble	Solid	300.0	58954
LCS 880-58954/2-A	Lab Control Sample	Soluble	Solid	300.0	58954
LCSD 880-58954/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	58954
890-5010-1 MS	BH-1	Soluble	Solid	300.0	58954
890-5010-1 MSD	BH-1	Soluble	Solid	300.0	58954
890-5010-11 MS	BH-9	Soluble	Solid	300.0	58954
890-5010-11 MSD	BH-9	Soluble	Solid	300.0	58954

Lab Chronicle

Client: GHD Services Inc. Job ID: 890-5010-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: BH-1 Lab Sample ID: 890-5010-1
Date Collected: 07/28/23 09:20 **Matrix: Solid**
Date Received: 07/31/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	58995	08/01/23 10:39	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58966	08/01/23 14:39	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59106	08/02/23 11:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			59160	08/02/23 19:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	59046	08/01/23 17:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59067	08/02/23 10:14	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	58954	07/31/23 16:54	KS	EET MID
Soluble	Analysis	300.0		5			59013	08/01/23 14:24	CH	EET MID

Client Sample ID: BH-2 Lab Sample ID: 890-5010-2
Date Collected: 07/28/23 09:22 **Matrix: Solid**
Date Received: 07/31/23 09:45

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	58995	08/01/23 10:39	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58966	08/01/23 14:59	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59106	08/02/23 11:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			59160	08/02/23 19:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	59046	08/01/23 17:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59067	08/02/23 11:20	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	58954	07/31/23 16:54	KS	EET MID
Soluble	Analysis	300.0		5			59013	08/01/23 14:39	CH	EET MID

Client Sample ID: BH-3 Lab Sample ID: 890-5010-3
Date Collected: 07/28/23 09:24 **Matrix: Solid**
Date Received: 07/31/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	58995	08/01/23 10:39	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58966	08/01/23 15:20	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59106	08/02/23 11:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			59160	08/02/23 19:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	59046	08/01/23 17:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59067	08/02/23 11:42	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	58954	07/31/23 16:54	KS	EET MID
Soluble	Analysis	300.0		5			59013	08/01/23 14:44	CH	EET MID

Client Sample ID: BH-4 Lab Sample ID: 890-5010-4
Date Collected: 07/28/23 09:26 **Matrix: Solid**
Date Received: 07/31/23 09:45

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	58995	08/01/23 10:39	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58966	08/01/23 15:40	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59106	08/02/23 11:04	SM	EET MID

Lab Chronicle

Client: GHD Services Inc. Job ID: 890-5010-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: BH-4 Lab Sample ID: 890-5010-4
Date Collected: 07/28/23 09:26 **Matrix: Solid**
Date Received: 07/31/23 09:45

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			59160	08/02/23 19:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	59046	08/01/23 17:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59067	08/02/23 12:04	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	58954	07/31/23 16:54	KS	EET MID
Soluble	Analysis	300.0		5			59013	08/01/23 14:49	CH	EET MID

Client Sample ID: BH-5 Lab Sample ID: 890-5010-5
Date Collected: 07/28/23 09:28 **Matrix: Solid**
Date Received: 07/31/23 09:45

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	58995	08/01/23 10:39	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58966	08/01/23 16:01	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59106	08/02/23 11:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			59160	08/02/23 19:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	59046	08/01/23 17:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59067	08/02/23 12:25	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	58954	07/31/23 16:54	KS	EET MID
Soluble	Analysis	300.0		5			59013	08/01/23 14:54	CH	EET MID

Client Sample ID: BH-6 Lab Sample ID: 890-5010-6
Date Collected: 07/28/23 09:30 **Matrix: Solid**
Date Received: 07/31/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	58995	08/01/23 10:39	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58966	08/01/23 16:21	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59106	08/02/23 11:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			59160	08/02/23 19:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.96 g	10 mL	59046	08/01/23 17:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59067	08/02/23 12:48	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	58954	07/31/23 16:54	KS	EET MID
Soluble	Analysis	300.0		5			59013	08/01/23 15:09	CH	EET MID

Client Sample ID: BH-7 Lab Sample ID: 890-5010-7
Date Collected: 07/28/23 09:32 **Matrix: Solid**
Date Received: 07/31/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	58995	08/01/23 10:39	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58966	08/01/23 16:41	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59106	08/02/23 11:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			59160	08/02/23 19:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	59046	08/01/23 17:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59067	08/02/23 13:09	AJ	EET MID

Lab Chronicle

Client: GHD Services Inc. Job ID: 890-5010-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: BH-7 Lab Sample ID: 890-5010-7
Date Collected: 07/28/23 09:32 **Matrix: Solid**
Date Received: 07/31/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	58954	07/31/23 16:54	KS	EET MID
Soluble	Analysis	300.0		5			59013	08/01/23 15:14	CH	EET MID

Client Sample ID: BH-8 Lab Sample ID: 890-5010-8
Date Collected: 07/28/23 09:34 **Matrix: Solid**
Date Received: 07/31/23 09:45

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	58995	08/01/23 10:39	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58966	08/01/23 17:02	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59106	08/02/23 11:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			59160	08/02/23 19:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	59046	08/01/23 17:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59067	08/02/23 13:31	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	58954	07/31/23 16:54	KS	EET MID
Soluble	Analysis	300.0		5			59013	08/01/23 15:19	CH	EET MID

Client Sample ID: BG-1 Lab Sample ID: 890-5010-9
Date Collected: 07/27/23 09:30 **Matrix: Solid**
Date Received: 07/31/23 09:45

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	58995	08/01/23 10:39	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58966	08/01/23 17:22	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59106	08/02/23 11:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			59160	08/02/23 19:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	59046	08/01/23 17:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59067	08/02/23 13:53	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	58954	07/31/23 16:54	KS	EET MID
Soluble	Analysis	300.0		1			59013	08/01/23 15:24	CH	EET MID

Client Sample ID: BG-2 Lab Sample ID: 890-5010-10
Date Collected: 07/27/23 09:35 **Matrix: Solid**
Date Received: 07/31/23 09:45

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	58995	08/01/23 10:39	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58966	08/01/23 17:43	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59106	08/02/23 11:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			59160	08/02/23 19:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	59046	08/01/23 17:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59067	08/02/23 14:14	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	58954	07/31/23 16:54	KS	EET MID
Soluble	Analysis	300.0		1			59013	08/01/23 15:29	CH	EET MID

Lab Chronicle

Client: GHD Services Inc. Job ID: 890-5010-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: BH-9 Lab Sample ID: 890-5010-11
Date Collected: 07/28/23 14:40 **Matrix: Solid**
Date Received: 07/31/23 09:45

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	58995	08/01/23 10:39	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58966	08/01/23 19:34	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59106	08/02/23 11:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			59160	08/02/23 19:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	59046	08/01/23 17:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59067	08/02/23 14:58	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	58954	07/31/23 16:54	KS	EET MID
Soluble	Analysis	300.0		1			59013	08/01/23 15:34	CH	EET MID

Client Sample ID: BH-10 Lab Sample ID: 890-5010-12
Date Collected: 07/28/23 14:42 **Matrix: Solid**
Date Received: 07/31/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	58995	08/01/23 10:39	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58966	08/01/23 19:55	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59106	08/02/23 11:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			59160	08/02/23 19:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	59046	08/01/23 17:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59067	08/02/23 15:20	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	58954	07/31/23 16:54	KS	EET MID
Soluble	Analysis	300.0		1			59013	08/01/23 15:49	CH	EET MID

Client Sample ID: BH-11 Lab Sample ID: 890-5010-13
Date Collected: 07/28/23 14:44 **Matrix: Solid**
Date Received: 07/31/23 09:45

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	58995	08/01/23 10:39	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58966	08/01/23 20:15	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59106	08/02/23 11:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			59160	08/02/23 19:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	59046	08/01/23 17:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59067	08/02/23 15:41	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	58954	07/31/23 16:54	KS	EET MID
Soluble	Analysis	300.0		1			59013	08/01/23 15:54	CH	EET MID

Client Sample ID: BH-12 Lab Sample ID: 890-5010-14
Date Collected: 07/28/23 14:46 **Matrix: Solid**
Date Received: 07/31/23 09:45

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	58995	08/01/23 10:39	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58966	08/01/23 20:36	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59106	08/02/23 11:04	SM	EET MID

Lab Chronicle

Client: GHD Services Inc. Job ID: 890-5010-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Client Sample ID: BH-12 Lab Sample ID: 890-5010-14
Date Collected: 07/28/23 14:46 **Matrix: Solid**
Date Received: 07/31/23 09:45

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			59160	08/02/23 19:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	59046	08/01/23 17:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59067	08/02/23 16:04	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	58954	07/31/23 16:54	KS	EET MID
Soluble	Analysis	300.0		1			59013	08/01/23 16:09	CH	EET MID

Client Sample ID: BH-13 Lab Sample ID: 890-5010-15
Date Collected: 07/28/23 14:48 **Matrix: Solid**
Date Received: 07/31/23 09:45

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	58995	08/01/23 10:39	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58966	08/01/23 20:56	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59106	08/02/23 11:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			59160	08/02/23 19:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	59046	08/01/23 17:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59067	08/02/23 16:25	AJ	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	58954	07/31/23 16:54	KS	EET MID
Soluble	Analysis	300.0		1			59013	08/01/23 16:14	CH	EET MID

Client Sample ID: BH-14 Lab Sample ID: 890-5010-16
Date Collected: 07/28/23 14:50 **Matrix: Solid**
Date Received: 07/31/23 09:45

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	58995	08/01/23 10:39	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58966	08/01/23 21:16	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59106	08/02/23 11:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			59160	08/02/23 19:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	59046	08/01/23 17:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59067	08/02/23 16:47	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	58954	07/31/23 16:54	KS	EET MID
Soluble	Analysis	300.0		1			59013	08/01/23 16:19	CH	EET MID

Client Sample ID: BH-15 Lab Sample ID: 890-5010-17
Date Collected: 07/28/23 14:52 **Matrix: Solid**
Date Received: 07/31/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	58995	08/01/23 10:39	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58966	08/01/23 21:37	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59106	08/02/23 11:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			59160	08/02/23 19:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	59046	08/01/23 17:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59067	08/02/23 17:10	AJ	EET MID

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-5010-1
SDG: 12618492

Client Sample ID: BH-15
Date Collected: 07/28/23 14:52
Date Received: 07/31/23 09:45

Lab Sample ID: 890-5010-17
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			4.99 g	50 mL	58954	07/31/23 16:54	KS	EET MID
Soluble	Analysis	300.0		1			59013	08/01/23 16:24	CH	EET MID

Client Sample ID: BH-16
Date Collected: 07/28/23 14:54
Date Received: 07/31/23 09:45

Lab Sample ID: 890-5010-18
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	58995	08/01/23 10:39	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58966	08/01/23 21:57	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59106	08/02/23 11:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			59160	08/02/23 19:38	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	59046	08/01/23 17:08	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59067	08/02/23 17:32	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	58954	07/31/23 16:54	KS	EET MID
Soluble	Analysis	300.0		1			59013	08/01/23 16:29	CH	EET MID

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

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 890-5010-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: GHD Services Inc. Job ID: 890-5010-1
Project/Site: Delek Matador Produced Water Release SDG: 12618492

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: GHD Services Inc.
Project/Site: Delek Matador Produced Water Release

Job ID: 890-5010-1
SDG: 12618492

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5010-1	BH-1	Solid	07/28/23 09:20	07/31/23 09:45	5.5
890-5010-2	BH-2	Solid	07/28/23 09:22	07/31/23 09:45	5.5
890-5010-3	BH-3	Solid	07/28/23 09:24	07/31/23 09:45	5.5
890-5010-4	BH-4	Solid	07/28/23 09:26	07/31/23 09:45	5.5
890-5010-5	BH-5	Solid	07/28/23 09:28	07/31/23 09:45	5.5
890-5010-6	BH-6	Solid	07/28/23 09:30	07/31/23 09:45	5.5
890-5010-7	BH-7	Solid	07/28/23 09:32	07/31/23 09:45	5.5
890-5010-8	BH-8	Solid	07/28/23 09:34	07/31/23 09:45	5.5
890-5010-9	BG-1	Solid	07/27/23 09:30	07/31/23 09:45	SURFACE
890-5010-10	BG-2	Solid	07/27/23 09:35	07/31/23 09:45	SURFACE
890-5010-11	BH-9	Solid	07/28/23 14:40	07/31/23 09:45	2
890-5010-12	BH-10	Solid	07/28/23 14:42	07/31/23 09:45	2
890-5010-13	BH-11	Solid	07/28/23 14:44	07/31/23 09:45	2
890-5010-14	BH-12	Solid	07/28/23 14:46	07/31/23 09:45	2
890-5010-15	BH-13	Solid	07/28/23 14:48	07/31/23 09:45	2
890-5010-16	BH-14	Solid	07/28/23 14:50	07/31/23 09:45	2
890-5010-17	BH-15	Solid	07/28/23 14:52	07/31/23 09:45	2
890-5010-18	BH-16	Solid	07/28/23 14:54	07/31/23 09:45	2

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 2

Project Manager:	Nate Reece	Bill to: (if different)	
Company Name:	GHD Services Inc.	Company Name:	
Address:	11451 W. Katy FWY. #400	Address:	
City, State ZIP:	Houston, Tx 77079	City, State ZIP:	
Phone:	(281) 286-7158 Email:	nate.reece@ghd.com	

Work Order Comments

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

Project Name:	Delek Matador produced water release	Turn Around	
Project Number:	126018492	☐ Routine ☑ Rush 24hr	Pres. Code
Project Location:	32.578378, -103.66405	Due Date:	
Sampler's Name:	Tristanna Crapo	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	THM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.0
Sample Custody Seals:	Yes No N/A	Temperature Reading:	2.2
Total Containers:		Corrected Temperature:	2.0

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$_4$: NABIS
$_3$: $NaSO_3$
tate+NaOH: Zn
-Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	BTEX 8021B	TPH/DRO 8015	TPH/GRO 8015	Chloride 300
BH-1	S	7-28-23	0920	5.5ft	G	1	X	X	X	X
BH-2			0922	5.5ft						
BH-3			0924	5.5ft						
BH-4			0926	5.5ft						
BH-5			0928	5.5ft						
BH-6			0930	5.5ft						
BH-7			0932	5.5ft						
BH-8			0934	5.5ft						
BG-1	S	7-27-23	0930	Surface						
BG-2			0935	Surface						

890-5010 Chain of Custody

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		7.31.23 945	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Received by OCD: 12/4/2024 10:43:20 AM
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8/3/2023
Released to Imaging: 3/12/2025 11:29:45 AM

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8/3/2023

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 2 of 2

Project Manager:	Nate Reece	Bill to: (if different)	
Company Name:	GHD Services Inc.	Company Name:	
Address:	11451 W. Katy FWY. #400	Address:	
City, State ZIP:	Houston, Tx 77079	City, State ZIP:	
Phone:	(281) 286-7158 Email: nate.reece@ghd.com		

Work Order Comments

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

Project Name:	Delek Matador produced water release	Turn Around	
Project Number:	12618492	☐ Routine ☑ Rush 24hr	
Project Location:	32.578378, -103.66405	Due Date:	
Sampler's Name:	Tristanna Crapo	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

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

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2SO_4: H_2 | NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX 8021B	TPH/DRO 8015	TPH/GRO 8015	Chloride 300	Sample Comments
BH-9	S	7-28-23	1440	2ft	G	1		X	X	X	X	
BH-10			1442									
BH-11			1444									
BH-12			1446									
BH-13			1448									
BH-14			1450									
BH-15			1452									
BH-16			1454									

Parameters

ANALYSIS REQUEST

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		7.31.23 945	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Received by OCD: 12/4/2024 10:43:20 AM

Released to Imaging: 3/12/2025 11:29:45 AM

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 890-5010-1
SDG Number: 12618492

Login Number: 5010
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: GHD Services Inc.

Job Number: 890-5010-1
SDG Number: 12618492

Login Number: 5010
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 08/01/23 10:57 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	

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 07, 2023

Nate Reece
GHD
6320 Rothway Ste 100
Houston, TX 77040
TEL: (713) 275-3838
FAX:

RE: Delek Matador Produced Water Release OrderNo.: 2308193

Dear Nate Reece:

Hall Environmental Analysis Laboratory received 43 sample(s) on 8/3/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** DS9-1
Project: Delek Matador Produced Water Release **Collection Date:** 7/31/2023 10:00:00 AM
Lab ID: 2308193-001 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	8/3/2023 2:35:48 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/3/2023 2:35:48 PM
Surr: DNOP	95.5	69-147		%Rec	1	8/3/2023 2:35:48 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	8/3/2023 11:21:44 AM
Surr: BFB	90.9	15-244		%Rec	1	8/3/2023 11:21:44 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.022		mg/Kg	1	8/3/2023 11:21:44 AM
Toluene	ND	0.044		mg/Kg	1	8/3/2023 11:21:44 AM
Ethylbenzene	ND	0.044		mg/Kg	1	8/3/2023 11:21:44 AM
Xylenes, Total	ND	0.089		mg/Kg	1	8/3/2023 11:21:44 AM
Surr: 4-Bromofluorobenzene	108	39.1-146		%Rec	1	8/3/2023 11:21:44 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	76	60		mg/Kg	20	8/3/2023 3:38:31 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** DS9-4
Project: Delek Matador Produced Water Release **Collection Date:** 7/31/2023 10:10:00 AM
Lab ID: 2308193-002 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/3/2023 2:46:49 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/3/2023 2:46:49 PM
Surr: DNOP	100	69-147		%Rec	1	8/3/2023 2:46:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	6.4		mg/Kg	1	8/3/2023 11:45:15 AM
Surr: BFB	91.2	15-244		%Rec	1	8/3/2023 11:45:15 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.032		mg/Kg	1	8/3/2023 11:45:15 AM
Toluene	ND	0.064		mg/Kg	1	8/3/2023 11:45:15 AM
Ethylbenzene	ND	0.064		mg/Kg	1	8/3/2023 11:45:15 AM
Xylenes, Total	ND	0.13		mg/Kg	1	8/3/2023 11:45:15 AM
Surr: 4-Bromofluorobenzene	110	39.1-146		%Rec	1	8/3/2023 11:45:15 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	8/3/2023 3:50:52 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** DS10-1
Project: Delek Matador Produced Water Release **Collection Date:** 7/31/2023 10:15:00 AM
Lab ID: 2308193-003 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	8/3/2023 3:09:13 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/3/2023 3:09:13 PM
Surr: DNOP	119	69-147		%Rec	1	8/3/2023 3:09:13 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/3/2023 12:08:49 PM
Surr: BFB	93.3	15-244		%Rec	1	8/3/2023 12:08:49 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	8/3/2023 12:08:49 PM
Toluene	ND	0.050		mg/Kg	1	8/3/2023 12:08:49 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/3/2023 12:08:49 PM
Xylenes, Total	ND	0.10		mg/Kg	1	8/3/2023 12:08:49 PM
Surr: 4-Bromofluorobenzene	112	39.1-146		%Rec	1	8/3/2023 12:08:49 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	93	60		mg/Kg	20	8/3/2023 4:03:12 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** DS10-4
Project: Delek Matador Produced Water Release **Collection Date:** 7/31/2023 10:25:00 AM
Lab ID: 2308193-004 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	8/3/2023 3:20:17 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/3/2023 3:20:17 PM
Surr: DNOP	120	69-147		%Rec	1	8/3/2023 3:20:17 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/3/2023 12:32:22 PM
Surr: BFB	96.4	15-244		%Rec	1	8/3/2023 12:32:22 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	8/3/2023 12:32:22 PM
Toluene	ND	0.047		mg/Kg	1	8/3/2023 12:32:22 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/3/2023 12:32:22 PM
Xylenes, Total	ND	0.094		mg/Kg	1	8/3/2023 12:32:22 PM
Surr: 4-Bromofluorobenzene	111	39.1-146		%Rec	1	8/3/2023 12:32:22 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	8/3/2023 4:15:33 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** DS11-1
Project: Delek Matador Produced Water Release **Collection Date:** 7/31/2023 10:30:00 AM
Lab ID: 2308193-005 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	8/3/2023 3:31:17 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/3/2023 3:31:17 PM
Surr: DNOP	99.8	69-147		%Rec	1	8/3/2023 3:31:17 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/3/2023 12:56:01 PM
Surr: BFB	92.9	15-244		%Rec	1	8/3/2023 12:56:01 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	8/3/2023 12:56:01 PM
Toluene	ND	0.049		mg/Kg	1	8/3/2023 12:56:01 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/3/2023 12:56:01 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/3/2023 12:56:01 PM
Surr: 4-Bromofluorobenzene	111	39.1-146		%Rec	1	8/3/2023 12:56:01 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	72	61		mg/Kg	20	8/3/2023 4:52:35 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** DS11-4
Project: Delek Matador Produced Water Release **Collection Date:** 7/31/2023 10:40:00 AM
Lab ID: 2308193-006 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	8.6		mg/Kg	1	8/3/2023 3:53:07 PM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	8/3/2023 3:53:07 PM
Surr: DNOP	96.4	69-147		%Rec	1	8/3/2023 3:53:07 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.5		mg/Kg	1	8/3/2023 1:19:41 PM
Surr: BFB	93.9	15-244		%Rec	1	8/3/2023 1:19:41 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.028		mg/Kg	1	8/3/2023 1:19:41 PM
Toluene	ND	0.055		mg/Kg	1	8/3/2023 1:19:41 PM
Ethylbenzene	ND	0.055		mg/Kg	1	8/3/2023 1:19:41 PM
Xylenes, Total	ND	0.11		mg/Kg	1	8/3/2023 1:19:41 PM
Surr: 4-Bromofluorobenzene	112	39.1-146		%Rec	1	8/3/2023 1:19:41 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	89	60		mg/Kg	20	8/3/2023 5:29:38 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** DS12-3
Project: Delek Matador Produced Water Release **Collection Date:** 7/31/2023 10:50:00 AM
Lab ID: 2308193-007 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	8/3/2023 4:04:10 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/3/2023 4:04:10 PM
Surr: DNOP	111	69-147		%Rec	1	8/3/2023 4:04:10 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	8/3/2023 1:43:21 PM
Surr: BFB	92.6	15-244		%Rec	1	8/3/2023 1:43:21 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.022		mg/Kg	1	8/3/2023 1:43:21 PM
Toluene	ND	0.044		mg/Kg	1	8/3/2023 1:43:21 PM
Ethylbenzene	ND	0.044		mg/Kg	1	8/3/2023 1:43:21 PM
Xylenes, Total	ND	0.088		mg/Kg	1	8/3/2023 1:43:21 PM
Surr: 4-Bromofluorobenzene	109	39.1-146		%Rec	1	8/3/2023 1:43:21 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	470	61		mg/Kg	20	8/3/2023 6:06:40 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** DS12-4
Project: Delek Matador Produced Water Release **Collection Date:** 7/31/2023 10:55:00 AM
Lab ID: 2308193-008 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/3/2023 4:15:11 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/3/2023 4:15:11 PM
Surr: DNOP	116	69-147		%Rec	1	8/3/2023 4:15:11 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	8/3/2023 2:07:02 PM
Surr: BFB	94.7	15-244		%Rec	1	8/3/2023 2:07:02 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.021		mg/Kg	1	8/3/2023 2:07:02 PM
Toluene	ND	0.042		mg/Kg	1	8/3/2023 2:07:02 PM
Ethylbenzene	ND	0.042		mg/Kg	1	8/3/2023 2:07:02 PM
Xylenes, Total	ND	0.084		mg/Kg	1	8/3/2023 2:07:02 PM
Surr: 4-Bromofluorobenzene	112	39.1-146		%Rec	1	8/3/2023 2:07:02 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	530	60		mg/Kg	20	8/3/2023 6:19:01 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** DS13-1
Project: Delek Matador Produced Water Release **Collection Date:** 7/31/2023 12:45:00 PM
Lab ID: 2308193-009 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/3/2023 4:26:10 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/3/2023 4:26:10 PM
Surr: DNOP	93.9	69-147		%Rec	1	8/3/2023 4:26:10 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	8/3/2023 2:30:44 PM
Surr: BFB	94.1	15-244		%Rec	1	8/3/2023 2:30:44 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.021		mg/Kg	1	8/3/2023 2:30:44 PM
Toluene	ND	0.042		mg/Kg	1	8/3/2023 2:30:44 PM
Ethylbenzene	ND	0.042		mg/Kg	1	8/3/2023 2:30:44 PM
Xylenes, Total	ND	0.084		mg/Kg	1	8/3/2023 2:30:44 PM
Surr: 4-Bromofluorobenzene	112	39.1-146		%Rec	1	8/3/2023 2:30:44 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	86	60		mg/Kg	20	8/3/2023 6:31:22 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** DS13-4
Project: Delek Matador Produced Water Release **Collection Date:** 7/31/2023 12:55:00 PM
Lab ID: 2308193-010 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	8.4		mg/Kg	1	8/3/2023 4:37:08 PM
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	8/3/2023 4:37:08 PM
Surr: DNOP	93.6	69-147		%Rec	1	8/3/2023 4:37:08 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	8/3/2023 2:54:25 PM
Surr: BFB	95.1	15-244		%Rec	1	8/3/2023 2:54:25 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.018		mg/Kg	1	8/3/2023 2:54:25 PM
Toluene	ND	0.037		mg/Kg	1	8/3/2023 2:54:25 PM
Ethylbenzene	ND	0.037		mg/Kg	1	8/3/2023 2:54:25 PM
Xylenes, Total	ND	0.074		mg/Kg	1	8/3/2023 2:54:25 PM
Surr: 4-Bromofluorobenzene	112	39.1-146		%Rec	1	8/3/2023 2:54:25 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	130	60		mg/Kg	20	8/3/2023 6:43:43 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** DS14-3
Project: Delek Matador Produced Water Release **Collection Date:** 7/31/2023 1:05:00 PM
Lab ID: 2308193-011 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	8/3/2023 5:08:30 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	8/3/2023 5:08:30 PM
Surr: DNOP	109	69-147		%Rec	1	8/3/2023 5:08:30 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/3/2023 3:41:57 PM
Surr: BFB	96.6	15-244		%Rec	1	8/3/2023 3:41:57 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	8/3/2023 3:41:57 PM
Toluene	ND	0.049		mg/Kg	1	8/3/2023 3:41:57 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/3/2023 3:41:57 PM
Xylenes, Total	ND	0.097		mg/Kg	1	8/3/2023 3:41:57 PM
Surr: 4-Bromofluorobenzene	114	39.1-146		%Rec	1	8/3/2023 3:41:57 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	280	60		mg/Kg	20	8/3/2023 6:56:04 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** DS14-4
Project: Delek Matador Produced Water Release **Collection Date:** 7/31/2023 1:15:00 PM
Lab ID: 2308193-012 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	8/3/2023 5:19:25 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/3/2023 5:19:25 PM
Surr: DNOP	116	69-147		%Rec	1	8/3/2023 5:19:25 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	8/3/2023 4:05:45 PM
Surr: BFB	96.1	15-244		%Rec	1	8/3/2023 4:05:45 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.021		mg/Kg	1	8/3/2023 4:05:45 PM
Toluene	ND	0.041		mg/Kg	1	8/3/2023 4:05:45 PM
Ethylbenzene	ND	0.041		mg/Kg	1	8/3/2023 4:05:45 PM
Xylenes, Total	ND	0.082		mg/Kg	1	8/3/2023 4:05:45 PM
Surr: 4-Bromofluorobenzene	112	39.1-146		%Rec	1	8/3/2023 4:05:45 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	340	60		mg/Kg	20	8/3/2023 7:08:24 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** DS15-3
Project: Delek Matador Produced Water Release **Collection Date:** 7/31/2023 1:25:00 PM
Lab ID: 2308193-013 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/3/2023 5:30:20 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/3/2023 5:30:20 PM
Surr: DNOP	96.3	69-147		%Rec	1	8/3/2023 5:30:20 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.4		mg/Kg	1	8/3/2023 4:29:29 PM
Surr: BFB	95.6	15-244		%Rec	1	8/3/2023 4:29:29 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.027		mg/Kg	1	8/3/2023 4:29:29 PM
Toluene	ND	0.054		mg/Kg	1	8/3/2023 4:29:29 PM
Ethylbenzene	ND	0.054		mg/Kg	1	8/3/2023 4:29:29 PM
Xylenes, Total	ND	0.11		mg/Kg	1	8/3/2023 4:29:29 PM
Surr: 4-Bromofluorobenzene	113	39.1-146		%Rec	1	8/3/2023 4:29:29 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	200	60		mg/Kg	20	8/3/2023 7:20:45 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** DS15-4
Project: Delek Matador Produced Water Release **Collection Date:** 7/31/2023 1:35:00 PM
Lab ID: 2308193-014 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	8/3/2023 5:41:18 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	8/3/2023 5:41:18 PM
Surr: DNOP	97.4	69-147		%Rec	1	8/3/2023 5:41:18 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.3		mg/Kg	1	8/3/2023 4:53:16 PM
Surr: BFB	97.0	15-244		%Rec	1	8/3/2023 4:53:16 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.026		mg/Kg	1	8/3/2023 4:53:16 PM
Toluene	ND	0.053		mg/Kg	1	8/3/2023 4:53:16 PM
Ethylbenzene	ND	0.053		mg/Kg	1	8/3/2023 4:53:16 PM
Xylenes, Total	ND	0.11		mg/Kg	1	8/3/2023 4:53:16 PM
Surr: 4-Bromofluorobenzene	114	39.1-146		%Rec	1	8/3/2023 4:53:16 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	350	60		mg/Kg	20	8/3/2023 7:33:06 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH17
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 8:40:00 AM
Lab ID: 2308193-015 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	21	9.6		mg/Kg	1	8/3/2023 5:52:24 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/3/2023 5:52:24 PM
Surr: DNOP	93.4	69-147		%Rec	1	8/3/2023 5:52:24 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	8/3/2023 5:17:04 PM
Surr: BFB	94.2	15-244		%Rec	1	8/3/2023 5:17:04 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.019		mg/Kg	1	8/3/2023 5:17:04 PM
Toluene	ND	0.037		mg/Kg	1	8/3/2023 5:17:04 PM
Ethylbenzene	ND	0.037		mg/Kg	1	8/3/2023 5:17:04 PM
Xylenes, Total	ND	0.074		mg/Kg	1	8/3/2023 5:17:04 PM
Surr: 4-Bromofluorobenzene	111	39.1-146		%Rec	1	8/3/2023 5:17:04 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	880	60		mg/Kg	20	8/3/2023 7:45:27 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH18
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 8:42:00 AM
Lab ID: 2308193-016 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	33	8.8		mg/Kg	1	8/3/2023 6:03:37 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	8/3/2023 6:03:37 PM
Surr: DNOP	95.9	69-147		%Rec	1	8/3/2023 6:03:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	8/3/2023 5:40:55 PM
Surr: BFB	98.0	15-244		%Rec	1	8/3/2023 5:40:55 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.019		mg/Kg	1	8/3/2023 5:40:55 PM
Toluene	ND	0.038		mg/Kg	1	8/3/2023 5:40:55 PM
Ethylbenzene	ND	0.038		mg/Kg	1	8/3/2023 5:40:55 PM
Xylenes, Total	ND	0.076		mg/Kg	1	8/3/2023 5:40:55 PM
Surr: 4-Bromofluorobenzene	115	39.1-146		%Rec	1	8/3/2023 5:40:55 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	1300	61		mg/Kg	20	8/3/2023 7:57:48 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH19
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 8:44:00 AM
Lab ID: 2308193-017 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	21	8.9		mg/Kg	1	8/3/2023 6:14:49 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	8/3/2023 6:14:49 PM
Surr: DNOP	79.5	69-147		%Rec	1	8/3/2023 6:14:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	8/3/2023 6:04:43 PM
Surr: BFB	94.4	15-244		%Rec	1	8/3/2023 6:04:43 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.021		mg/Kg	1	8/3/2023 6:04:43 PM
Toluene	ND	0.042		mg/Kg	1	8/3/2023 6:04:43 PM
Ethylbenzene	ND	0.042		mg/Kg	1	8/3/2023 6:04:43 PM
Xylenes, Total	ND	0.084		mg/Kg	1	8/3/2023 6:04:43 PM
Surr: 4-Bromofluorobenzene	110	39.1-146		%Rec	1	8/3/2023 6:04:43 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	610	60		mg/Kg	20	8/3/2023 8:34:49 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH20
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 8:46:00 AM
Lab ID: 2308193-018 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	8/3/2023 12:13:13 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	8/3/2023 12:13:13 PM
Surr: DNOP	107	69-147		%Rec	1	8/3/2023 12:13:13 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	8/3/2023 6:28:28 PM
Surr: BFB	96.0	15-244		%Rec	1	8/3/2023 6:28:28 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.021		mg/Kg	1	8/3/2023 6:28:28 PM
Toluene	ND	0.041		mg/Kg	1	8/3/2023 6:28:28 PM
Ethylbenzene	ND	0.041		mg/Kg	1	8/3/2023 6:28:28 PM
Xylenes, Total	ND	0.082		mg/Kg	1	8/3/2023 6:28:28 PM
Surr: 4-Bromofluorobenzene	112	39.1-146		%Rec	1	8/3/2023 6:28:28 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	260	60		mg/Kg	20	8/3/2023 8:47:10 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH21
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 8:48:00 AM
Lab ID: 2308193-019 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	8/3/2023 12:34:44 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	8/3/2023 12:34:44 PM
Surr: DNOP	93.9	69-147		%Rec	1	8/3/2023 12:34:44 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	8/3/2023 6:52:12 PM
Surr: BFB	94.6	15-244		%Rec	1	8/3/2023 6:52:12 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.022		mg/Kg	1	8/3/2023 6:52:12 PM
Toluene	ND	0.044		mg/Kg	1	8/3/2023 6:52:12 PM
Ethylbenzene	ND	0.044		mg/Kg	1	8/3/2023 6:52:12 PM
Xylenes, Total	ND	0.088		mg/Kg	1	8/3/2023 6:52:12 PM
Surr: 4-Bromofluorobenzene	111	39.1-146		%Rec	1	8/3/2023 6:52:12 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	430	59		mg/Kg	20	8/3/2023 8:59:31 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH22
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 2:05:00 PM
Lab ID: 2308193-020 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	8/3/2023 12:45:32 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/3/2023 12:45:32 PM
Surr: DNOP	96.2	69-147		%Rec	1	8/3/2023 12:45:32 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	8/3/2023 7:15:55 PM
Surr: BFB	94.8	15-244		%Rec	1	8/3/2023 7:15:55 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.020		mg/Kg	1	8/3/2023 7:15:55 PM
Toluene	ND	0.040		mg/Kg	1	8/3/2023 7:15:55 PM
Ethylbenzene	ND	0.040		mg/Kg	1	8/3/2023 7:15:55 PM
Xylenes, Total	ND	0.080		mg/Kg	1	8/3/2023 7:15:55 PM
Surr: 4-Bromofluorobenzene	112	39.1-146		%Rec	1	8/3/2023 7:15:55 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	600	60		mg/Kg	20	8/3/2023 9:11:52 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH23
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 8:52:00 AM
Lab ID: 2308193-021 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	8/4/2023 2:53:25 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/4/2023 2:53:25 PM
Surr: DNOP	99.2	69-147		%Rec	1	8/4/2023 2:53:25 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	8/3/2023 3:39:00 PM
Surr: BFB	99.3	15-244		%Rec	1	8/3/2023 3:39:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.021		mg/Kg	1	8/3/2023 3:39:00 PM
Toluene	ND	0.042		mg/Kg	1	8/3/2023 3:39:00 PM
Ethylbenzene	ND	0.042		mg/Kg	1	8/3/2023 3:39:00 PM
Xylenes, Total	ND	0.085		mg/Kg	1	8/3/2023 3:39:00 PM
Surr: 4-Bromofluorobenzene	95.0	39.1-146		%Rec	1	8/3/2023 3:39:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	530	59		mg/Kg	20	8/3/2023 9:24:12 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH24
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 12:40:00 PM
Lab ID: 2308193-022 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	8/4/2023 3:04:12 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	8/4/2023 3:04:12 PM
Surr: DNOP	114	69-147		%Rec	1	8/4/2023 3:04:12 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	8/3/2023 4:23:00 PM
Surr: BFB	101	15-244		%Rec	1	8/3/2023 4:23:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.020		mg/Kg	1	8/3/2023 4:23:00 PM
Toluene	ND	0.041		mg/Kg	1	8/3/2023 4:23:00 PM
Ethylbenzene	ND	0.041		mg/Kg	1	8/3/2023 4:23:00 PM
Xylenes, Total	ND	0.081		mg/Kg	1	8/3/2023 4:23:00 PM
Surr: 4-Bromofluorobenzene	96.0	39.1-146		%Rec	1	8/3/2023 4:23:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	540	60		mg/Kg	20	8/3/2023 9:36:33 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH25
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 12:42:00 PM
Lab ID: 2308193-023 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/4/2023 3:15:00 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/4/2023 3:15:00 PM
Surr: DNOP	104	69-147		%Rec	1	8/4/2023 3:15:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/3/2023 4:45:00 PM
Surr: BFB	99.2	15-244		%Rec	1	8/3/2023 4:45:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.020		mg/Kg	1	8/3/2023 4:45:00 PM
Toluene	ND	0.039		mg/Kg	1	8/3/2023 4:45:00 PM
Ethylbenzene	ND	0.039		mg/Kg	1	8/3/2023 4:45:00 PM
Xylenes, Total	ND	0.079		mg/Kg	1	8/3/2023 4:45:00 PM
Surr: 4-Bromofluorobenzene	94.4	39.1-146		%Rec	1	8/3/2023 4:45:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	550	60		mg/Kg	20	8/3/2023 10:13:35 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH26
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 12:44:00 PM
Lab ID: 2308193-024 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	8.5		mg/Kg	1	8/4/2023 3:25:48 PM
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	8/4/2023 3:25:48 PM
Surr: DNOP	103	69-147		%Rec	1	8/4/2023 3:25:48 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	8/3/2023 5:07:00 PM
Surr: BFB	98.5	15-244		%Rec	1	8/3/2023 5:07:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.020		mg/Kg	1	8/3/2023 5:07:00 PM
Toluene	ND	0.041		mg/Kg	1	8/3/2023 5:07:00 PM
Ethylbenzene	ND	0.041		mg/Kg	1	8/3/2023 5:07:00 PM
Xylenes, Total	ND	0.082		mg/Kg	1	8/3/2023 5:07:00 PM
Surr: 4-Bromofluorobenzene	95.1	39.1-146		%Rec	1	8/3/2023 5:07:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	560	60		mg/Kg	20	8/3/2023 10:25:56 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH27
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 12:46:00 PM
Lab ID: 2308193-025 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	11	9.7		mg/Kg	1	8/4/2023 2:17:19 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/4/2023 2:17:19 PM
Surr: DNOP	96.9	69-147		%Rec	1	8/4/2023 2:17:19 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	8/3/2023 5:29:00 PM
Surr: BFB	96.5	15-244		%Rec	1	8/3/2023 5:29:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.022		mg/Kg	1	8/3/2023 5:29:00 PM
Toluene	ND	0.044		mg/Kg	1	8/3/2023 5:29:00 PM
Ethylbenzene	ND	0.044		mg/Kg	1	8/3/2023 5:29:00 PM
Xylenes, Total	ND	0.087		mg/Kg	1	8/3/2023 5:29:00 PM
Surr: 4-Bromofluorobenzene	95.6	39.1-146		%Rec	1	8/3/2023 5:29:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	470	60		mg/Kg	20	8/3/2023 11:27:41 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH28
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 2:10:00 PM
Lab ID: 2308193-026 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	8/3/2023 2:23:04 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	8/3/2023 2:23:04 PM
Surr: DNOP	97.8	69-147		%Rec	1	8/3/2023 2:23:04 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/3/2023 5:51:00 PM
Surr: BFB	104	15-244		%Rec	1	8/3/2023 5:51:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	8/3/2023 5:51:00 PM
Toluene	ND	0.046		mg/Kg	1	8/3/2023 5:51:00 PM
Ethylbenzene	ND	0.046		mg/Kg	1	8/3/2023 5:51:00 PM
Xylenes, Total	ND	0.092		mg/Kg	1	8/3/2023 5:51:00 PM
Surr: 4-Bromofluorobenzene	94.9	39.1-146		%Rec	1	8/3/2023 5:51:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	510	60		mg/Kg	20	8/3/2023 11:40:01 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH29
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 2:12:00 PM
Lab ID: 2308193-027 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/3/2023 2:44:06 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/3/2023 2:44:06 PM
Surr: DNOP	98.4	69-147		%Rec	1	8/3/2023 2:44:06 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/3/2023 6:13:00 PM
Surr: BFB	96.5	15-244		%Rec	1	8/3/2023 6:13:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.020		mg/Kg	1	8/3/2023 6:13:00 PM
Toluene	ND	0.039		mg/Kg	1	8/3/2023 6:13:00 PM
Ethylbenzene	ND	0.039		mg/Kg	1	8/3/2023 6:13:00 PM
Xylenes, Total	ND	0.079		mg/Kg	1	8/3/2023 6:13:00 PM
Surr: 4-Bromofluorobenzene	94.3	39.1-146		%Rec	1	8/3/2023 6:13:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	420	60		mg/Kg	20	8/3/2023 11:52:22 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH30
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 2:14:00 PM
Lab ID: 2308193-028 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	8/3/2023 3:04:56 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	8/3/2023 3:04:56 PM
Surr: DNOP	98.4	69-147		%Rec	1	8/3/2023 3:04:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	8/3/2023 6:34:00 PM
Surr: BFB	98.4	15-244		%Rec	1	8/3/2023 6:34:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.021		mg/Kg	1	8/3/2023 6:34:00 PM
Toluene	ND	0.041		mg/Kg	1	8/3/2023 6:34:00 PM
Ethylbenzene	ND	0.041		mg/Kg	1	8/3/2023 6:34:00 PM
Xylenes, Total	ND	0.082		mg/Kg	1	8/3/2023 6:34:00 PM
Surr: 4-Bromofluorobenzene	95.0	39.1-146		%Rec	1	8/3/2023 6:34:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	570	60		mg/Kg	20	8/4/2023 12:04:43 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH31
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 2:16:00 PM
Lab ID: 2308193-029 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	8/3/2023 3:25:50 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	8/3/2023 3:25:50 PM
Surr: DNOP	99.5	69-147		%Rec	1	8/3/2023 3:25:50 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	8/3/2023 6:56:00 PM
Surr: BFB	94.4	15-244		%Rec	1	8/3/2023 6:56:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.018		mg/Kg	1	8/3/2023 6:56:00 PM
Toluene	ND	0.036		mg/Kg	1	8/3/2023 6:56:00 PM
Ethylbenzene	ND	0.036		mg/Kg	1	8/3/2023 6:56:00 PM
Xylenes, Total	ND	0.072		mg/Kg	1	8/3/2023 6:56:00 PM
Surr: 4-Bromofluorobenzene	94.8	39.1-146		%Rec	1	8/3/2023 6:56:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	510	60		mg/Kg	20	8/4/2023 12:17:04 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH32
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 2:18:00 PM
Lab ID: 2308193-030 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	8/4/2023 2:41:22 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	8/4/2023 2:41:22 PM
Surr: DNOP	96.3	69-147		%Rec	1	8/4/2023 2:41:22 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	8/3/2023 7:18:00 PM
Surr: BFB	101	15-244		%Rec	1	8/3/2023 7:18:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.022		mg/Kg	1	8/3/2023 7:18:00 PM
Toluene	ND	0.045		mg/Kg	1	8/3/2023 7:18:00 PM
Ethylbenzene	ND	0.045		mg/Kg	1	8/3/2023 7:18:00 PM
Xylenes, Total	ND	0.090		mg/Kg	1	8/3/2023 7:18:00 PM
Surr: 4-Bromofluorobenzene	96.0	39.1-146		%Rec	1	8/3/2023 7:18:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	490	60		mg/Kg	20	8/4/2023 12:29:25 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH33
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 2:20:00 PM
Lab ID: 2308193-031 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	8/3/2023 4:30:43 PM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	8/3/2023 4:30:43 PM
Surr: DNOP	101	69-147		%Rec	1	8/3/2023 4:30:43 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	8/3/2023 7:40:00 PM
Surr: BFB	98.4	15-244		%Rec	1	8/3/2023 7:40:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.021		mg/Kg	1	8/3/2023 7:40:00 PM
Toluene	ND	0.042		mg/Kg	1	8/3/2023 7:40:00 PM
Ethylbenzene	ND	0.042		mg/Kg	1	8/3/2023 7:40:00 PM
Xylenes, Total	ND	0.084		mg/Kg	1	8/3/2023 7:40:00 PM
Surr: 4-Bromofluorobenzene	95.8	39.1-146		%Rec	1	8/3/2023 7:40:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	400	60		mg/Kg	20	8/4/2023 12:41:46 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH34
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 2:21:00 PM
Lab ID: 2308193-032 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	8/3/2023 4:52:31 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/3/2023 4:52:31 PM
Surr: DNOP	98.0	69-147		%Rec	1	8/3/2023 4:52:31 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	8/3/2023 9:51:00 PM
Surr: BFB	97.5	15-244		%Rec	1	8/3/2023 9:51:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.022		mg/Kg	1	8/3/2023 9:51:00 PM
Toluene	ND	0.044		mg/Kg	1	8/3/2023 9:51:00 PM
Ethylbenzene	ND	0.044		mg/Kg	1	8/3/2023 9:51:00 PM
Xylenes, Total	ND	0.088		mg/Kg	1	8/3/2023 9:51:00 PM
Surr: 4-Bromofluorobenzene	93.1	39.1-146		%Rec	1	8/3/2023 9:51:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	260	60		mg/Kg	20	8/4/2023 12:54:06 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH35
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 2:22:00 PM
Lab ID: 2308193-033 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	8/3/2023 5:14:17 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	8/3/2023 5:14:17 PM
Surr: DNOP	99.3	69-147		%Rec	1	8/3/2023 5:14:17 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	8/3/2023 10:56:00 PM
Surr: BFB	93.4	15-244		%Rec	1	8/3/2023 10:56:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.021		mg/Kg	1	8/3/2023 10:56:00 PM
Toluene	ND	0.043		mg/Kg	1	8/3/2023 10:56:00 PM
Ethylbenzene	ND	0.043		mg/Kg	1	8/3/2023 10:56:00 PM
Xylenes, Total	ND	0.085		mg/Kg	1	8/3/2023 10:56:00 PM
Surr: 4-Bromofluorobenzene	92.4	39.1-146		%Rec	1	8/3/2023 10:56:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	440	60		mg/Kg	20	8/4/2023 1:31:08 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH36
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 2:24:00 PM
Lab ID: 2308193-034 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	8.6		mg/Kg	1	8/3/2023 5:35:11 PM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	8/3/2023 5:35:11 PM
Surr: DNOP	103	69-147		%Rec	1	8/3/2023 5:35:11 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/4/2023 12:01:00 AM
Surr: BFB	96.3	15-244		%Rec	1	8/4/2023 12:01:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	8/4/2023 12:01:00 AM
Toluene	ND	0.047		mg/Kg	1	8/4/2023 12:01:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	8/4/2023 12:01:00 AM
Xylenes, Total	ND	0.093		mg/Kg	1	8/4/2023 12:01:00 AM
Surr: 4-Bromofluorobenzene	93.7	39.1-146		%Rec	1	8/4/2023 12:01:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	280	60		mg/Kg	20	8/4/2023 1:43:29 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH37
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 2:26:00 PM
Lab ID: 2308193-035 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	8/3/2023 5:57:58 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/3/2023 5:57:58 PM
Surr: DNOP	102	69-147		%Rec	1	8/3/2023 5:57:58 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	8/4/2023 12:23:00 AM
Surr: BFB	95.6	15-244		%Rec	1	8/4/2023 12:23:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.022		mg/Kg	1	8/4/2023 12:23:00 AM
Toluene	ND	0.044		mg/Kg	1	8/4/2023 12:23:00 AM
Ethylbenzene	ND	0.044		mg/Kg	1	8/4/2023 12:23:00 AM
Xylenes, Total	ND	0.088		mg/Kg	1	8/4/2023 12:23:00 AM
Surr: 4-Bromofluorobenzene	92.8	39.1-146		%Rec	1	8/4/2023 12:23:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	810	60		mg/Kg	20	8/4/2023 1:55:49 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH38
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 2:28:00 PM
Lab ID: 2308193-036 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/3/2023 6:20:05 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/3/2023 6:20:05 PM
Surr: DNOP	105	69-147		%Rec	1	8/3/2023 6:20:05 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/4/2023 12:44:00 AM
Surr: BFB	97.6	15-244		%Rec	1	8/4/2023 12:44:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/4/2023 12:44:00 AM
Toluene	ND	0.049		mg/Kg	1	8/4/2023 12:44:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/4/2023 12:44:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	8/4/2023 12:44:00 AM
Surr: 4-Bromofluorobenzene	93.0	39.1-146		%Rec	1	8/4/2023 12:44:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	290	60		mg/Kg	20	8/4/2023 2:08:10 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH39
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 2:30:00 PM
Lab ID: 2308193-037 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	8/3/2023 6:42:11 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/3/2023 6:42:11 PM
Surr: DNOP	105	69-147		%Rec	1	8/3/2023 6:42:11 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	8/4/2023 1:06:00 AM
Surr: BFB	95.0	15-244		%Rec	1	8/4/2023 1:06:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.020		mg/Kg	1	8/4/2023 1:06:00 AM
Toluene	ND	0.040		mg/Kg	1	8/4/2023 1:06:00 AM
Ethylbenzene	ND	0.040		mg/Kg	1	8/4/2023 1:06:00 AM
Xylenes, Total	ND	0.081		mg/Kg	1	8/4/2023 1:06:00 AM
Surr: 4-Bromofluorobenzene	91.7	39.1-146		%Rec	1	8/4/2023 1:06:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	590	60		mg/Kg	20	8/4/2023 2:20:31 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH40
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 2:32:00 PM
Lab ID: 2308193-038 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	17	8.9		mg/Kg	1	8/4/2023 3:05:28 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	8/4/2023 3:05:28 PM
Surr: DNOP	92.2	69-147		%Rec	1	8/4/2023 3:05:28 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	8/4/2023 1:28:00 AM
Surr: BFB	100	15-244		%Rec	1	8/4/2023 1:28:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.020		mg/Kg	1	8/4/2023 1:28:00 AM
Toluene	ND	0.040		mg/Kg	1	8/4/2023 1:28:00 AM
Ethylbenzene	ND	0.040		mg/Kg	1	8/4/2023 1:28:00 AM
Xylenes, Total	ND	0.081		mg/Kg	1	8/4/2023 1:28:00 AM
Surr: 4-Bromofluorobenzene	91.9	39.1-146		%Rec	1	8/4/2023 1:28:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	910	60		mg/Kg	20	8/4/2023 2:32:51 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH41
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 2:34:00 PM
Lab ID: 2308193-039 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	8/4/2023 3:29:28 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/4/2023 3:29:28 PM
Surr: DNOP	94.2	69-147		%Rec	1	8/4/2023 3:29:28 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/4/2023 1:50:00 AM
Surr: BFB	97.5	15-244		%Rec	1	8/4/2023 1:50:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	8/4/2023 1:50:00 AM
Toluene	ND	0.046		mg/Kg	1	8/4/2023 1:50:00 AM
Ethylbenzene	ND	0.046		mg/Kg	1	8/4/2023 1:50:00 AM
Xylenes, Total	ND	0.093		mg/Kg	1	8/4/2023 1:50:00 AM
Surr: 4-Bromofluorobenzene	94.6	39.1-146		%Rec	1	8/4/2023 1:50:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	540	60		mg/Kg	20	8/4/2023 2:45:12 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH42
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 2:36:00 PM
Lab ID: 2308193-040 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/4/2023 3:19:57 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/4/2023 3:19:57 PM
Surr: DNOP	94.8	69-147		%Rec	1	8/4/2023 3:19:57 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	8/4/2023 2:11:00 AM
Surr: BFB	99.7	15-244		%Rec	1	8/4/2023 2:11:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.022		mg/Kg	1	8/4/2023 2:11:00 AM
Toluene	ND	0.044		mg/Kg	1	8/4/2023 2:11:00 AM
Ethylbenzene	ND	0.044		mg/Kg	1	8/4/2023 2:11:00 AM
Xylenes, Total	ND	0.088		mg/Kg	1	8/4/2023 2:11:00 AM
Surr: 4-Bromofluorobenzene	93.6	39.1-146		%Rec	1	8/4/2023 2:11:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	470	60		mg/Kg	20	8/4/2023 2:57:32 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH43
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 2:38:00 PM
Lab ID: 2308193-041 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/3/2023 12:16:53 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/3/2023 12:16:53 PM
Surr: DNOP	90.1	69-147		%Rec	1	8/3/2023 12:16:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	8/4/2023 2:33:00 AM
Surr: BFB	98.0	15-244		%Rec	1	8/4/2023 2:33:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.019		mg/Kg	1	8/4/2023 2:33:00 AM
Toluene	ND	0.037		mg/Kg	1	8/4/2023 2:33:00 AM
Ethylbenzene	ND	0.037		mg/Kg	1	8/4/2023 2:33:00 AM
Xylenes, Total	ND	0.075		mg/Kg	1	8/4/2023 2:33:00 AM
Surr: 4-Bromofluorobenzene	90.8	39.1-146		%Rec	1	8/4/2023 2:33:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	420	60		mg/Kg	20	8/3/2023 2:59:02 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH44
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 2:40:00 PM
Lab ID: 2308193-042 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	8/3/2023 12:40:50 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/3/2023 12:40:50 PM
Surr: DNOP	88.2	69-147		%Rec	1	8/3/2023 12:40:50 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	8/4/2023 3:16:00 AM
Surr: BFB	97.0	15-244		%Rec	1	8/4/2023 3:16:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.019		mg/Kg	1	8/4/2023 3:16:00 AM
Toluene	ND	0.037		mg/Kg	1	8/4/2023 3:16:00 AM
Ethylbenzene	ND	0.037		mg/Kg	1	8/4/2023 3:16:00 AM
Xylenes, Total	ND	0.074		mg/Kg	1	8/4/2023 3:16:00 AM
Surr: 4-Bromofluorobenzene	93.7	39.1-146		%Rec	1	8/4/2023 3:16:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	440	60		mg/Kg	20	8/3/2023 3:11:26 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308193**
Date Reported: **8/7/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH45
Project: Delek Matador Produced Water Release **Collection Date:** 8/1/2023 2:42:00 PM
Lab ID: 2308193-043 **Matrix:** MEOH (SOIL) **Received Date:** 8/3/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	8/3/2023 1:04:49 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/3/2023 1:04:49 PM
Surr: DNOP	92.7	69-147		%Rec	1	8/3/2023 1:04:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	8/4/2023 3:38:00 AM
Surr: BFB	95.3	15-244		%Rec	1	8/4/2023 3:38:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.022		mg/Kg	1	8/4/2023 3:38:00 AM
Toluene	ND	0.043		mg/Kg	1	8/4/2023 3:38:00 AM
Ethylbenzene	ND	0.043		mg/Kg	1	8/4/2023 3:38:00 AM
Xylenes, Total	ND	0.087		mg/Kg	1	8/4/2023 3:38:00 AM
Surr: 4-Bromofluorobenzene	93.8	39.1-146		%Rec	1	8/4/2023 3:38:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	490	60		mg/Kg	20	8/3/2023 4:38:19 PM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308193**

07-Aug-23

Client: GHD

Project: Delek Matador Produced Water Release

Sample ID: **MB-76655**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **76655**	RunNo: **98696**
Prep Date: **8/3/2023**	Analysis Date: **8/3/2023**	SeqNo: **3596216** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-76655**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **76655**	RunNo: **98696**
Prep Date: **8/3/2023**	Analysis Date: **8/3/2023**	SeqNo: **3596217** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.5	90	110			

Sample ID: **MB-76656**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **76656**	RunNo: **98696**
Prep Date: **8/3/2023**	Analysis Date: **8/3/2023**	SeqNo: **3596218** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-76656**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **76656**	RunNo: **98696**
Prep Date: **8/3/2023**	Analysis Date: **8/3/2023**	SeqNo: **3596219** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.4	90	110			

Sample ID: **LCS-76659**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **76659**	RunNo: **98737**
Prep Date: **8/3/2023**	Analysis Date: **8/3/2023**	SeqNo: **3596542** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.7	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308193**

07-Aug-23

Client: GHD

Project: Delek Matador Produced Water Release

Sample ID: **2308193-020AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH22**	Batch ID: **76646**	RunNo: **98705**
Prep Date: **8/3/2023**	Analysis Date: **8/3/2023**	SeqNo: **3595307** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	8.6	42.96	8.508	83.4	54.2	135			
Surr: DNOP	4.3		4.296		99.3	69	147			

Sample ID: **2308193-020AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH22**	Batch ID: **76646**	RunNo: **98705**
Prep Date: **8/3/2023**	Analysis Date: **8/3/2023**	SeqNo: **3595308** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	8.8	44.01	8.508	86.3	54.2	135	4.79	29.2	
Surr: DNOP	4.5		4.401		101	69	147	0	0	

Sample ID: **LCS-76646**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **76646**	RunNo: **98705**
Prep Date: **8/3/2023**	Analysis Date: **8/3/2023**	SeqNo: **3595310** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.9	61.9	130			
Surr: DNOP	4.9		5.000		97.3	69	147			

Sample ID: **MB-76650**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **76650**	RunNo: **98707**
Prep Date: **8/3/2023**	Analysis Date: **8/3/2023**	SeqNo: **3595364** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.9		10.00		89.3	69	147			

Sample ID: **LCS-76650**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **76650**	RunNo: **98707**
Prep Date: **8/3/2023**	Analysis Date: **8/3/2023**	SeqNo: **3595365** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	88.7	61.9	130			
Surr: DNOP	4.5		5.000		89.1	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308193**

07-Aug-23

Client: GHD

Project: Delek Matador Produced Water Release

Sample ID: **MB-76649**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **76649**	RunNo: **98725**
Prep Date: **8/3/2023**	Analysis Date: **8/3/2023**	SeqNo: **3596009** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.5		10.00		95.0	69	147			

Sample ID: **MB-76646**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **76646**	RunNo: **98705**
Prep Date: **8/3/2023**	Analysis Date: **8/3/2023**	SeqNo: **3596177** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.7		10.00		97.1	69	147			

Sample ID: **LCS-76649**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **76649**	RunNo: **98744**
Prep Date: **8/3/2023**	Analysis Date: **8/4/2023**	SeqNo: **3596726** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	99.8	61.9	130			
Surr: DNOP	4.9		5.000		97.6	69	147			

Sample ID: **LCS-76674**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **76674**	RunNo: **98744**
Prep Date: **8/4/2023**	Analysis Date: **8/4/2023**	SeqNo: **3596727** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.0	61.9	130			
Surr: DNOP	4.5		5.000		89.6	69	147			

Sample ID: **MB-76674**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **76674**	RunNo: **98744**
Prep Date: **8/4/2023**	Analysis Date: **8/4/2023**	SeqNo: **3596728** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.2		10.00		91.7	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308193**

07-Aug-23

Client: GHD

Project: Delek Matador Produced Water Release

Sample ID: **2308193-040AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH42**	Batch ID: **76674**	RunNo: **98747**
Prep Date: **8/4/2023**	Analysis Date: **8/4/2023**	SeqNo: **3596770** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.5	47.48	0	93.3	54.2	135			
Surr: DNOP	4.3		4.748		90.9	69	147			

Sample ID: **2308193-040AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH42**	Batch ID: **76674**	RunNo: **98747**
Prep Date: **8/4/2023**	Analysis Date: **8/4/2023**	SeqNo: **3597537** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	9.5	47.66	0	118	54.2	135	26.8	29.2	
Surr: DNOP	4.6		4.766		96.1	69	147	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308193**

07-Aug-23

Client: GHD

Project: Delek Matador Produced Water Release

Sample ID: **100ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R98690**	RunNo: **98690**
Prep Date:	Analysis Date: **8/3/2023**	SeqNo: **3594928** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.4	70	130			
Surr: BFB	2200		1000		215	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **R98690**	RunNo: **98690**
Prep Date:	Analysis Date: **8/3/2023**	SeqNo: **3594929** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		105	15	244			

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **GS98709**	RunNo: **98709**
Prep Date:	Analysis Date: **8/3/2023**	SeqNo: **3595412** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.4	70	130			
Surr: BFB	2000		1000		198	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **GS98709**	RunNo: **98709**
Prep Date:	Analysis Date: **8/3/2023**	SeqNo: **3595413** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	900		1000		90.3	15	244			

Sample ID: **2308193-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **DS9-1**	Batch ID: **GS98709**	RunNo: **98709**
Prep Date:	Analysis Date: **8/3/2023**	SeqNo: **3596130** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	4.4	22.20	0	87.6	70	130			
Surr: BFB	1800		888.1		202	15	244			

Sample ID: **2308193-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **DS9-1**	Batch ID: **GS98709**	RunNo: **98709**
Prep Date:	Analysis Date: **8/3/2023**	SeqNo: **3596131** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308193**

07-Aug-23

Client: GHD

Project: Delek Matador Produced Water Release

Sample ID: **2308193-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **DS9-1**	Batch ID: **GS98709**	RunNo: **98709**
Prep Date:	Analysis Date: **8/3/2023**	SeqNo: **3596131** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	4.4	22.20	0	83.1	70	130	5.34	20	
Surr: BFB	1800		888.1		201	15	244	0	0	

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R98690**	RunNo: **98690**
Prep Date:	Analysis Date: **8/3/2023**	SeqNo: **3596291** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	83.6	70	130			
Surr: BFB	2100		1000		207	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **R98690**	RunNo: **98690**
Prep Date:	Analysis Date: **8/3/2023**	SeqNo: **3596292** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	950		1000		95.0	15	244			

Sample ID: **2308193-032ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH34**	Batch ID: **R98690**	RunNo: **98690**
Prep Date:	Analysis Date: **8/3/2023**	SeqNo: **3596294** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	4.4	21.97	0	83.4	70	130			
Surr: BFB	1800		878.7		202	15	244			

Sample ID: **2308193-032amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH34**	Batch ID: **R98690**	RunNo: **98690**
Prep Date:	Analysis Date: **8/3/2023**	SeqNo: **3596295** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	4.4	21.97	0	81.7	70	130	1.99	20	
Surr: BFB	1800		878.7		205	15	244	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308193**

07-Aug-23

Client: GHD

Project: Delek Matador Produced Water Release

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **R98690**	RunNo: **98690**
Prep Date:	Analysis Date: **8/3/2023**	SeqNo: **3594931** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	94.8	70	130			
Toluene	0.96	0.050	1.000	0	96.2	70	130			
Ethylbenzene	0.97	0.050	1.000	0	96.7	70	130			
Xylenes, Total	2.9	0.10	3.000	0	96.5	70	130			
Surr: 4-Bromofluorobenzene	0.97		1.000		96.7	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **R98690**	RunNo: **98690**
Prep Date:	Analysis Date: **8/3/2023**	SeqNo: **3594932** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.95		1.000		95.2	39.1	146			

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **BS98709**	RunNo: **98709**
Prep Date:	Analysis Date: **8/3/2023**	SeqNo: **3595425** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	105	70	130			
Toluene	1.1	0.050	1.000	0	108	70	130			
Ethylbenzene	1.1	0.050	1.000	0	106	70	130			
Xylenes, Total	3.2	0.10	3.000	0	108	70	130			
Surr: 4-Bromofluorobenzene	1.1		1.000		109	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **BS98709**	RunNo: **98709**
Prep Date:	Analysis Date: **8/3/2023**	SeqNo: **3595426** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		108	39.1	146			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308193**

07-Aug-23

Client: GHD

Project: Delek Matador Produced Water Release

Sample ID: **2308193-002ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **DS9-4**	Batch ID: **BS98709**	RunNo: **98709**
Prep Date:	Analysis Date: **8/3/2023**	SeqNo: **3596132** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.4	0.032	1.274	0	108	70	130			
Toluene	1.4	0.064	1.274	0	108	70	130			
Ethylbenzene	1.4	0.064	1.274	0	108	70	130			
Xylenes, Total	4.2	0.13	3.822	0	110	70	130			
Surr: 4-Bromofluorobenzene	1.4		1.274		111	39.1	146			

Sample ID: **2308193-002amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **DS9-4**	Batch ID: **BS98709**	RunNo: **98709**
Prep Date:	Analysis Date: **8/3/2023**	SeqNo: **3596133** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.3	0.032	1.274	0	105	70	130	2.83	20	
Toluene	1.4	0.064	1.274	0	107	70	130	1.01	20	
Ethylbenzene	1.4	0.064	1.274	0	107	70	130	0.992	20	
Xylenes, Total	4.1	0.13	3.822	0	108	70	130	1.85	20	
Surr: 4-Bromofluorobenzene	1.5		1.274		114	39.1	146	0	0	

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **R98690**	RunNo: **98690**
Prep Date:	Analysis Date: **8/3/2023**	SeqNo: **3596324** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	94.3	70	130			
Toluene	0.96	0.050	1.000	0	96.3	70	130			
Ethylbenzene	0.97	0.050	1.000	0	97.2	70	130			
Xylenes, Total	2.9	0.10	3.000	0	97.2	70	130			
Surr: 4-Bromofluorobenzene	0.95		1.000		95.4	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **R98690**	RunNo: **98690**
Prep Date:	Analysis Date: **8/3/2023**	SeqNo: **3596325** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.95		1.000		95.2	39.1	146			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308193**

07-Aug-23

Client: GHD

Project: Delek Matador Produced Water Release

Sample ID: **2308193-033ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH35**	Batch ID: **R98690**	RunNo: **98690**
Prep Date:	Analysis Date: **8/3/2023**	SeqNo: **3596328** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.021	0.8532	0	93.7	70	130			
Toluene	0.81	0.043	0.8532	0	95.4	70	130			
Ethylbenzene	0.82	0.043	0.8532	0	96.1	70	130			
Xylenes, Total	2.4	0.085	2.560	0	95.6	70	130			
Surr: 4-Bromofluorobenzene	0.80		0.8532		94.1	39.1	146			

Sample ID: **2308193-033amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH35**	Batch ID: **R98690**	RunNo: **98690**
Prep Date:	Analysis Date: **8/3/2023**	SeqNo: **3596329** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.77	0.021	0.8532	0	90.5	70	130	3.53	20	
Toluene	0.79	0.043	0.8532	0	92.2	70	130	3.48	20	
Ethylbenzene	0.79	0.043	0.8532	0	92.5	70	130	3.81	20	
Xylenes, Total	2.4	0.085	2.560	0	92.2	70	130	3.62	20	
Surr: 4-Bromofluorobenzene	0.78		0.8532		91.5	39.1	146	0	0	

Qualifiers:

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

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: GHD | Work Order Number: 2308193 | RcptNo: 1

Received By: Tracy Casarrubias 8/3/2023 7:20:00 AM

Completed By: Tracy Casarrubias 8/3/2023 7:44:28 AM

Reviewed By: JN 8-3-23

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
	Approved by client.		
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑ JN 8/3/23	No ☑	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: JN 8/3/23

Labeled by: SCM 08/03/23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks: Samp IDs on coc do not match bottle labels for -001 thru -014, -007, and -011. Per Brian C., go with COC samp IDs. JN 8/3/23

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	9.9	Good	Yes	Yogi		
2	8.0	Good	Yes	Yogi		
3	8.3	Good	Yes	Yogi		

Received by OCD: 12/4/2024 10:43:20 AM

Released to Imaging: 3/12/2025 11:29:45 AM

Chain-of-Custody Record

Client: GHD Services Inc.

Nate Reece

Mailing Address: 11451 W. Katy Fwy #400

Houston, TX 77079

Phone #: (281) 286-7158

email or Fax#: nate.reece@ghd.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☐ Standard ☑ Rush 24 hr.

Project Name: Delek Matador Produced Water Release

Project #: 126184 92

Project Manager: Nate Reece

J.T. Murrey

Sampler: Liam Giersdorf / Tristanna Crapo

On Ice: ☒ Yes ☐ No

# of Coolers: 3

Cooler Temp(including CF): See Checklist (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308193	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
0731	1000	Soil	BS9-1	1 Jar	Ice	001	X	X					X			
	1010		BS9-4			002										
	1015		BS10-1			003										
	1025		BS10-4			004										
	1030		BS11-1			005										
	1040		BS11-4			006										
	1050		BS12-3			007										
	1055		BS12-4			008										
	1245		BS13-1			009										
	1255		BS13-4			010										
	1305		BS14-3			011										
	1315		BS14-4			012										

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
0802	0800				8/2/23	800
8/2/23	1900			Courier	8/3/23	7:20

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: GHD Services Inc.

Nate Reece

Mailing Address: 11451 W. Katy Fwy #400

Houston, TX 77079

Phone #: (281) 286-7158

email or Fax#: nate.reece@ghd.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☐ Standard ☑ Rush 24 hr.

Project Name: Delek Matador Produced Water Release

Project #: 126184 92

Project Manager: Nate Reece

J.T. Murrey

Sampler: Liam Giersdorf / Tristanna Crapo

On Ice: ☑ Yes ☐ No

# of Coolers: 3

Cooler Temp(including CF): See Checklist (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308193	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
0731	1325	Soil	BS15-3	1 Jar	Ice	013	X	X					X			
0731	1335		BS15-4			014										
0801	0840		BH17			015										
	0842		BH18			016										
	0844		BH19			017										
	0846		BH20			018										
	0848		BH21			019										
	1405		BH22			020										
	0852		BH23			021										
	1240		BH24			022										
	1247		BH25			023										
	1244		BH26			024										

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
0802	0800				8/2/23	800
8/2/23	1900			Courier	8/3/23	7:20

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: GHD Services Inc.

Nate Reece

Mailing Address: 11451 W. Katy Fwy #400

Houston, TX 77079

Phone #: (281) 286-7158

email or Fax#: nate.reece@ghd.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☐ Standard ☑ Rush 24 hr.

Project Name: Delek Matador Produced Water Release

Project #: 1261 8492

Project Manager: Nate Reece

J.T. Murrey

Sampler: Liam Giersdorf / Tristanna Crapo

On Ice: ☑ Yes ☐ No

# of Coolers: 3

Cooler Temp (including CF): See Checklist (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308193	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
0801	1246	Soil	BH27	1 Jar	Ice	025	X	Y					X			
	1410		BH28			026										
	1412		BH29			027										
	1414		BH30			028										
	1416		BH31			029										
	1418		BH32			030										
	1420		BH33			031										
	1421		BH34			032										
	1422		BH35			033										
	1424		BH36			034										
	1426		BH37			035										
	1428		BH38			036										

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
0802	0800				8/2/23	800
8/2/23	1900			courier	8/3/23	7:20

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: GHD Services Inc.

Nate Reece

Mailing Address: 11451 W. Katy Fwy #400

Houston, TX 77079

Phone #: (281) 286-7158

email or Fax#: nate.reece@ghd.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☐ Standard ☑ Rush 24 hr.

Project Name: Delek Matador Produced Water Release

Project #: 126184 92

Project Manager: Nate Reece

J.T. Murray

Sampler: Liam Giersdorf / Tristanna Crapo

On Ice: ☒ Yes ☐ No

# of Coolers: 3

Cooler Temp (including CF): See Checklist (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308193	BTEX / MTBE / TMB's (8021)	TPH:8015D GRO / DRO / MRO	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
0801	1430	Soil	BH39	1 Jar	Ice	037	X	X					X			
	1432		BH40			038										
	1434		BH41			039										
	1436		BH42			040										
	1438		BH43			041										
	1440		BH44			042										
↓	1442	↓	BH45	↓	↓	043	↓	↓					↓			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
0802	0800				8/2/23	800
8/2/23	900				8/3/23	7:20

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 08, 2023

Nate Reece
GHD
6320 Rothway Ste 100
Houston, TX 77040
TEL: (713) 275-3838
FAX:

RE: Delek Matador Produced Water Release OrderNo.: 2308290

Dear Nate Reece:

Hall Environmental Analysis Laboratory received 6 sample(s) on 8/4/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2308290**
Date Reported: **8/8/2023**

CLIENT: GHD **Client Sample ID:** SW1
Project: Delek Matador Produced Water Release **Collection Date:** 8/2/2023 9:57:00 AM
Lab ID: 2308290-001 **Matrix:** MEOH (SOIL) **Received Date:** 8/4/2023 6:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/4/2023 9:35:55 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/4/2023 9:35:55 AM
Surr: DNOP	84.2	69-147		%Rec	1	8/4/2023 9:35:55 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	8/4/2023 12:44:00 PM
Surr: BFB	97.5	15-244		%Rec	1	8/4/2023 12:44:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.022		mg/Kg	1	8/4/2023 12:44:00 PM
Toluene	ND	0.045		mg/Kg	1	8/4/2023 12:44:00 PM
Ethylbenzene	ND	0.045		mg/Kg	1	8/4/2023 12:44:00 PM
Xylenes, Total	ND	0.089		mg/Kg	1	8/4/2023 12:44:00 PM
Surr: 4-Bromofluorobenzene	93.9	39.1-146		%Rec	1	8/4/2023 12:44:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	140	59		mg/Kg	20	8/4/2023 4:00:33 PM

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2308290**
Date Reported: **8/8/2023**

CLIENT: GHD **Client Sample ID:** SW2
Project: Delek Matador Produced Water Release **Collection Date:** 8/2/2023 9:59:00 AM
Lab ID: 2308290-002 **Matrix:** MEOH (SOIL) **Received Date:** 8/4/2023 6:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/4/2023 10:07:30 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/4/2023 10:07:30 AM
Surr: DNOP	91.6	69-147		%Rec	1	8/4/2023 10:07:30 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/4/2023 1:05:00 PM
Surr: BFB	102	15-244		%Rec	1	8/4/2023 1:05:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/4/2023 1:05:00 PM
Toluene	ND	0.049		mg/Kg	1	8/4/2023 1:05:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/4/2023 1:05:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	8/4/2023 1:05:00 PM
Surr: 4-Bromofluorobenzene	97.6	39.1-146		%Rec	1	8/4/2023 1:05:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	390	60		mg/Kg	20	8/4/2023 4:12:57 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308290**
Date Reported: **8/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** SW3
Project: Delek Matador Produced Water Release **Collection Date:** 8/2/2023 10:01:00 AM
Lab ID: 2308290-003 **Matrix:** MEOH (SOIL) **Received Date:** 8/4/2023 6:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/4/2023 10:18:04 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/4/2023 10:18:04 AM
Surr: DNOP	97.0	69-147		%Rec	1	8/4/2023 10:18:04 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/4/2023 1:27:00 PM
Surr: BFB	101	15-244		%Rec	1	8/4/2023 1:27:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.020		mg/Kg	1	8/4/2023 1:27:00 PM
Toluene	ND	0.039		mg/Kg	1	8/4/2023 1:27:00 PM
Ethylbenzene	ND	0.039		mg/Kg	1	8/4/2023 1:27:00 PM
Xylenes, Total	ND	0.079		mg/Kg	1	8/4/2023 1:27:00 PM
Surr: 4-Bromofluorobenzene	96.1	39.1-146		%Rec	1	8/4/2023 1:27:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	160	60		mg/Kg	20	8/4/2023 4:25:22 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308290**
Date Reported: **8/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** SW4
Project: Delek Matador Produced Water Release **Collection Date:** 8/2/2023 10:03:00 AM
Lab ID: 2308290-004 **Matrix:** MEOH (SOIL) **Received Date:** 8/4/2023 6:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/4/2023 10:28:42 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/4/2023 10:28:42 AM
Surr: DNOP	95.5	69-147		%Rec	1	8/4/2023 10:28:42 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	8/4/2023 1:49:00 PM
Surr: BFB	104	15-244		%Rec	1	8/4/2023 1:49:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	8/4/2023 1:49:00 PM
Toluene	ND	0.045		mg/Kg	1	8/4/2023 1:49:00 PM
Ethylbenzene	ND	0.045		mg/Kg	1	8/4/2023 1:49:00 PM
Xylenes, Total	ND	0.090		mg/Kg	1	8/4/2023 1:49:00 PM
Surr: 4-Bromofluorobenzene	99.1	39.1-146		%Rec	1	8/4/2023 1:49:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	260	60		mg/Kg	20	8/4/2023 4:37:47 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308290**
Date Reported: **8/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** SW5
Project: Delek Matador Produced Water Release **Collection Date:** 8/2/2023 10:05:00 AM
Lab ID: 2308290-005 **Matrix:** MEOH (SOIL) **Received Date:** 8/4/2023 6:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	8/4/2023 10:39:18 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/4/2023 10:39:18 AM
Surr: DNOP	91.4	69-147		%Rec	1	8/4/2023 10:39:18 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	8/4/2023 2:11:00 PM
Surr: BFB	99.3	15-244		%Rec	1	8/4/2023 2:11:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.019		mg/Kg	1	8/4/2023 2:11:00 PM
Toluene	ND	0.038		mg/Kg	1	8/4/2023 2:11:00 PM
Ethylbenzene	ND	0.038		mg/Kg	1	8/4/2023 2:11:00 PM
Xylenes, Total	ND	0.075		mg/Kg	1	8/4/2023 2:11:00 PM
Surr: 4-Bromofluorobenzene	96.2	39.1-146		%Rec	1	8/4/2023 2:11:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	81	60		mg/Kg	20	8/4/2023 4:50:12 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308290**
Date Reported: **8/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** SW6
Project: Delek Matador Produced Water Release **Collection Date:** 8/2/2023 10:07:00 AM
Lab ID: 2308290-006 **Matrix:** MEOH (SOIL) **Received Date:** 8/4/2023 6:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/4/2023 10:49:55 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/4/2023 10:49:55 AM
Surr: DNOP	115	69-147		%Rec	1	8/4/2023 10:49:55 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/4/2023 2:33:00 PM
Surr: BFB	100	15-244		%Rec	1	8/4/2023 2:33:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	8/4/2023 2:33:00 PM
Toluene	ND	0.047		mg/Kg	1	8/4/2023 2:33:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/4/2023 2:33:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	8/4/2023 2:33:00 PM
Surr: 4-Bromofluorobenzene	94.5	39.1-146		%Rec	1	8/4/2023 2:33:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	120	60		mg/Kg	20	8/4/2023 5:02:37 PM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308290**

08-Aug-23

Client: GHD

Project: Delek Matador Produced Water Release

Sample ID: **MB-76680**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **76680**	RunNo: **98753**
Prep Date: **8/4/2023**	Analysis Date: **8/4/2023**	SeqNo: **3597028** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-76680**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **76680**	RunNo: **98753**
Prep Date: **8/4/2023**	Analysis Date: **8/4/2023**	SeqNo: **3597029** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.7	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308290**

08-Aug-23

Client: GHD

Project: Delek Matador Produced Water Release

Sample ID: **2308290-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SW1**	Batch ID: **76674**	RunNo: **98744**
Prep Date: **8/4/2023**	Analysis Date: **8/4/2023**	SeqNo: **3596719** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	9.3	46.69	0	86.6	54.2	135			
Surr: DNOP	3.9		4.669		83.7	69	147			

Sample ID: **2308290-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SW1**	Batch ID: **76674**	RunNo: **98744**
Prep Date: **8/4/2023**	Analysis Date: **8/4/2023**	SeqNo: **3596720** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	9.6	47.85	0	97.4	54.2	135	14.1	29.2	
Surr: DNOP	4.2		4.785		88.6	69	147	0	0	

Sample ID: **LCS-76674**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **76674**	RunNo: **98744**
Prep Date: **8/4/2023**	Analysis Date: **8/4/2023**	SeqNo: **3596727** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.0	61.9	130			
Surr: DNOP	4.5		5.000		89.6	69	147			

Sample ID: **MB-76674**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **76674**	RunNo: **98744**
Prep Date: **8/4/2023**	Analysis Date: **8/4/2023**	SeqNo: **3596728** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.2		10.00		91.7	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308290**

08-Aug-23

Client: GHD

Project: Delek Matador Produced Water Release

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **G98759**	RunNo: **98759**
Prep Date:	Analysis Date: **8/4/2023**	SeqNo: **3597280** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	86.6	70	130			
Surr: BFB	2100		1000		210	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **G98759**	RunNo: **98759**
Prep Date:	Analysis Date: **8/4/2023**	SeqNo: **3597281** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		103	15	244			

Sample ID: **2308290-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SW1**	Batch ID: **G98759**	RunNo: **98759**
Prep Date:	Analysis Date: **8/4/2023**	SeqNo: **3597287** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	4.5	22.26	0	81.0	70	130			
Surr: BFB	1900		890.5		214	15	244			

Sample ID: **2308290-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SW1**	Batch ID: **G98759**	RunNo: **98759**
Prep Date:	Analysis Date: **8/4/2023**	SeqNo: **3597288** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	4.5	22.26	0	81.2	70	130	0.148	20	
Surr: BFB	1900		890.5		214	15	244	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308290**

08-Aug-23

Client: GHD

Project: Delek Matador Produced Water Release

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **R98759**	RunNo: **98759**
Prep Date:	Analysis Date: **8/4/2023**	SeqNo: **3597337** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	89.1	70	130			
Toluene	0.91	0.050	1.000	0	91.2	70	130			
Ethylbenzene	0.91	0.050	1.000	0	91.2	70	130			
Xylenes, Total	2.7	0.10	3.000	0	91.3	70	130			
Surr: 4-Bromofluorobenzene	0.99		1.000		98.7	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **R98759**	RunNo: **98759**
Prep Date:	Analysis Date: **8/4/2023**	SeqNo: **3597338** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.98		1.000		98.0	39.1	146			

Sample ID: **2308290-002ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SW2**	Batch ID: **R98759**	RunNo: **98759**
Prep Date:	Analysis Date: **8/4/2023**	SeqNo: **3597344** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.024	0.9728	0	90.8	70	130			
Toluene	0.90	0.049	0.9728	0	92.5	70	130			
Ethylbenzene	0.91	0.049	0.9728	0	93.4	70	130			
Xylenes, Total	2.7	0.097	2.918	0	93.6	70	130			
Surr: 4-Bromofluorobenzene	0.95		0.9728		97.1	39.1	146			

Sample ID: **2308290-002amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SW2**	Batch ID: **R98759**	RunNo: **98759**
Prep Date:	Analysis Date: **8/4/2023**	SeqNo: **3597345** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.81	0.024	0.9728	0	83.6	70	130	8.23	20	
Toluene	0.83	0.049	0.9728	0	85.2	70	130	8.25	20	
Ethylbenzene	0.84	0.049	0.9728	0	86.6	70	130	7.56	20	
Xylenes, Total	2.5	0.097	2.918	0	87.4	70	130	6.92	20	
Surr: 4-Bromofluorobenzene	0.94		0.9728		96.8	39.1	146	0	0	

Qualifiers:

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

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: GHD | Work Order Number: 2308290 | RcptNo: 1

Received By: Juan Rojas 8/4/2023 6:55:00 AM

Completed By: Tracy Casarrubias 8/4/2023 7:21:24 AM

Reviewed By: SCM 08/04/23

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no. notify customer for authorization.)	Yes ☑	No ☐	Checked by: JM 8/4/23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.4	Good	Yes	Morty		

Received by OCD: 12/4/2024 10:43:20 AM

Released to Imaging: 3/12/2025 11:29:45 AM

Chain-of-Custody Record

Client: GHD Services Inc.

Nate Reece

Mailing Address: 11451 W. Katy Fwy #400

Houston, TX 77079

Phone #: (281) 286-7158

email or Fax#: nate.reece@ghd.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☐ Standard ☑ Rush 24 hr.

Project Name: Delek Matador Produced Water Release

Project #: 12618492

Project Manager: Nate Reece

J.T. Murray

Sampler: Liam Giersdorf / Tristanna Crapo

On Ice: ☐ Yes ☐ No

# of Coolers: 1 Murry

Cooler Temp (Including CF): 0.5-0.1=0.4 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308290	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
0802	0951	Soil	SW1	1 Jar	Ice	001	X	X					X			
	0959		SW2			002										
	1001		SW3			003										
	1003		SW4			004										
	1005		SW5			005										
	1007		SW6			006										

Remarks:

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
0803	0800				8/3/23	800
8/3/23	1900				Date	Time
				Courier	8/4/23	6:55

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 29, 2023

Nate Reece
GHD
6320 Rothway Ste 100
Houston, TX 77040
TEL: (713) 275-3838
FAX:

RE: Delek Matador Produced Water Release OrderNo.: 2308C16

Dear Nate Reece:

Hall Environmental Analysis Laboratory received 35 sample(s) on 8/23/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-46
Project: Delek Matador Produced Water Release **Collection Date:** 8/18/2023 1:40:00 PM
Lab ID: 2308C16-001 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/23/2023 12:09:43 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/23/2023 12:09:43 PM
Surr: DNOP	108	69-147		%Rec	1	8/23/2023 12:09:43 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	8/23/2023 4:58:00 PM
Surr: BFB	98.5	15-244		%Rec	1	8/23/2023 4:58:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.019		mg/Kg	1	8/23/2023 4:58:00 PM
Toluene	ND	0.038		mg/Kg	1	8/23/2023 4:58:00 PM
Ethylbenzene	ND	0.038		mg/Kg	1	8/23/2023 4:58:00 PM
Xylenes, Total	ND	0.076		mg/Kg	1	8/23/2023 4:58:00 PM
Surr: 4-Bromofluorobenzene	92.5	39.1-146		%Rec	1	8/23/2023 4:58:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	420	60		mg/Kg	20	8/23/2023 11:09:01 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-47
Project: Delek Matador Produced Water Release **Collection Date:** 8/18/2023 1:42:00 PM
Lab ID: 2308C16-002 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/23/2023 12:28:03 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/23/2023 12:28:03 PM
Surr: DNOP	106	69-147		%Rec	1	8/23/2023 12:28:03 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	8/23/2023 5:19:00 PM
Surr: BFB	97.5	15-244		%Rec	1	8/23/2023 5:19:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.020		mg/Kg	1	8/23/2023 5:19:00 PM
Toluene	ND	0.040		mg/Kg	1	8/23/2023 5:19:00 PM
Ethylbenzene	ND	0.040		mg/Kg	1	8/23/2023 5:19:00 PM
Xylenes, Total	ND	0.079		mg/Kg	1	8/23/2023 5:19:00 PM
Surr: 4-Bromofluorobenzene	91.8	39.1-146		%Rec	1	8/23/2023 5:19:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	340	60		mg/Kg	20	8/24/2023 12:10:45 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-48
Project: Delek Matador Produced Water Release **Collection Date:** 8/18/2023 1:44:00 PM
Lab ID: 2308C16-003 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/23/2023 12:46:36 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/23/2023 12:46:36 PM
Surr: DNOP	94.4	69-147		%Rec	1	8/23/2023 12:46:36 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	8/23/2023 5:41:00 PM
Surr: BFB	96.3	15-244		%Rec	1	8/23/2023 5:41:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.018		mg/Kg	1	8/23/2023 5:41:00 PM
Toluene	ND	0.036		mg/Kg	1	8/23/2023 5:41:00 PM
Ethylbenzene	ND	0.036		mg/Kg	1	8/23/2023 5:41:00 PM
Xylenes, Total	ND	0.073		mg/Kg	1	8/23/2023 5:41:00 PM
Surr: 4-Bromofluorobenzene	91.0	39.1-146		%Rec	1	8/23/2023 5:41:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	350	60		mg/Kg	20	8/24/2023 12:47:47 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-49
Project: Delek Matador Produced Water Release **Collection Date:** 8/18/2023 1:46:00 PM
Lab ID: 2308C16-004 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	10	9.4		mg/Kg	1	8/23/2023 1:04:55 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/23/2023 1:04:55 PM
Surr: DNOP	87.0	69-147		%Rec	1	8/23/2023 1:04:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/23/2023 6:03:00 PM
Surr: BFB	98.2	15-244		%Rec	1	8/23/2023 6:03:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.019		mg/Kg	1	8/23/2023 6:03:00 PM
Toluene	ND	0.039		mg/Kg	1	8/23/2023 6:03:00 PM
Ethylbenzene	ND	0.039		mg/Kg	1	8/23/2023 6:03:00 PM
Xylenes, Total	ND	0.078		mg/Kg	1	8/23/2023 6:03:00 PM
Surr: 4-Bromofluorobenzene	92.7	39.1-146		%Rec	1	8/23/2023 6:03:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	520	59		mg/Kg	20	8/24/2023 1:00:09 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-50
Project: Delek Matador Produced Water Release **Collection Date:** 8/18/2023 1:48:00 PM
Lab ID: 2308C16-005 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/23/2023 1:23:30 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/23/2023 1:23:30 PM
Surr: DNOP	81.0	69-147		%Rec	1	8/23/2023 1:23:30 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	8/23/2023 6:25:00 PM
Surr: BFB	96.3	15-244		%Rec	1	8/23/2023 6:25:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.021		mg/Kg	1	8/23/2023 6:25:00 PM
Toluene	ND	0.041		mg/Kg	1	8/23/2023 6:25:00 PM
Ethylbenzene	ND	0.041		mg/Kg	1	8/23/2023 6:25:00 PM
Xylenes, Total	ND	0.082		mg/Kg	1	8/23/2023 6:25:00 PM
Surr: 4-Bromofluorobenzene	90.3	39.1-146		%Rec	1	8/23/2023 6:25:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	500	60		mg/Kg	20	8/24/2023 1:12:30 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-51
Project: Delek Matador Produced Water Release **Collection Date:** 8/18/2023 1:50:00 PM
Lab ID: 2308C16-006 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/23/2023 1:42:01 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/23/2023 1:42:01 PM
Surr: DNOP	85.7	69-147		%Rec	1	8/23/2023 1:42:01 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	8/23/2023 6:46:00 PM
Surr: BFB	96.0	15-244		%Rec	1	8/23/2023 6:46:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.020		mg/Kg	1	8/23/2023 6:46:00 PM
Toluene	ND	0.040		mg/Kg	1	8/23/2023 6:46:00 PM
Ethylbenzene	ND	0.040		mg/Kg	1	8/23/2023 6:46:00 PM
Xylenes, Total	ND	0.079		mg/Kg	1	8/23/2023 6:46:00 PM
Surr: 4-Bromofluorobenzene	93.0	39.1-146		%Rec	1	8/23/2023 6:46:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	560	60		mg/Kg	20	8/24/2023 1:24:51 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-52
Project: Delek Matador Produced Water Release **Collection Date:** 8/18/2023 1:52:00 PM
Lab ID: 2308C16-007 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	10	9.9		mg/Kg	1	8/23/2023 2:00:36 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/23/2023 2:00:36 PM
Surr: DNOP	75.3	69-147		%Rec	1	8/23/2023 2:00:36 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	8/23/2023 7:08:00 PM
Surr: BFB	99.2	15-244		%Rec	1	8/23/2023 7:08:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.019		mg/Kg	1	8/23/2023 7:08:00 PM
Toluene	ND	0.037		mg/Kg	1	8/23/2023 7:08:00 PM
Ethylbenzene	ND	0.037		mg/Kg	1	8/23/2023 7:08:00 PM
Xylenes, Total	ND	0.074		mg/Kg	1	8/23/2023 7:08:00 PM
Surr: 4-Bromofluorobenzene	92.4	39.1-146		%Rec	1	8/23/2023 7:08:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	430	60		mg/Kg	20	8/24/2023 1:37:11 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-53
Project: Delek Matador Produced Water Release **Collection Date:** 8/18/2023 1:54:00 PM
Lab ID: 2308C16-008 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/23/2023 2:19:17 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/23/2023 2:19:17 PM
Surr: DNOP	67.6	69-147	S	%Rec	1	8/23/2023 2:19:17 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	8/23/2023 11:31:15 AM
Surr: BFB	98.2	15-244		%Rec	1	8/23/2023 11:31:15 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.019		mg/Kg	1	8/23/2023 11:31:15 AM
Toluene	ND	0.037		mg/Kg	1	8/23/2023 11:31:15 AM
Ethylbenzene	ND	0.037		mg/Kg	1	8/23/2023 11:31:15 AM
Xylenes, Total	ND	0.075		mg/Kg	1	8/23/2023 11:31:15 AM
Surr: 4-Bromofluorobenzene	112	39.1-146		%Rec	1	8/23/2023 11:31:15 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	380	60		mg/Kg	20	8/24/2023 1:49:31 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-54
Project: Delek Matador Produced Water Release **Collection Date:** 8/18/2023 1:56:00 PM
Lab ID: 2308C16-009 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/23/2023 2:37:46 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/23/2023 2:37:46 PM
Surr: DNOP	64.5	69-147	S	%Rec	1	8/23/2023 2:37:46 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/23/2023 11:54:45 AM
Surr: BFB	100	15-244		%Rec	1	8/23/2023 11:54:45 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.020		mg/Kg	1	8/23/2023 11:54:45 AM
Toluene	ND	0.039		mg/Kg	1	8/23/2023 11:54:45 AM
Ethylbenzene	ND	0.039		mg/Kg	1	8/23/2023 11:54:45 AM
Xylenes, Total	ND	0.079		mg/Kg	1	8/23/2023 11:54:45 AM
Surr: 4-Bromofluorobenzene	109	39.1-146		%Rec	1	8/23/2023 11:54:45 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	470	60		mg/Kg	20	8/24/2023 2:01:51 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-55
Project: Delek Matador Produced Water Release **Collection Date:** 8/18/2023 1:58:00 PM
Lab ID: 2308C16-010 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	13	9.8		mg/Kg	1	8/23/2023 3:14:57 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/23/2023 3:14:57 PM
Surr: DNOP	57.9	69-147	S	%Rec	1	8/23/2023 3:14:57 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	8/23/2023 12:18:18 PM
Surr: BFB	97.6	15-244		%Rec	1	8/23/2023 12:18:18 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.018		mg/Kg	1	8/23/2023 12:18:18 PM
Toluene	ND	0.037		mg/Kg	1	8/23/2023 12:18:18 PM
Ethylbenzene	ND	0.037		mg/Kg	1	8/23/2023 12:18:18 PM
Xylenes, Total	ND	0.074		mg/Kg	1	8/23/2023 12:18:18 PM
Surr: 4-Bromofluorobenzene	111	39.1-146		%Rec	1	8/23/2023 12:18:18 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	480	60		mg/Kg	20	8/24/2023 2:38:54 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-56
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 8:26:00 AM
Lab ID: 2308C16-011 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/23/2023 3:33:31 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/23/2023 3:33:31 PM
Surr: DNOP	53.8	69-147	S	%Rec	1	8/23/2023 3:33:31 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	8/23/2023 12:41:51 PM
Surr: BFB	97.4	15-244		%Rec	1	8/23/2023 12:41:51 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.020		mg/Kg	1	8/23/2023 12:41:51 PM
Toluene	ND	0.041		mg/Kg	1	8/23/2023 12:41:51 PM
Ethylbenzene	ND	0.041		mg/Kg	1	8/23/2023 12:41:51 PM
Xylenes, Total	ND	0.082		mg/Kg	1	8/23/2023 12:41:51 PM
Surr: 4-Bromofluorobenzene	110	39.1-146		%Rec	1	8/23/2023 12:41:51 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	630	60		mg/Kg	20	8/24/2023 2:51:15 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-57
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 8:28:00 AM
Lab ID: 2308C16-012 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/23/2023 3:52:06 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/23/2023 3:52:06 PM
Surr: DNOP	56.5	69-147	S	%Rec	1	8/23/2023 3:52:06 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	8/23/2023 1:05:24 PM
Surr: BFB	96.2	15-244		%Rec	1	8/23/2023 1:05:24 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.021		mg/Kg	1	8/23/2023 1:05:24 PM
Toluene	ND	0.042		mg/Kg	1	8/23/2023 1:05:24 PM
Ethylbenzene	ND	0.042		mg/Kg	1	8/23/2023 1:05:24 PM
Xylenes, Total	ND	0.084		mg/Kg	1	8/23/2023 1:05:24 PM
Surr: 4-Bromofluorobenzene	110	39.1-146		%Rec	1	8/23/2023 1:05:24 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	790	60		mg/Kg	20	8/24/2023 3:03:36 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-58
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 8:30:00 AM
Lab ID: 2308C16-013 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/23/2023 4:10:44 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/23/2023 4:10:44 PM
Surr: DNOP	51.4	69-147	S	%Rec	1	8/23/2023 4:10:44 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	8/23/2023 1:28:54 PM
Surr: BFB	97.6	15-244		%Rec	1	8/23/2023 1:28:54 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.021		mg/Kg	1	8/23/2023 1:28:54 PM
Toluene	ND	0.041		mg/Kg	1	8/23/2023 1:28:54 PM
Ethylbenzene	ND	0.041		mg/Kg	1	8/23/2023 1:28:54 PM
Xylenes, Total	ND	0.082		mg/Kg	1	8/23/2023 1:28:54 PM
Surr: 4-Bromofluorobenzene	111	39.1-146		%Rec	1	8/23/2023 1:28:54 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	630	60		mg/Kg	20	8/24/2023 3:15:57 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-59
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 8:32:00 AM
Lab ID: 2308C16-014 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/23/2023 4:29:06 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/23/2023 4:29:06 PM
Surr: DNOP	50.4	69-147	S	%Rec	1	8/23/2023 4:29:06 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	8/23/2023 1:52:30 PM
Surr: BFB	98.7	15-244		%Rec	1	8/23/2023 1:52:30 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.020		mg/Kg	1	8/23/2023 1:52:30 PM
Toluene	ND	0.040		mg/Kg	1	8/23/2023 1:52:30 PM
Ethylbenzene	ND	0.040		mg/Kg	1	8/23/2023 1:52:30 PM
Xylenes, Total	ND	0.081		mg/Kg	1	8/23/2023 1:52:30 PM
Surr: 4-Bromofluorobenzene	113	39.1-146		%Rec	1	8/23/2023 1:52:30 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	540	60		mg/Kg	20	8/24/2023 3:28:18 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-60
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 8:34:00 AM
Lab ID: 2308C16-015 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/23/2023 4:47:51 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/23/2023 4:47:51 PM
Surr: DNOP	50.7	69-147	S	%Rec	1	8/23/2023 4:47:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/23/2023 2:16:03 PM
Surr: BFB	96.2	15-244		%Rec	1	8/23/2023 2:16:03 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.020		mg/Kg	1	8/23/2023 2:16:03 PM
Toluene	ND	0.039		mg/Kg	1	8/23/2023 2:16:03 PM
Ethylbenzene	ND	0.039		mg/Kg	1	8/23/2023 2:16:03 PM
Xylenes, Total	ND	0.078		mg/Kg	1	8/23/2023 2:16:03 PM
Surr: 4-Bromofluorobenzene	110	39.1-146		%Rec	1	8/23/2023 2:16:03 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	590	60		mg/Kg	20	8/24/2023 3:40:38 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-61
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 8:36:00 AM
Lab ID: 2308C16-016 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/23/2023 5:06:24 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/23/2023 5:06:24 PM
Surr: DNOP	42.2	69-147	S	%Rec	1	8/23/2023 5:06:24 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/23/2023 2:39:31 PM
Surr: BFB	94.6	15-244		%Rec	1	8/23/2023 2:39:31 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	8/23/2023 2:39:31 PM
Toluene	ND	0.046		mg/Kg	1	8/23/2023 2:39:31 PM
Ethylbenzene	ND	0.046		mg/Kg	1	8/23/2023 2:39:31 PM
Xylenes, Total	ND	0.092		mg/Kg	1	8/23/2023 2:39:31 PM
Surr: 4-Bromofluorobenzene	108	39.1-146		%Rec	1	8/23/2023 2:39:31 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	790	60		mg/Kg	20	8/24/2023 3:52:59 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-62
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 8:38:00 AM
Lab ID: 2308C16-017 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	12	9.6		mg/Kg	1	8/23/2023 5:25:04 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/23/2023 5:25:04 PM
Surr: DNOP	39.5	69-147	S	%Rec	1	8/23/2023 5:25:04 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	8/23/2023 3:02:59 PM
Surr: BFB	95.4	15-244		%Rec	1	8/23/2023 3:02:59 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.020		mg/Kg	1	8/23/2023 3:02:59 PM
Toluene	ND	0.041		mg/Kg	1	8/23/2023 3:02:59 PM
Ethylbenzene	ND	0.041		mg/Kg	1	8/23/2023 3:02:59 PM
Xylenes, Total	ND	0.081		mg/Kg	1	8/23/2023 3:02:59 PM
Surr: 4-Bromofluorobenzene	109	39.1-146		%Rec	1	8/23/2023 3:02:59 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	690	60		mg/Kg	20	8/24/2023 4:05:19 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-63
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 8:40:00 AM
Lab ID: 2308C16-018 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/23/2023 5:43:39 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/23/2023 5:43:39 PM
Surr: DNOP	35.8	69-147	S	%Rec	1	8/23/2023 5:43:39 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/23/2023 3:49:57 PM
Surr: BFB	95.2	15-244		%Rec	1	8/23/2023 3:49:57 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.020		mg/Kg	1	8/23/2023 3:49:57 PM
Toluene	ND	0.039		mg/Kg	1	8/23/2023 3:49:57 PM
Ethylbenzene	ND	0.039		mg/Kg	1	8/23/2023 3:49:57 PM
Xylenes, Total	ND	0.078		mg/Kg	1	8/23/2023 3:49:57 PM
Surr: 4-Bromofluorobenzene	109	39.1-146		%Rec	1	8/23/2023 3:49:57 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	570	60		mg/Kg	20	8/24/2023 4:17:40 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-64
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 8:42:00 AM
Lab ID: 2308C16-019 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/23/2023 6:02:19 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/23/2023 6:02:19 PM
Surr: DNOP	34.2	69-147	S	%Rec	1	8/23/2023 6:02:19 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/23/2023 4:13:27 PM
Surr: BFB	97.2	15-244		%Rec	1	8/23/2023 4:13:27 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.020		mg/Kg	1	8/23/2023 4:13:27 PM
Toluene	ND	0.039		mg/Kg	1	8/23/2023 4:13:27 PM
Ethylbenzene	ND	0.039		mg/Kg	1	8/23/2023 4:13:27 PM
Xylenes, Total	ND	0.078		mg/Kg	1	8/23/2023 4:13:27 PM
Surr: 4-Bromofluorobenzene	107	39.1-146		%Rec	1	8/23/2023 4:13:27 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	280	60		mg/Kg	20	8/24/2023 4:30:00 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-65
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 8:44:00 AM
Lab ID: 2308C16-020 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/23/2023 6:21:13 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/23/2023 6:21:13 PM
Surr: DNOP	33.3	69-147	S	%Rec	1	8/23/2023 6:21:13 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	8/23/2023 4:36:57 PM
Surr: BFB	95.4	15-244		%Rec	1	8/23/2023 4:36:57 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.021		mg/Kg	1	8/23/2023 4:36:57 PM
Toluene	ND	0.042		mg/Kg	1	8/23/2023 4:36:57 PM
Ethylbenzene	ND	0.042		mg/Kg	1	8/23/2023 4:36:57 PM
Xylenes, Total	ND	0.085		mg/Kg	1	8/23/2023 4:36:57 PM
Surr: 4-Bromofluorobenzene	108	39.1-146		%Rec	1	8/23/2023 4:36:57 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	570	60		mg/Kg	20	8/24/2023 5:07:02 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-66
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 8:46:00 AM
Lab ID: 2308C16-021 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	8/23/2023 8:14:23 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/23/2023 8:14:23 PM
Surr: DNOP	31.8	69-147	S	%Rec	1	8/23/2023 8:14:23 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	6.1		mg/Kg	1	8/23/2023 5:00:25 PM
Surr: BFB	94.6	15-244		%Rec	1	8/23/2023 5:00:25 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.031		mg/Kg	1	8/23/2023 5:00:25 PM
Toluene	ND	0.061		mg/Kg	1	8/23/2023 5:00:25 PM
Ethylbenzene	ND	0.061		mg/Kg	1	8/23/2023 5:00:25 PM
Xylenes, Total	ND	0.12		mg/Kg	1	8/23/2023 5:00:25 PM
Surr: 4-Bromofluorobenzene	109	39.1-146		%Rec	1	8/23/2023 5:00:25 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	500	60		mg/Kg	20	8/23/2023 5:59:46 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-67
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 8:48:00 AM
Lab ID: 2308C16-022 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	8/23/2023 8:33:14 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/23/2023 8:33:14 PM
Surr: DNOP	35.5	69-147	S	%Rec	1	8/23/2023 8:33:14 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	8/23/2023 5:23:53 PM
Surr: BFB	95.0	15-244		%Rec	1	8/23/2023 5:23:53 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.021		mg/Kg	1	8/23/2023 5:23:53 PM
Toluene	ND	0.041		mg/Kg	1	8/23/2023 5:23:53 PM
Ethylbenzene	ND	0.041		mg/Kg	1	8/23/2023 5:23:53 PM
Xylenes, Total	ND	0.082		mg/Kg	1	8/23/2023 5:23:53 PM
Surr: 4-Bromofluorobenzene	108	39.1-146		%Rec	1	8/23/2023 5:23:53 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	300	59		mg/Kg	20	8/23/2023 6:37:00 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-68
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 8:50:00 AM
Lab ID: 2308C16-023 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	8/25/2023 6:05:08 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/25/2023 6:05:08 AM
Surr: DNOP	80.5	69-147		%Rec	1	8/25/2023 6:05:08 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	8/23/2023 5:47:24 PM
Surr: BFB	96.3	15-244		%Rec	1	8/23/2023 5:47:24 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.018		mg/Kg	1	8/23/2023 5:47:24 PM
Toluene	ND	0.037		mg/Kg	1	8/23/2023 5:47:24 PM
Ethylbenzene	ND	0.037		mg/Kg	1	8/23/2023 5:47:24 PM
Xylenes, Total	ND	0.074		mg/Kg	1	8/23/2023 5:47:24 PM
Surr: 4-Bromofluorobenzene	110	39.1-146		%Rec	1	8/23/2023 5:47:24 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	290	60		mg/Kg	20	8/23/2023 7:14:14 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-69
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 8:52:00 AM
Lab ID: 2308C16-024 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/23/2023 9:11:01 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/23/2023 9:11:01 PM
Surr: DNOP	37.9	69-147	S	%Rec	1	8/23/2023 9:11:01 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	8/23/2023 6:10:54 PM
Surr: BFB	95.4	15-244		%Rec	1	8/23/2023 6:10:54 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.020		mg/Kg	1	8/23/2023 6:10:54 PM
Toluene	ND	0.040		mg/Kg	1	8/23/2023 6:10:54 PM
Ethylbenzene	ND	0.040		mg/Kg	1	8/23/2023 6:10:54 PM
Xylenes, Total	ND	0.081		mg/Kg	1	8/23/2023 6:10:54 PM
Surr: 4-Bromofluorobenzene	109	39.1-146		%Rec	1	8/23/2023 6:10:54 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	420	60		mg/Kg	20	8/23/2023 7:26:38 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-70
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 8:54:00 AM
Lab ID: 2308C16-025 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/23/2023 9:29:55 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/23/2023 9:29:55 PM
Surr: DNOP	32.8	69-147	S	%Rec	1	8/23/2023 9:29:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	8/23/2023 6:34:22 PM
Surr: BFB	94.3	15-244		%Rec	1	8/23/2023 6:34:22 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.019		mg/Kg	1	8/23/2023 6:34:22 PM
Toluene	ND	0.038		mg/Kg	1	8/23/2023 6:34:22 PM
Ethylbenzene	ND	0.038		mg/Kg	1	8/23/2023 6:34:22 PM
Xylenes, Total	ND	0.076		mg/Kg	1	8/23/2023 6:34:22 PM
Surr: 4-Bromofluorobenzene	108	39.1-146		%Rec	1	8/23/2023 6:34:22 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	490	60		mg/Kg	20	8/23/2023 7:39:03 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-71
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 12:40:00 PM
Lab ID: 2308C16-026 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	8/23/2023 9:48:48 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	8/23/2023 9:48:48 PM
Surr: DNOP	33.4	69-147	S	%Rec	1	8/23/2023 9:48:48 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	8/23/2023 6:57:51 PM
Surr: BFB	96.3	15-244		%Rec	1	8/23/2023 6:57:51 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.022		mg/Kg	1	8/23/2023 6:57:51 PM
Toluene	ND	0.044		mg/Kg	1	8/23/2023 6:57:51 PM
Ethylbenzene	ND	0.044		mg/Kg	1	8/23/2023 6:57:51 PM
Xylenes, Total	ND	0.088		mg/Kg	1	8/23/2023 6:57:51 PM
Surr: 4-Bromofluorobenzene	110	39.1-146		%Rec	1	8/23/2023 6:57:51 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	590	60		mg/Kg	20	8/23/2023 7:51:28 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-72
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 12:42:00 PM
Lab ID: 2308C16-027 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	8.6		mg/Kg	1	8/23/2023 10:07:27 PM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	8/23/2023 10:07:27 PM
Surr: DNOP	34.8	69-147	S	%Rec	1	8/23/2023 10:07:27 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/23/2023 7:21:22 PM
Surr: BFB	93.5	15-244		%Rec	1	8/23/2023 7:21:22 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.019		mg/Kg	1	8/23/2023 7:21:22 PM
Toluene	ND	0.039		mg/Kg	1	8/23/2023 7:21:22 PM
Ethylbenzene	ND	0.039		mg/Kg	1	8/23/2023 7:21:22 PM
Xylenes, Total	ND	0.077		mg/Kg	1	8/23/2023 7:21:22 PM
Surr: 4-Bromofluorobenzene	108	39.1-146		%Rec	1	8/23/2023 7:21:22 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	610	60		mg/Kg	20	8/23/2023 8:28:40 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-73
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 12:44:00 PM
Lab ID: 2308C16-028 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	8.5		mg/Kg	1	8/25/2023 6:29:18 AM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	8/25/2023 6:29:18 AM
Surr: DNOP	69.8	69-147		%Rec	1	8/25/2023 6:29:18 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/23/2023 11:06:00 PM
Surr: BFB	96.1	15-244		%Rec	1	8/23/2023 11:06:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.020		mg/Kg	1	8/23/2023 11:06:00 PM
Toluene	ND	0.039		mg/Kg	1	8/23/2023 11:06:00 PM
Ethylbenzene	ND	0.039		mg/Kg	1	8/23/2023 11:06:00 PM
Xylenes, Total	ND	0.079		mg/Kg	1	8/23/2023 11:06:00 PM
Surr: 4-Bromofluorobenzene	89.7	39.1-146		%Rec	1	8/23/2023 11:06:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	370	60		mg/Kg	20	8/23/2023 8:41:05 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-74
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 12:46:00 PM
Lab ID: 2308C16-029 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/25/2023 11:36:22 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/25/2023 11:36:22 AM
Surr: DNOP	97.3	69-147		%Rec	1	8/25/2023 11:36:22 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	8/23/2023 11:28:00 PM
Surr: BFB	95.9	15-244		%Rec	1	8/23/2023 11:28:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.019		mg/Kg	1	8/23/2023 11:28:00 PM
Toluene	ND	0.038		mg/Kg	1	8/23/2023 11:28:00 PM
Ethylbenzene	ND	0.038		mg/Kg	1	8/23/2023 11:28:00 PM
Xylenes, Total	ND	0.076		mg/Kg	1	8/23/2023 11:28:00 PM
Surr: 4-Bromofluorobenzene	92.5	39.1-146		%Rec	1	8/23/2023 11:28:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	440	61		mg/Kg	20	8/23/2023 8:53:29 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-75
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 12:48:00 PM
Lab ID: 2308C16-030 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	8/23/2023 11:03:55 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/23/2023 11:03:55 PM
Surr: DNOP	35.9	69-147	S	%Rec	1	8/23/2023 11:03:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	8/23/2023 11:50:00 PM
Surr: BFB	97.8	15-244		%Rec	1	8/23/2023 11:50:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.021		mg/Kg	1	8/23/2023 11:50:00 PM
Toluene	ND	0.042		mg/Kg	1	8/23/2023 11:50:00 PM
Ethylbenzene	ND	0.042		mg/Kg	1	8/23/2023 11:50:00 PM
Xylenes, Total	ND	0.084		mg/Kg	1	8/23/2023 11:50:00 PM
Surr: 4-Bromofluorobenzene	92.5	39.1-146		%Rec	1	8/23/2023 11:50:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	500	59		mg/Kg	20	8/23/2023 9:05:54 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-76
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 12:50:00 PM
Lab ID: 2308C16-031 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/23/2023 11:41:28 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/23/2023 11:41:28 PM
Surr: DNOP	37.5	69-147	S	%Rec	1	8/23/2023 11:41:28 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/24/2023 12:11:00 AM
Surr: BFB	97.3	15-244		%Rec	1	8/24/2023 12:11:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.020		mg/Kg	1	8/24/2023 12:11:00 AM
Toluene	ND	0.039		mg/Kg	1	8/24/2023 12:11:00 AM
Ethylbenzene	ND	0.039		mg/Kg	1	8/24/2023 12:11:00 AM
Xylenes, Total	ND	0.079		mg/Kg	1	8/24/2023 12:11:00 AM
Surr: 4-Bromofluorobenzene	93.1	39.1-146		%Rec	1	8/24/2023 12:11:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	500	60		mg/Kg	20	8/23/2023 9:18:19 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-77
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 12:52:00 PM
Lab ID: 2308C16-032 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	320	9.7		mg/Kg	1	8/25/2023 7:17:38 AM
Motor Oil Range Organics (MRO)	170	48		mg/Kg	1	8/25/2023 7:17:38 AM
Surr: DNOP	82.1	69-147		%Rec	1	8/25/2023 7:17:38 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	8/24/2023 12:33:00 AM
Surr: BFB	99.2	15-244		%Rec	1	8/24/2023 12:33:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.018		mg/Kg	1	8/24/2023 12:33:00 AM
Toluene	ND	0.037		mg/Kg	1	8/24/2023 12:33:00 AM
Ethylbenzene	ND	0.037		mg/Kg	1	8/24/2023 12:33:00 AM
Xylenes, Total	ND	0.074		mg/Kg	1	8/24/2023 12:33:00 AM
Surr: 4-Bromofluorobenzene	92.2	39.1-146		%Rec	1	8/24/2023 12:33:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	2200	150		mg/Kg	50	8/24/2023 9:45:14 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-78
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 12:54:00 PM
Lab ID: 2308C16-033 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/24/2023 12:18:55 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/24/2023 12:18:55 AM
Surr: DNOP	41.4	69-147	S	%Rec	1	8/24/2023 12:18:55 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/24/2023 12:55:00 AM
Surr: BFB	99.8	15-244		%Rec	1	8/24/2023 12:55:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.020		mg/Kg	1	8/24/2023 12:55:00 AM
Toluene	ND	0.039		mg/Kg	1	8/24/2023 12:55:00 AM
Ethylbenzene	ND	0.039		mg/Kg	1	8/24/2023 12:55:00 AM
Xylenes, Total	ND	0.078		mg/Kg	1	8/24/2023 12:55:00 AM
Surr: 4-Bromofluorobenzene	91.3	39.1-146		%Rec	1	8/24/2023 12:55:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	590	60		mg/Kg	20	8/23/2023 9:43:08 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-79
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 12:56:00 PM
Lab ID: 2308C16-034 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	8/24/2023 12:38:00 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/24/2023 12:38:00 AM
Surr: DNOP	44.6	69-147	S	%Rec	1	8/24/2023 12:38:00 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	8/24/2023 1:17:00 AM
Surr: BFB	95.3	15-244		%Rec	1	8/24/2023 1:17:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.019		mg/Kg	1	8/24/2023 1:17:00 AM
Toluene	ND	0.038		mg/Kg	1	8/24/2023 1:17:00 AM
Ethylbenzene	ND	0.038		mg/Kg	1	8/24/2023 1:17:00 AM
Xylenes, Total	ND	0.075		mg/Kg	1	8/24/2023 1:17:00 AM
Surr: 4-Bromofluorobenzene	90.0	39.1-146		%Rec	1	8/24/2023 1:17:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	260	60		mg/Kg	20	8/23/2023 9:55:33 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C16**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-80
Project: Delek Matador Produced Water Release **Collection Date:** 8/21/2023 12:58:00 PM
Lab ID: 2308C16-035 **Matrix:** MEOH (SOIL) **Received Date:** 8/23/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/24/2023 12:56:44 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/24/2023 12:56:44 AM
Surr: DNOP	45.8	69-147	S	%Rec	1	8/24/2023 12:56:44 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/24/2023 1:38:00 AM
Surr: BFB	99.0	15-244		%Rec	1	8/24/2023 1:38:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.019		mg/Kg	1	8/24/2023 1:38:00 AM
Toluene	ND	0.039		mg/Kg	1	8/24/2023 1:38:00 AM
Ethylbenzene	ND	0.039		mg/Kg	1	8/24/2023 1:38:00 AM
Xylenes, Total	ND	0.078		mg/Kg	1	8/24/2023 1:38:00 AM
Surr: 4-Bromofluorobenzene	88.8	39.1-146		%Rec	1	8/24/2023 1:38:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	280	59		mg/Kg	20	8/23/2023 10:07:57 PM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308C16**

29-Aug-23

Client: GHD

Project: Delek Matador Produced Water Release

Sample ID: **MB-77035**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **77035**	RunNo: **99188**
Prep Date: **8/23/2023**	Analysis Date: **8/23/2023**	SeqNo: **3616109** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77035**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **77035**	RunNo: **99188**
Prep Date: **8/23/2023**	Analysis Date: **8/23/2023**	SeqNo: **3616110** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.0	90	110			

Sample ID: **MB-77043**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **77043**	RunNo: **99168**
Prep Date: **8/23/2023**	Analysis Date: **8/23/2023**	SeqNo: **3617090** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77043**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **77043**	RunNo: **99168**
Prep Date: **8/23/2023**	Analysis Date: **8/23/2023**	SeqNo: **3617091** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.2	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308C16**

29-Aug-23

Client: GHD

Project: Delek Matador Produced Water Release

Sample ID: **MB-77020**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **77020**	RunNo: **99200**
Prep Date: **8/23/2023**	Analysis Date: **8/23/2023**	SeqNo: **3616843** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		109	69	147			

Sample ID: **LCS-77020**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **77020**	RunNo: **99200**
Prep Date: **8/23/2023**	Analysis Date: **8/23/2023**	SeqNo: **3616844** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	55	10	50.00	0	110	61.9	130			
Surr: DNOP	5.2		5.000		105	69	147			

Sample ID: **2308C16-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH-46**	Batch ID: **77020**	RunNo: **99200**
Prep Date: **8/23/2023**	Analysis Date: **8/23/2023**	SeqNo: **3616866** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	55	9.4	46.99	0	117	54.2	135			
Surr: DNOP	1.4		4.699		30.1	69	147			S

Sample ID: **2308C16-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH-46**	Batch ID: **77020**	RunNo: **99200**
Prep Date: **8/23/2023**	Analysis Date: **8/23/2023**	SeqNo: **3616867** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	9.9	49.70	0	108	54.2	135	2.45	29.2	
Surr: DNOP	1.5		4.970		29.8	69	147	0	0	S

Sample ID: **LCS-77025**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **77025**	RunNo: **99200**
Prep Date: **8/23/2023**	Analysis Date: **8/23/2023**	SeqNo: **3616870** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	10	50.00	0	105	61.9	130			
Surr: DNOP	1.5		5.000		29.9	69	147			S

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308C16**

29-Aug-23

Client: GHD

Project: Delek Matador Produced Water Release

Sample ID: **MB-77025**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **77025**	RunNo: **99211**
Prep Date: **8/23/2023**	Analysis Date: **8/24/2023**	SeqNo: **3619116** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.1		10.00		80.9	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308C16**

29-Aug-23

Client: GHD

Project: Delek Matador Produced Water Release

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **GS99164**	RunNo: **99164**							
Prep Date:	Analysis Date: **8/23/2023**	SeqNo: **3615345**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.4	70	130			
Surr: BFB	2000		1000		196	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **GS99164**	RunNo: **99164**							
Prep Date:	Analysis Date: **8/23/2023**	SeqNo: **3615346**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	980		1000		97.6	15	244			

Sample ID: **2308c16-008ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **BH-53**	Batch ID: **GS99164**	RunNo: **99164**							
Prep Date:	Analysis Date: **8/23/2023**	SeqNo: **3615987**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	16	3.7	18.74	0	86.7	70	130			
Surr: BFB	1500		749.6		194	15	244			

Sample ID: **2308c16-008amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **BH-53**	Batch ID: **GS99164**	RunNo: **99164**							
Prep Date:	Analysis Date: **8/23/2023**	SeqNo: **3615988**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	15	3.7	18.74	0	82.0	70	130	5.60	20	
Surr: BFB	1500		749.6		194	15	244	0	0	

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **GS99197**	RunNo: **99197**							
Prep Date:	Analysis Date: **8/23/2023**	SeqNo: **3616748**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.0	70	130			
Surr: BFB	2100		1000		213	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **GS99197**	RunNo: **99197**							
Prep Date:	Analysis Date: **8/23/2023**	SeqNo: **3616749**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308C16**

29-Aug-23

Client: GHD

Project: Delek Matador Produced Water Release

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **GS99197**	RunNo: **99197**
Prep Date:	Analysis Date: **8/23/2023**	SeqNo: **3616749** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		103	15	244			

Sample ID: **2.5ug gro lcs 2**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **G99197**	RunNo: **99197**
Prep Date:	Analysis Date: **8/23/2023**	SeqNo: **3616773** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	85.5	70	130			
Surr: BFB	2100		1000		210	15	244			

Sample ID: **mb 2**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **G99197**	RunNo: **99197**
Prep Date:	Analysis Date: **8/23/2023**	SeqNo: **3616774** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		101	15	244			

Sample ID: **2308C16-028ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH-73**	Batch ID: **G99197**	RunNo: **99197**
Prep Date:	Analysis Date: **8/24/2023**	SeqNo: **3616784** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	17	3.9	19.64	0	84.1	70	130			
Surr: BFB	1600		785.5		202	15	244			

Sample ID: **2308C16-028amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH-73**	Batch ID: **G99197**	RunNo: **99197**
Prep Date:	Analysis Date: **8/24/2023**	SeqNo: **3616785** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	16	3.9	19.64	0	82.1	70	130	2.45	20	
Surr: BFB	1600		785.5		202	15	244	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308C16**

29-Aug-23

Client: GHD

Project: Delek Matador Produced Water Release

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **BS99164**	RunNo: **99164**
Prep Date:	Analysis Date: **8/23/2023**	SeqNo: **3615355** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	103	70	130			
Toluene	1.0	0.050	1.000	0	104	70	130			
Ethylbenzene	1.1	0.050	1.000	0	105	70	130			
Xylenes, Total	3.2	0.10	3.000	0	106	70	130			
Surr: 4-Bromofluorobenzene	1.1		1.000		113	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **BS99164**	RunNo: **99164**
Prep Date:	Analysis Date: **8/23/2023**	SeqNo: **3615356** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		111	39.1	146			

Sample ID: **2308c16-009ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-54**	Batch ID: **BS99164**	RunNo: **99164**
Prep Date:	Analysis Date: **8/23/2023**	SeqNo: **3615994** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.020	0.7880	0	102	70	130			
Toluene	0.81	0.039	0.7880	0	103	70	130			
Ethylbenzene	0.82	0.039	0.7880	0	104	70	130			
Xylenes, Total	2.5	0.079	2.364	0	105	70	130			
Surr: 4-Bromofluorobenzene	0.86		0.7880		109	39.1	146			

Sample ID: **2308c16-009amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-54**	Batch ID: **BS99164**	RunNo: **99164**
Prep Date:	Analysis Date: **8/23/2023**	SeqNo: **3615995** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.78	0.020	0.7880	0	99.5	70	130	2.31	20	
Toluene	0.80	0.039	0.7880	0	102	70	130	1.27	20	
Ethylbenzene	0.81	0.039	0.7880	0	103	70	130	1.49	20	
Xylenes, Total	2.4	0.079	2.364	0	104	70	130	1.75	20	
Surr: 4-Bromofluorobenzene	0.88		0.7880		111	39.1	146	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308C16**

29-Aug-23

Client: GHD

Project: Delek Matador Produced Water Release

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **BS99197**	RunNo: **99197**
Prep Date:	Analysis Date: **8/23/2023**	SeqNo: **3616803** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	92.6	70	130			
Toluene	0.94	0.050	1.000	0	94.0	70	130			
Ethylbenzene	0.96	0.050	1.000	0	95.9	70	130			
Xylenes, Total	2.9	0.10	3.000	0	96.0	70	130			
Surr: 4-Bromofluorobenzene	0.99		1.000		98.5	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **BS99197**	RunNo: **99197**
Prep Date:	Analysis Date: **8/23/2023**	SeqNo: **3616804** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.94		1.000		94.3	39.1	146			

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **B99197**	RunNo: **99197**
Prep Date:	Analysis Date: **8/23/2023**	SeqNo: **3616827** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.1	70	130			
Toluene	0.94	0.050	1.000	0	94.4	70	130			
Ethylbenzene	0.96	0.050	1.000	0	96.0	70	130			
Xylenes, Total	2.9	0.10	3.000	0	96.1	70	130			
Surr: 4-Bromofluorobenzene	0.95		1.000		94.8	39.1	146			

Sample ID: **mb 2**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **B99197**	RunNo: **99197**
Prep Date:	Analysis Date: **8/23/2023**	SeqNo: **3616828** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.93		1.000		92.6	39.1	146			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308C16**

29-Aug-23

Client: GHD

Project: Delek Matador Produced Water Release

Sample ID: **2308C16-029ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-74**	Batch ID: **B99197**	RunNo: **99197**
Prep Date:	Analysis Date: **8/24/2023**	SeqNo: **3616837** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.69	0.019	0.7564	0	91.4	70	130			
Toluene	0.70	0.038	0.7564	0	92.1	70	130			
Ethylbenzene	0.71	0.038	0.7564	0	93.4	70	130			
Xylenes, Total	2.1	0.076	2.269	0	93.1	70	130			
Surr: 4-Bromofluorobenzene	0.70		0.7564		92.6	39.1	146			

Sample ID: **2308C16-029amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-74**	Batch ID: **B99197**	RunNo: **99197**
Prep Date:	Analysis Date: **8/24/2023**	SeqNo: **3616838** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.68	0.019	0.7564	0	90.0	70	130	1.46	20	
Toluene	0.69	0.038	0.7564	0	90.8	70	130	1.42	20	
Ethylbenzene	0.70	0.038	0.7564	0	92.4	70	130	1.08	20	
Xylenes, Total	2.1	0.076	2.269	0	92.7	70	130	0.427	20	
Surr: 4-Bromofluorobenzene	0.70		0.7564		92.0	39.1	146	0	0	

Qualifiers:

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

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: GHD | Work Order Number: 2308C16 | RcptNo: 1

Received By: Tracy Casarrubias 8/23/2023 7:30:00 AM

Completed By: Tracy Casarrubias 8/23/2023 7:51:39 AM

Reviewed By: TM 8/23/23

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: SCM 8/23/23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes	Yogi		

Received by OCD: 12/4/2024 10:43:20 AM

Released to Imaging: 3/12/2025 11:29:45 AM

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy FWY #400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: Nate.Reece@ghd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 24hr

Project Name: DelekMatador Produced Water release

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna Crapo

On Ice: ☒ Yes ☐ No Yoqi

# of Coolers: 1

Cooler Temp(including CF): 1.3-0=1.3 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308C16	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8-18-23	1340	S	BH-46	Glass 1	none	001	X	X								
	1342	S	BH-47			002										
	1344	S	BH-48			003										
	1346	S	BH-49			004										
	1348	S	BH-50			005										
	1350	S	BH-51			006										
	1352	S	BH-52			007										
	1354	S	BH-53			008										
	1356	S	BH-54			009										
↓	1358	S	BH-55	↓	↓	010										

Analysis Request

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
8/18						
8/22/23	1900				8/22/23	800
				Courier	8/23/23	7:30

Remarks:

Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy #400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: nate.Reece@ghd.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☐ Standard ☒ Rush 24hr

Project Name: DeLeK Matador Produced water

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna Crapo

On Ice: ☒ Yes ☐ No 4gi

# of Coolers: 1

Cooler Temp(including CF): 1.3 - 0 = 1.3 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308C16	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8-21-23	0826	S	BH-56	1 glass	N/A	011	X	X								
	0828		BH-57			012										
	0830		BH-58			013										
	0832		BH-59			014										
	0834		BH-60			015										
	0836		BH-61			016										
	0838		BH-62			017										
	0840		BH-63			018										
	0842		BH-64			019										
	0844		BH-65			020										
	0846		BH-66			021										
	0848		BH-67			022										

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
8/21	1644					
8/22/23	1900				8/23/23	7:30

Remarks:

Released to Imaging: 12/12/2023 11:29:15 AM

Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy #400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: nate.Reece@ghd.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☐ Standard ☒ Rush 24hr

Project Name: DelcK Matador Produced water

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna CrapO

On Ice: ☒ Yes ☐ No

# of Coolers: 1 4°C

Cooler Temp (including CF): 1.3 - 0 = 1.3 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308C16	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8-21-23	0850	S	BH-68	1glass	N/A	023	X	X								
	0852		BH-69			024										
	0854		BH-70			025										
	1240		BH-71			026										
	1242		BH-72			027										
	1244		BH-73			028										
	1246		BH-74			029										
	1248		BH-75			030										
	1250		BH-76			031										
	1252		BH-77			032										
	1254		BH-78			033										
	1256		BH-79			034										

Remarks:

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
8/21	1644				8/22/23	800
8/22/23	1900			courier	8/23/23	7:30

Released to Imaging: 3/12/2025 11:29:45 AM

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy #400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: nate.Reece@ghd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 24hr

Project Name: DelcK Matador Produced water

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna CrapO

On Ice: ☒ Yes ☐ No 4oa;

# of Coolers: 1

Cooler Temp(Including CF): 1.3 - 0 = 1.3 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308C16
8-21-23	1258	S	BH-80	1glass	N/A	035

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
X	X								

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
8/21	1644					
8/22/23	1900				8/23/23	7:30

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 29, 2023

Nate Reece
GHD
6320 Rothway Ste 100
Houston, TX 77040
TEL: (713) 275-3838
FAX:

RE: Delek Matador Produced Water OrderNo.: 2308C95

Dear Nate Reece:

Hall Environmental Analysis Laboratory received 25 sample(s) on 8/24/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-2a
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 9:20:00 AM
Lab ID: 2308C95-001 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/24/2023 6:34:42 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/24/2023 6:34:42 PM
Surr: DNOP	74.0	69-147		%Rec	1	8/24/2023 6:34:42 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	8/24/2023 11:23:00 AM
Surr: BFB	96.0	15-244		%Rec	1	8/24/2023 11:23:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.021		mg/Kg	1	8/24/2023 11:23:00 AM
Toluene	ND	0.043		mg/Kg	1	8/24/2023 11:23:00 AM
Ethylbenzene	ND	0.043		mg/Kg	1	8/24/2023 11:23:00 AM
Xylenes, Total	ND	0.085		mg/Kg	1	8/24/2023 11:23:00 AM
Surr: 4-Bromofluorobenzene	93.0	39.1-146		%Rec	1	8/24/2023 11:23:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	460	60		mg/Kg	20	8/24/2023 5:03:15 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-3a
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 9:22:00 AM
Lab ID: 2308C95-002 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/24/2023 6:59:27 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/24/2023 6:59:27 PM
Surr: DNOP	75.4	69-147		%Rec	1	8/24/2023 6:59:27 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	8/24/2023 12:28:00 PM
Surr: BFB	98.6	15-244		%Rec	1	8/24/2023 12:28:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.018		mg/Kg	1	8/24/2023 12:28:00 PM
Toluene	ND	0.036		mg/Kg	1	8/24/2023 12:28:00 PM
Ethylbenzene	ND	0.036		mg/Kg	1	8/24/2023 12:28:00 PM
Xylenes, Total	ND	0.073		mg/Kg	1	8/24/2023 12:28:00 PM
Surr: 4-Bromofluorobenzene	93.3	39.1-146		%Rec	1	8/24/2023 12:28:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	520	60		mg/Kg	20	8/24/2023 6:05:18 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-7a
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 9:24:00 AM
Lab ID: 2308C95-003 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/25/2023 8:13:33 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/25/2023 8:13:33 AM
Surr: DNOP	96.0	69-147		%Rec	1	8/25/2023 8:13:33 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/24/2023 1:33:00 PM
Surr: BFB	102	15-244		%Rec	1	8/24/2023 1:33:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.020		mg/Kg	1	8/24/2023 1:33:00 PM
Toluene	ND	0.039		mg/Kg	1	8/24/2023 1:33:00 PM
Ethylbenzene	ND	0.039		mg/Kg	1	8/24/2023 1:33:00 PM
Xylenes, Total	ND	0.078		mg/Kg	1	8/24/2023 1:33:00 PM
Surr: 4-Bromofluorobenzene	93.5	39.1-146		%Rec	1	8/24/2023 1:33:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	440	60		mg/Kg	20	8/24/2023 6:42:32 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-40a
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 9:26:00 AM
Lab ID: 2308C95-004 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/25/2023 8:24:10 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/25/2023 8:24:10 AM
Surr: DNOP	94.4	69-147		%Rec	1	8/25/2023 8:24:10 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	8/24/2023 1:55:00 PM
Surr: BFB	96.5	15-244		%Rec	1	8/24/2023 1:55:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.021		mg/Kg	1	8/24/2023 1:55:00 PM
Toluene	ND	0.041		mg/Kg	1	8/24/2023 1:55:00 PM
Ethylbenzene	ND	0.041		mg/Kg	1	8/24/2023 1:55:00 PM
Xylenes, Total	ND	0.083		mg/Kg	1	8/24/2023 1:55:00 PM
Surr: 4-Bromofluorobenzene	92.2	39.1-146		%Rec	1	8/24/2023 1:55:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	500	60		mg/Kg	20	8/24/2023 6:54:56 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-37a
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 9:28:00 AM
Lab ID: 2308C95-005 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	8/25/2023 8:34:50 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/25/2023 8:34:50 AM
Surr: DNOP	92.3	69-147		%Rec	1	8/25/2023 8:34:50 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/24/2023 2:17:00 PM
Surr: BFB	99.1	15-244		%Rec	1	8/24/2023 2:17:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.020		mg/Kg	1	8/24/2023 2:17:00 PM
Toluene	ND	0.039		mg/Kg	1	8/24/2023 2:17:00 PM
Ethylbenzene	ND	0.039		mg/Kg	1	8/24/2023 2:17:00 PM
Xylenes, Total	ND	0.079		mg/Kg	1	8/24/2023 2:17:00 PM
Surr: 4-Bromofluorobenzene	91.3	39.1-146		%Rec	1	8/24/2023 2:17:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	390	60		mg/Kg	20	8/24/2023 7:07:21 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-18a
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 9:32:00 AM
Lab ID: 2308C95-006 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	8/25/2023 8:52:57 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/25/2023 8:52:57 AM
Surr: DNOP	95.4	69-147		%Rec	1	8/25/2023 8:52:57 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	8/24/2023 2:38:00 PM
Surr: BFB	96.9	15-244		%Rec	1	8/24/2023 2:38:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.018		mg/Kg	1	8/24/2023 2:38:00 PM
Toluene	ND	0.037		mg/Kg	1	8/24/2023 2:38:00 PM
Ethylbenzene	ND	0.037		mg/Kg	1	8/24/2023 2:38:00 PM
Xylenes, Total	ND	0.073		mg/Kg	1	8/24/2023 2:38:00 PM
Surr: 4-Bromofluorobenzene	91.8	39.1-146		%Rec	1	8/24/2023 2:38:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	320	60		mg/Kg	20	8/24/2023 7:19:45 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-17a
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 9:34:00 AM
Lab ID: 2308C95-007 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	8/25/2023 9:03:30 AM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	8/25/2023 9:03:30 AM
Surr: DNOP	93.6	69-147		%Rec	1	8/25/2023 9:03:30 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	8/24/2023 3:00:00 PM
Surr: BFB	103	15-244		%Rec	1	8/24/2023 3:00:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.018		mg/Kg	1	8/24/2023 3:00:00 PM
Toluene	ND	0.037		mg/Kg	1	8/24/2023 3:00:00 PM
Ethylbenzene	ND	0.037		mg/Kg	1	8/24/2023 3:00:00 PM
Xylenes, Total	ND	0.074		mg/Kg	1	8/24/2023 3:00:00 PM
Surr: 4-Bromofluorobenzene	92.6	39.1-146		%Rec	1	8/24/2023 3:00:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	320	60		mg/Kg	20	8/24/2023 7:32:09 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-81
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 10:30:00 AM
Lab ID: 2308C95-008 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/25/2023 9:14:04 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/25/2023 9:14:04 AM
Surr: DNOP	95.5	69-147		%Rec	1	8/25/2023 9:14:04 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/24/2023 3:22:00 PM
Surr: BFB	100	15-244		%Rec	1	8/24/2023 3:22:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.023		mg/Kg	1	8/24/2023 3:22:00 PM
Toluene	ND	0.046		mg/Kg	1	8/24/2023 3:22:00 PM
Ethylbenzene	ND	0.046		mg/Kg	1	8/24/2023 3:22:00 PM
Xylenes, Total	ND	0.092		mg/Kg	1	8/24/2023 3:22:00 PM
Surr: 4-Bromofluorobenzene	93.7	39.1-146		%Rec	1	8/24/2023 3:22:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	130	60		mg/Kg	20	8/24/2023 8:09:24 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-82
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 10:32:00 AM
Lab ID: 2308C95-009 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	8/25/2023 9:24:39 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/25/2023 9:24:39 AM
Surr: DNOP	90.4	69-147		%Rec	1	8/25/2023 9:24:39 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	8/24/2023 3:44:00 PM
Surr: BFB	96.2	15-244		%Rec	1	8/24/2023 3:44:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.022		mg/Kg	1	8/24/2023 3:44:00 PM
Toluene	ND	0.044		mg/Kg	1	8/24/2023 3:44:00 PM
Ethylbenzene	ND	0.044		mg/Kg	1	8/24/2023 3:44:00 PM
Xylenes, Total	ND	0.089		mg/Kg	1	8/24/2023 3:44:00 PM
Surr: 4-Bromofluorobenzene	91.5	39.1-146		%Rec	1	8/24/2023 3:44:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	230	60		mg/Kg	20	8/24/2023 8:21:49 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-83
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 10:34:00 AM
Lab ID: 2308C95-010 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/25/2023 9:35:18 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/25/2023 9:35:18 AM
Surr: DNOP	92.1	69-147		%Rec	1	8/25/2023 9:35:18 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/24/2023 4:06:00 PM
Surr: BFB	101	15-244		%Rec	1	8/24/2023 4:06:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.019		mg/Kg	1	8/24/2023 4:06:00 PM
Toluene	ND	0.039		mg/Kg	1	8/24/2023 4:06:00 PM
Ethylbenzene	ND	0.039		mg/Kg	1	8/24/2023 4:06:00 PM
Xylenes, Total	ND	0.077		mg/Kg	1	8/24/2023 4:06:00 PM
Surr: 4-Bromofluorobenzene	93.6	39.1-146		%Rec	1	8/24/2023 4:06:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	130	60		mg/Kg	20	8/24/2023 8:34:13 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-84
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 10:36:00 AM
Lab ID: 2308C95-011 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/25/2023 9:45:57 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/25/2023 9:45:57 AM
Surr: DNOP	94.0	69-147		%Rec	1	8/25/2023 9:45:57 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	8/24/2023 4:50:00 PM
Surr: BFB	102	15-244		%Rec	1	8/24/2023 4:50:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.022		mg/Kg	1	8/24/2023 4:50:00 PM
Toluene	ND	0.043		mg/Kg	1	8/24/2023 4:50:00 PM
Ethylbenzene	ND	0.043		mg/Kg	1	8/24/2023 4:50:00 PM
Xylenes, Total	ND	0.087		mg/Kg	1	8/24/2023 4:50:00 PM
Surr: 4-Bromofluorobenzene	94.2	39.1-146		%Rec	1	8/24/2023 4:50:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	8/24/2023 8:46:37 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-85
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 10:38:00 AM
Lab ID: 2308C95-012 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	8/24/2023 11:32:08 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	8/24/2023 11:32:08 PM
Surr: DNOP	69.1	69-147		%Rec	1	8/24/2023 11:32:08 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	8/24/2023 5:11:00 PM
Surr: BFB	97.0	15-244		%Rec	1	8/24/2023 5:11:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.021		mg/Kg	1	8/24/2023 5:11:00 PM
Toluene	ND	0.043		mg/Kg	1	8/24/2023 5:11:00 PM
Ethylbenzene	ND	0.043		mg/Kg	1	8/24/2023 5:11:00 PM
Xylenes, Total	ND	0.085		mg/Kg	1	8/24/2023 5:11:00 PM
Surr: 4-Bromofluorobenzene	91.7	39.1-146		%Rec	1	8/24/2023 5:11:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	71	60		mg/Kg	20	8/24/2023 8:59:02 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-86
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 1:45:00 PM
Lab ID: 2308C95-013 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	8/25/2023 9:56:37 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/25/2023 9:56:37 AM
Surr: DNOP	86.9	69-147		%Rec	1	8/25/2023 9:56:37 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	8/24/2023 5:33:00 PM
Surr: BFB	95.4	15-244		%Rec	1	8/24/2023 5:33:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.019		mg/Kg	1	8/24/2023 5:33:00 PM
Toluene	ND	0.038		mg/Kg	1	8/24/2023 5:33:00 PM
Ethylbenzene	ND	0.038		mg/Kg	1	8/24/2023 5:33:00 PM
Xylenes, Total	ND	0.077		mg/Kg	1	8/24/2023 5:33:00 PM
Surr: 4-Bromofluorobenzene	90.5	39.1-146		%Rec	1	8/24/2023 5:33:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	8/24/2023 9:11:26 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-87
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 10:42:00 AM
Lab ID: 2308C95-014 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	8/25/2023 10:07:14 AM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	8/25/2023 10:07:14 AM
Surr: DNOP	92.2	69-147		%Rec	1	8/25/2023 10:07:14 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	8/24/2023 5:55:00 PM
Surr: BFB	95.6	15-244		%Rec	1	8/24/2023 5:55:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.022		mg/Kg	1	8/24/2023 5:55:00 PM
Toluene	ND	0.043		mg/Kg	1	8/24/2023 5:55:00 PM
Ethylbenzene	ND	0.043		mg/Kg	1	8/24/2023 5:55:00 PM
Xylenes, Total	ND	0.087		mg/Kg	1	8/24/2023 5:55:00 PM
Surr: 4-Bromofluorobenzene	91.1	39.1-146		%Rec	1	8/24/2023 5:55:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	220	60		mg/Kg	20	8/24/2023 9:23:50 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-88
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 10:44:00 AM
Lab ID: 2308C95-015 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	8/25/2023 10:17:52 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/25/2023 10:17:52 AM
Surr: DNOP	92.5	69-147		%Rec	1	8/25/2023 10:17:52 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	8/24/2023 6:17:00 PM
Surr: BFB	98.1	15-244		%Rec	1	8/24/2023 6:17:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.022		mg/Kg	1	8/24/2023 6:17:00 PM
Toluene	ND	0.044		mg/Kg	1	8/24/2023 6:17:00 PM
Ethylbenzene	ND	0.044		mg/Kg	1	8/24/2023 6:17:00 PM
Xylenes, Total	ND	0.089		mg/Kg	1	8/24/2023 6:17:00 PM
Surr: 4-Bromofluorobenzene	92.1	39.1-146		%Rec	1	8/24/2023 6:17:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	84	60		mg/Kg	20	8/24/2023 9:36:15 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-96
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 1:40:00 PM
Lab ID: 2308C95-016 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/25/2023 1:11:09 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/25/2023 1:11:09 AM
Surr: DNOP	69.0	69-147		%Rec	1	8/25/2023 1:11:09 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	8/24/2023 6:39:00 PM
Surr: BFB	95.0	15-244		%Rec	1	8/24/2023 6:39:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.021		mg/Kg	1	8/24/2023 6:39:00 PM
Toluene	ND	0.043		mg/Kg	1	8/24/2023 6:39:00 PM
Ethylbenzene	ND	0.043		mg/Kg	1	8/24/2023 6:39:00 PM
Xylenes, Total	ND	0.086		mg/Kg	1	8/24/2023 6:39:00 PM
Surr: 4-Bromofluorobenzene	91.8	39.1-146		%Rec	1	8/24/2023 6:39:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	1200	60		mg/Kg	20	8/24/2023 9:48:40 PM

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

CLIENT: GHD **Client Sample ID:** BH-98
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 1:44:00 PM
Lab ID: 2308C95-017 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	8/25/2023 1:35:47 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/25/2023 1:35:47 AM
Surr: DNOP	70.9	69-147		%Rec	1	8/25/2023 1:35:47 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.1		mg/Kg	1	8/24/2023 7:00:00 PM
Surr: BFB	99.2	15-244		%Rec	1	8/24/2023 7:00:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.026		mg/Kg	1	8/24/2023 7:00:00 PM
Toluene	ND	0.051		mg/Kg	1	8/24/2023 7:00:00 PM
Ethylbenzene	ND	0.051		mg/Kg	1	8/24/2023 7:00:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	8/24/2023 7:00:00 PM
Surr: 4-Bromofluorobenzene	92.8	39.1-146		%Rec	1	8/24/2023 7:00:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	190	60		mg/Kg	20	8/24/2023 10:01:05 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-99
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 1:46:00 PM
Lab ID: 2308C95-018 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/25/2023 10:30:28 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/25/2023 10:30:28 AM
Surr: DNOP	88.6	69-147		%Rec	1	8/25/2023 10:30:28 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/24/2023 7:22:00 PM
Surr: BFB	97.3	15-244		%Rec	1	8/24/2023 7:22:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.020		mg/Kg	1	8/24/2023 7:22:00 PM
Toluene	ND	0.039		mg/Kg	1	8/24/2023 7:22:00 PM
Ethylbenzene	ND	0.039		mg/Kg	1	8/24/2023 7:22:00 PM
Xylenes, Total	ND	0.079		mg/Kg	1	8/24/2023 7:22:00 PM
Surr: 4-Bromofluorobenzene	93.0	39.1-146		%Rec	1	8/24/2023 7:22:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	370	60		mg/Kg	20	8/24/2023 10:38:19 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-100
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 1:48:00 PM
Lab ID: 2308C95-019 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/25/2023 10:41:03 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/25/2023 10:41:03 AM
Surr: DNOP	86.6	69-147		%Rec	1	8/25/2023 10:41:03 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	8/24/2023 7:44:00 PM
Surr: BFB	96.6	15-244		%Rec	1	8/24/2023 7:44:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.022		mg/Kg	1	8/24/2023 7:44:00 PM
Toluene	ND	0.044		mg/Kg	1	8/24/2023 7:44:00 PM
Ethylbenzene	ND	0.044		mg/Kg	1	8/24/2023 7:44:00 PM
Xylenes, Total	ND	0.089		mg/Kg	1	8/24/2023 7:44:00 PM
Surr: 4-Bromofluorobenzene	91.9	39.1-146		%Rec	1	8/24/2023 7:44:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	430	60		mg/Kg	20	8/24/2023 10:50:43 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-101
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 1:50:00 PM
Lab ID: 2308C95-020 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	8/25/2023 10:51:40 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/25/2023 10:51:40 AM
Surr: DNOP	87.6	69-147		%Rec	1	8/25/2023 10:51:40 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	8/24/2023 8:06:00 PM
Surr: BFB	95.0	15-244		%Rec	1	8/24/2023 8:06:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.019		mg/Kg	1	8/24/2023 8:06:00 PM
Toluene	ND	0.038		mg/Kg	1	8/24/2023 8:06:00 PM
Ethylbenzene	ND	0.038		mg/Kg	1	8/24/2023 8:06:00 PM
Xylenes, Total	ND	0.076		mg/Kg	1	8/24/2023 8:06:00 PM
Surr: 4-Bromofluorobenzene	92.4	39.1-146		%Rec	1	8/24/2023 8:06:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	400	60		mg/Kg	20	8/24/2023 11:03:08 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-102
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 1:52:00 PM
Lab ID: 2308C95-021 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/24/2023 4:42:12 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/24/2023 4:42:12 PM
Surr: DNOP	117	69-147		%Rec	1	8/24/2023 4:42:12 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/24/2023 10:17:00 PM
Surr: BFB	97.8	15-244		%Rec	1	8/24/2023 10:17:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.023		mg/Kg	1	8/24/2023 10:17:00 PM
Toluene	ND	0.046		mg/Kg	1	8/24/2023 10:17:00 PM
Ethylbenzene	ND	0.046		mg/Kg	1	8/24/2023 10:17:00 PM
Xylenes, Total	ND	0.091		mg/Kg	1	8/24/2023 10:17:00 PM
Surr: 4-Bromofluorobenzene	91.6	39.1-146		%Rec	1	8/24/2023 10:17:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	260	60		mg/Kg	20	8/24/2023 11:40:21 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-104
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 1:54:00 PM
Lab ID: 2308C95-022 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/24/2023 4:52:56 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/24/2023 4:52:56 PM
Surr: DNOP	96.1	69-147		%Rec	1	8/24/2023 4:52:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	8/24/2023 11:21:00 PM
Surr: BFB	97.0	15-244		%Rec	1	8/24/2023 11:21:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.021		mg/Kg	1	8/24/2023 11:21:00 PM
Toluene	ND	0.042		mg/Kg	1	8/24/2023 11:21:00 PM
Ethylbenzene	ND	0.042		mg/Kg	1	8/24/2023 11:21:00 PM
Xylenes, Total	ND	0.084		mg/Kg	1	8/24/2023 11:21:00 PM
Surr: 4-Bromofluorobenzene	92.2	39.1-146		%Rec	1	8/24/2023 11:21:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	190	60		mg/Kg	20	8/24/2023 11:52:46 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-105
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 1:56:00 PM
Lab ID: 2308C95-023 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	8/24/2023 5:03:41 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/24/2023 5:03:41 PM
Surr: DNOP	99.7	69-147		%Rec	1	8/24/2023 5:03:41 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	8/25/2023 12:26:00 AM
Surr: BFB	97.4	15-244		%Rec	1	8/25/2023 12:26:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.019		mg/Kg	1	8/25/2023 12:26:00 AM
Toluene	ND	0.038		mg/Kg	1	8/25/2023 12:26:00 AM
Ethylbenzene	ND	0.038		mg/Kg	1	8/25/2023 12:26:00 AM
Xylenes, Total	ND	0.077		mg/Kg	1	8/25/2023 12:26:00 AM
Surr: 4-Bromofluorobenzene	92.1	39.1-146		%Rec	1	8/25/2023 12:26:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	290	60		mg/Kg	20	8/25/2023 12:05:11 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-106
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 1:58:00 PM
Lab ID: 2308C95-024 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/24/2023 5:14:27 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/24/2023 5:14:27 PM
Surr: DNOP	93.8	69-147		%Rec	1	8/24/2023 5:14:27 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	8/25/2023 12:48:00 AM
Surr: BFB	100	15-244		%Rec	1	8/25/2023 12:48:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.018		mg/Kg	1	8/25/2023 12:48:00 AM
Toluene	ND	0.035		mg/Kg	1	8/25/2023 12:48:00 AM
Ethylbenzene	ND	0.035		mg/Kg	1	8/25/2023 12:48:00 AM
Xylenes, Total	ND	0.071		mg/Kg	1	8/25/2023 12:48:00 AM
Surr: 4-Bromofluorobenzene	91.3	39.1-146		%Rec	1	8/25/2023 12:48:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	260	60		mg/Kg	20	8/25/2023 12:17:35 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308C95**
Date Reported: **8/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-107
Project: Delek Matador Produced Water **Collection Date:** 8/22/2023 2:00:00 PM
Lab ID: 2308C95-025 **Matrix:** MEOH (SOIL) **Received Date:** 8/24/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/24/2023 5:25:22 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/24/2023 5:25:22 PM
Surr: DNOP	95.1	69-147		%Rec	1	8/24/2023 5:25:22 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/25/2023 1:10:00 AM
Surr: BFB	99.8	15-244		%Rec	1	8/25/2023 1:10:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.019		mg/Kg	1	8/25/2023 1:10:00 AM
Toluene	ND	0.039		mg/Kg	1	8/25/2023 1:10:00 AM
Ethylbenzene	ND	0.039		mg/Kg	1	8/25/2023 1:10:00 AM
Xylenes, Total	ND	0.077		mg/Kg	1	8/25/2023 1:10:00 AM
Surr: 4-Bromofluorobenzene	90.9	39.1-146		%Rec	1	8/25/2023 1:10:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	310	60		mg/Kg	20	8/25/2023 12:29:59 AM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308C95**

29-Aug-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **MB-77090**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **77090**	RunNo: **99227**							
Prep Date: **8/24/2023**	Analysis Date: **8/25/2023**	SeqNo: **3618458**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77090**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **77090**	RunNo: **99227**							
Prep Date: **8/24/2023**	Analysis Date: **8/25/2023**	SeqNo: **3618459**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.3	90	110			

Sample ID: **MB-77080**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **77080**	RunNo: **99222**							
Prep Date: **8/24/2023**	Analysis Date: **8/24/2023**	SeqNo: **3618895**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77080**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **77080**	RunNo: **99222**							
Prep Date: **8/24/2023**	Analysis Date: **8/24/2023**	SeqNo: **3618896**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.4	90	110			

Sample ID: **MB-77090**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **77090**	RunNo: **99222**							
Prep Date: **8/24/2023**	Analysis Date: **8/24/2023**	SeqNo: **3618946**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77090**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **77090**	RunNo: **99222**							
Prep Date: **8/24/2023**	Analysis Date: **8/24/2023**	SeqNo: **3618947**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.4	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308C95**

29-Aug-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **MB-77052**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **77052**	RunNo: **99199**
Prep Date: **8/23/2023**	Analysis Date: **8/24/2023**	SeqNo: **3617393** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.8		10.00		97.8	69	147			

Sample ID: **LCS-77052**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **77052**	RunNo: **99199**
Prep Date: **8/23/2023**	Analysis Date: **8/24/2023**	SeqNo: **3617395** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		5.000		99.2	69	147			

Sample ID: **MB-77049**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **77049**	RunNo: **99199**
Prep Date: **8/23/2023**	Analysis Date: **8/25/2023**	SeqNo: **3617816** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		114	69	147			

Sample ID: **MB-77076**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **77076**	RunNo: **99199**
Prep Date: **8/24/2023**	Analysis Date: **8/24/2023**	SeqNo: **3617818** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.2		10.00		92.4	69	147			

Sample ID: **LCS-77049**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **77049**	RunNo: **99199**
Prep Date: **8/23/2023**	Analysis Date: **8/25/2023**	SeqNo: **3617819** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.7		5.000		115	69	147			

Sample ID: **LCS-77076**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **77076**	RunNo: **99199**
Prep Date: **8/24/2023**	Analysis Date: **8/24/2023**	SeqNo: **3617821** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.2	61.9	130			
Surr: DNOP	4.8		5.000		95.0	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308C95**

29-Aug-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **2308C95-020AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH-101**	Batch ID: **77068**	RunNo: **99199**
Prep Date: **8/24/2023**	Analysis Date: **8/25/2023**	SeqNo: **3619027** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	9.7	48.45	0	96.1	54.2	135			
Surr: DNOP	4.3		4.845		89.4	69	147			

Sample ID: **2308C95-020AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH-101**	Batch ID: **77068**	RunNo: **99199**
Prep Date: **8/24/2023**	Analysis Date: **8/25/2023**	SeqNo: **3619028** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	9.2	45.83	0	97.4	54.2	135	4.29	29.2	
Surr: DNOP	4.1		4.583		88.5	69	147	0	0	

Sample ID: **MB-77068**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **77068**	RunNo: **99211**
Prep Date: **8/24/2023**	Analysis Date: **8/24/2023**	SeqNo: **3619117** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	7.2		10.00		72.3	69	147			

Sample ID: **LCS-77068**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **77068**	RunNo: **99199**
Prep Date: **8/24/2023**	Analysis Date: **8/25/2023**	SeqNo: **3620343** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	86.8	61.9	130			
Surr: DNOP	4.4		5.000		88.6	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308C95**

29-Aug-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **GS99229**	RunNo: **99229**							
Prep Date:	Analysis Date: **8/24/2023**	SeqNo: **3618702**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.0	70	130			
Surr: BFB	2200		1000		216	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **GS99229**	RunNo: **99229**							
Prep Date:	Analysis Date: **8/24/2023**	SeqNo: **3618703**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		102	15	244			

Sample ID: **2308C95-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **BH-2a**	Batch ID: **GS99229**	RunNo: **99229**							
Prep Date:	Analysis Date: **8/24/2023**	SeqNo: **3618705**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	4.3	21.31	0	90.4	70	130			
Surr: BFB	1800		852.5		211	15	244			

Sample ID: **2308C95-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **BH-2a**	Batch ID: **GS99229**	RunNo: **99229**							
Prep Date:	Analysis Date: **8/24/2023**	SeqNo: **3618706**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	4.3	21.31	0	86.6	70	130	4.20	20	
Surr: BFB	1800		852.5		208	15	244	0	0	

Sample ID: **2.5ug gro lcs 2**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **G99229**	RunNo: **99229**							
Prep Date:	Analysis Date: **8/24/2023**	SeqNo: **3618726**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	86.8	70	130			
Surr: BFB	2000		1000		204	15	244			

Sample ID: **mb 2**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **G99229**	RunNo: **99229**							
Prep Date:	Analysis Date: **8/24/2023**	SeqNo: **3618727**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308C95**

29-Aug-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **mb 2**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **G99229**	RunNo: **99229**
Prep Date:	Analysis Date: **8/24/2023**	SeqNo: **3618727** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		102	15	244			

Sample ID: **2308C95-021ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH-102**	Batch ID: **G99229**	RunNo: **99229**
Prep Date:	Analysis Date: **8/24/2023**	SeqNo: **3618729** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.6	22.85	0	85.9	70	130			
Surr: BFB	1900		914.1		204	15	244			

Sample ID: **2308C95-021amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH-102**	Batch ID: **G99229**	RunNo: **99229**
Prep Date:	Analysis Date: **8/24/2023**	SeqNo: **3618730** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	4.6	22.85	0	85.0	70	130	0.983	20	
Surr: BFB	1900		914.1		202	15	244	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308C95**

29-Aug-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **BS99229**	RunNo: **99229**
Prep Date:	Analysis Date: **8/24/2023**	SeqNo: **3618746** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	92.6	70	130			
Toluene	0.94	0.050	1.000	0	94.0	70	130			
Ethylbenzene	0.96	0.050	1.000	0	96.2	70	130			
Xylenes, Total	2.9	0.10	3.000	0	96.5	70	130			
Surr: 4-Bromofluorobenzene	0.98		1.000		97.5	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **BS99229**	RunNo: **99229**
Prep Date:	Analysis Date: **8/24/2023**	SeqNo: **3618747** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.95		1.000		94.9	39.1	146			

Sample ID: **2308C95-002ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-3a**	Batch ID: **BS99229**	RunNo: **99229**
Prep Date:	Analysis Date: **8/24/2023**	SeqNo: **3618750** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.67	0.018	0.7289	0	91.6	70	130			
Toluene	0.68	0.036	0.7289	0	92.8	70	130			
Ethylbenzene	0.69	0.036	0.7289	0	94.9	70	130			
Xylenes, Total	2.1	0.073	2.187	0	95.1	70	130			
Surr: 4-Bromofluorobenzene	0.68		0.7289		93.5	39.1	146			

Sample ID: **2308C95-002amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-3a**	Batch ID: **BS99229**	RunNo: **99229**
Prep Date:	Analysis Date: **8/24/2023**	SeqNo: **3618751** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.66	0.018	0.7289	0	90.7	70	130	0.916	20	
Toluene	0.67	0.036	0.7289	0	91.9	70	130	1.05	20	
Ethylbenzene	0.68	0.036	0.7289	0	93.4	70	130	1.53	20	
Xylenes, Total	2.1	0.073	2.187	0	93.9	70	130	1.22	20	
Surr: 4-Bromofluorobenzene	0.68		0.7289		93.0	39.1	146	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308C95**

29-Aug-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **B99229**	RunNo: **99229**
Prep Date:	Analysis Date: **8/24/2023**	SeqNo: **3618770** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	103	70	130			
Toluene	1.0	0.050	1.000	0	104	70	130			
Ethylbenzene	1.1	0.050	1.000	0	106	70	130			
Xylenes, Total	3.2	0.10	3.000	0	107	70	130			
Surr: 4-Bromofluorobenzene	0.95		1.000		94.9	39.1	146			

Sample ID: **mb 2**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **B99229**	RunNo: **99229**
Prep Date:	Analysis Date: **8/24/2023**	SeqNo: **3618771** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.95		1.000		95.2	39.1	146			

Sample ID: **2308C95-022ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-104**	Batch ID: **B99229**	RunNo: **99229**
Prep Date:	Analysis Date: **8/24/2023**	SeqNo: **3618774** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.021	0.8361	0	100	70	130			
Toluene	0.85	0.042	0.8361	0	101	70	130			
Ethylbenzene	0.86	0.042	0.8361	0	103	70	130			
Xylenes, Total	2.6	0.084	2.508	0	103	70	130			
Surr: 4-Bromofluorobenzene	0.77		0.8361		92.0	39.1	146			

Sample ID: **2308C95-022amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-104**	Batch ID: **B99229**	RunNo: **99229**
Prep Date:	Analysis Date: **8/25/2023**	SeqNo: **3618775** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.021	0.8361	0	101	70	130	0.249	20	
Toluene	0.85	0.042	0.8361	0	101	70	130	0.352	20	
Ethylbenzene	0.86	0.042	0.8361	0	103	70	130	0.0942	20	
Xylenes, Total	2.6	0.084	2.508	0	103	70	130	0.119	20	
Surr: 4-Bromofluorobenzene	0.76		0.8361		91.2	39.1	146	0	0	

Qualifiers:

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

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: GHD | Work Order Number: 2308C95 | RcptNo: 1

Received By: Tracy Casarrubias 8/24/2023 7:25:00 AM

Completed By: Tracy Casarrubias 8/24/2023 7:55:41 AM

Reviewed By: JH 8-24-23

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: JH 8/24/23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.9	Good	Yes	Yogi		
2	5.3	Good	Yes	Yogi		

Received by OCD: 12/4/2024 10:43:20 AM

Released to Imaging: 3/12/2025 11:29:45 AM

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy #400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: nate.Reece@ghd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 24hr

Project Name: DeleK Matador Produced water

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna CraPO

On Ice: ☒ Yes ☐ No

# of Coolers: 2

Cooler Temp(including CF): See checklist (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Tested For Chlorides

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308C95	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8-22-23	0920	S	BH-2a	1 glass	N/A	001	X	X					X			
	0922		BH-3a			002										
	0924		BH-7a			003										
	0926		BH-40a			004										
	0928		BH-37a			005										
	0932		BH-18a			006										
	0934		BH-17a			007										
	1030		BH-81			008										
	1632		BH-82			009										
	1034		BH-83			010										
	1036		BH-84			011										
	1038		BH-85			012										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
1728	8/22				8/23/23	800
8/23/23	1900			courier	8/24/23	7:25

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy #400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: nate.Reece@ghd.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☐ Standard ☒ Rush 24hr

Project Name: Delek Matador Produced water

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna Crapo

On Ice: ☑ Yes ☐ No

# of Coolers: 2

Cooler Temp (including CF): See Chain (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

needs to be tested for chloride

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308C95	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8/22/23	1345	S	BH-86	1 glass	N/A	013	X	X					X			
	1042		BH-87			014										
	1044		BH-88			015										
	1340		BH-96			016										
	1344		BH-98			017										
	1346		BH-99			018										
	1348		BH-100			019										
	1350		BH-101			020										
	1352		BH-102			021										
	1354		BH-104			022										
	1356		BH-105			023										
	1358		BH-106			024										

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
8/22	1728				8/23/23	800
8/23/23	1900				8/24/23	7:25

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy #400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: nate.Reece@ghd.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☐ Standard ☒ Rush 24hr

Project Name: Delek Matador Produced water

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna Crapo

On Ice: ☑ Yes ☐ No

# of Coolers: 2

Cooler Temp (including CF): See Checklist (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

needs tested for chloride

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308C95	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8-22-23	1400	S	BH-107	1 glass	N/A	025	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
					8/23/23	800
8/23/23	1900				8/24/23	7:25

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 05, 2023

Nate Reece
GHD
6320 Rothway Ste 100
Houston, TX 77040
TEL: (713) 275-3838
FAX:

RE: Delek Matador Produced Water OrderNo.: 2308E55

Dear Nate Reece:

Hall Environmental Analysis Laboratory received 14 sample(s) on 8/26/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2308E55**
Date Reported: **9/5/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-116
Project: Delek Matador Produced Water **Collection Date:** 8/23/2023 7:28:00 AM
Lab ID: 2308E55-001 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/28/2023 11:56:05 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/28/2023 11:56:05 AM
Surr: DNOP	101	69-147		%Rec	1	8/28/2023 11:56:05 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	8/26/2023 6:19:00 PM
Surr: BFB	94.9	15-244		%Rec	1	8/26/2023 6:19:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.022		mg/Kg	1	8/26/2023 6:19:00 PM
Toluene	ND	0.045		mg/Kg	1	8/26/2023 6:19:00 PM
Ethylbenzene	ND	0.045		mg/Kg	1	8/26/2023 6:19:00 PM
Xylenes, Total	ND	0.089		mg/Kg	1	8/26/2023 6:19:00 PM
Surr: 4-Bromofluorobenzene	89.1	39.1-146		%Rec	1	8/26/2023 6:19:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	120	60		mg/Kg	20	8/28/2023 6:49:26 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E55**
Date Reported: **9/5/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-117
Project: Delek Matador Produced Water **Collection Date:** 8/23/2023 7:30:00 AM
Lab ID: 2308E55-002 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	8/28/2023 12:07:00 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/28/2023 12:07:00 PM
Surr: DNOP	98.0	69-147		%Rec	1	8/28/2023 12:07:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	8/26/2023 6:41:00 PM
Surr: BFB	102	15-244		%Rec	1	8/26/2023 6:41:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.022		mg/Kg	1	8/26/2023 6:41:00 PM
Toluene	ND	0.043		mg/Kg	1	8/26/2023 6:41:00 PM
Ethylbenzene	ND	0.043		mg/Kg	1	8/26/2023 6:41:00 PM
Xylenes, Total	ND	0.086		mg/Kg	1	8/26/2023 6:41:00 PM
Surr: 4-Bromofluorobenzene	89.5	39.1-146		%Rec	1	8/26/2023 6:41:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	180	60		mg/Kg	20	8/28/2023 7:01:50 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E55**
Date Reported: **9/5/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-118
Project: Delek Matador Produced Water **Collection Date:** 8/23/2023 7:32:00 AM
Lab ID: 2308E55-003 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/28/2023 12:17:55 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/28/2023 12:17:55 PM
Surr: DNOP	91.8	69-147		%Rec	1	8/28/2023 12:17:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	8/26/2023 7:03:00 PM
Surr: BFB	101	15-244		%Rec	1	8/26/2023 7:03:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.021		mg/Kg	1	8/26/2023 7:03:00 PM
Toluene	ND	0.041		mg/Kg	1	8/26/2023 7:03:00 PM
Ethylbenzene	ND	0.041		mg/Kg	1	8/26/2023 7:03:00 PM
Xylenes, Total	ND	0.083		mg/Kg	1	8/26/2023 7:03:00 PM
Surr: 4-Bromofluorobenzene	89.6	39.1-146		%Rec	1	8/26/2023 7:03:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	330	60		mg/Kg	20	8/28/2023 8:28:42 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E55**
Date Reported: **9/5/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-119
Project: Delek Matador Produced Water **Collection Date:** 8/23/2023 7:34:00 AM
Lab ID: 2308E55-004 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/28/2023 12:28:50 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/28/2023 12:28:50 PM
Surr: DNOP	103	69-147		%Rec	1	8/28/2023 12:28:50 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	8/26/2023 7:24:00 PM
Surr: BFB	96.4	15-244		%Rec	1	8/26/2023 7:24:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.020		mg/Kg	1	8/26/2023 7:24:00 PM
Toluene	ND	0.040		mg/Kg	1	8/26/2023 7:24:00 PM
Ethylbenzene	ND	0.040		mg/Kg	1	8/26/2023 7:24:00 PM
Xylenes, Total	ND	0.081		mg/Kg	1	8/26/2023 7:24:00 PM
Surr: 4-Bromofluorobenzene	90.4	39.1-146		%Rec	1	8/26/2023 7:24:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	310	60		mg/Kg	20	8/28/2023 8:41:06 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E55**
Date Reported: **9/5/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-120
Project: Delek Matador Produced Water **Collection Date:** 8/23/2023 7:36:00 AM
Lab ID: 2308E55-005 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/28/2023 12:50:22 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/28/2023 12:50:22 PM
Surr: DNOP	94.0	69-147		%Rec	1	8/28/2023 12:50:22 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	8/26/2023 7:46:00 PM
Surr: BFB	97.9	15-244		%Rec	1	8/26/2023 7:46:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.021		mg/Kg	1	8/26/2023 7:46:00 PM
Toluene	ND	0.043		mg/Kg	1	8/26/2023 7:46:00 PM
Ethylbenzene	ND	0.043		mg/Kg	1	8/26/2023 7:46:00 PM
Xylenes, Total	ND	0.086		mg/Kg	1	8/26/2023 7:46:00 PM
Surr: 4-Bromofluorobenzene	90.7	39.1-146		%Rec	1	8/26/2023 7:46:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	300	60		mg/Kg	20	8/28/2023 8:53:31 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E55**
Date Reported: **9/5/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-121
Project: Delek Matador Produced Water **Collection Date:** 8/23/2023 7:38:00 AM
Lab ID: 2308E55-006 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/28/2023 1:01:17 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/28/2023 1:01:17 PM
Surr: DNOP	91.6	69-147		%Rec	1	8/28/2023 1:01:17 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	8/26/2023 9:56:00 PM
Surr: BFB	100	15-244		%Rec	1	8/26/2023 9:56:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.022		mg/Kg	1	8/26/2023 9:56:00 PM
Toluene	ND	0.045		mg/Kg	1	8/26/2023 9:56:00 PM
Ethylbenzene	ND	0.045		mg/Kg	1	8/26/2023 9:56:00 PM
Xylenes, Total	ND	0.090		mg/Kg	1	8/26/2023 9:56:00 PM
Surr: 4-Bromofluorobenzene	91.5	39.1-146		%Rec	1	8/26/2023 9:56:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	90	61		mg/Kg	20	8/28/2023 9:05:56 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E55**
Date Reported: **9/5/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-122
Project: Delek Matador Produced Water **Collection Date:** 8/23/2023 7:40:00 AM
Lab ID: 2308E55-007 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/28/2023 1:12:11 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/28/2023 1:12:11 PM
Surr: DNOP	83.6	69-147		%Rec	1	8/28/2023 1:12:11 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	8/26/2023 10:18:00 PM
Surr: BFB	94.9	15-244		%Rec	1	8/26/2023 10:18:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.023		mg/Kg	1	8/26/2023 10:18:00 PM
Toluene	ND	0.045		mg/Kg	1	8/26/2023 10:18:00 PM
Ethylbenzene	ND	0.045		mg/Kg	1	8/26/2023 10:18:00 PM
Xylenes, Total	ND	0.090		mg/Kg	1	8/26/2023 10:18:00 PM
Surr: 4-Bromofluorobenzene	90.6	39.1-146		%Rec	1	8/26/2023 10:18:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	97	60		mg/Kg	20	8/28/2023 9:18:21 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E55**
Date Reported: **9/5/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-123
Project: Delek Matador Produced Water **Collection Date:** 8/23/2023 7:42:00 AM
Lab ID: 2308E55-008 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/28/2023 1:23:04 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/28/2023 1:23:04 PM
Surr: DNOP	91.2	69-147		%Rec	1	8/28/2023 1:23:04 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/26/2023 10:40:00 PM
Surr: BFB	95.9	15-244		%Rec	1	8/26/2023 10:40:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	8/26/2023 10:40:00 PM
Toluene	ND	0.048		mg/Kg	1	8/26/2023 10:40:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/26/2023 10:40:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	8/26/2023 10:40:00 PM
Surr: 4-Bromofluorobenzene	88.9	39.1-146		%Rec	1	8/26/2023 10:40:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	230	60		mg/Kg	20	8/28/2023 9:30:45 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E55**
Date Reported: **9/5/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-124
Project: Delek Matador Produced Water **Collection Date:** 8/23/2023 7:44:00 AM
Lab ID: 2308E55-009 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/28/2023 1:33:58 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/28/2023 1:33:58 PM
Surr: DNOP	89.9	69-147		%Rec	1	8/28/2023 1:33:58 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	8/26/2023 11:02:00 PM
Surr: BFB	93.7	15-244		%Rec	1	8/26/2023 11:02:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.023		mg/Kg	1	8/26/2023 11:02:00 PM
Toluene	ND	0.045		mg/Kg	1	8/26/2023 11:02:00 PM
Ethylbenzene	ND	0.045		mg/Kg	1	8/26/2023 11:02:00 PM
Xylenes, Total	ND	0.091		mg/Kg	1	8/26/2023 11:02:00 PM
Surr: 4-Bromofluorobenzene	90.8	39.1-146		%Rec	1	8/26/2023 11:02:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	160	60		mg/Kg	20	8/28/2023 10:07:59 PM

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2308E55**
Date Reported: **9/5/2023**

CLIENT: GHD **Client Sample ID:** BH-126
Project: Delek Matador Produced Water **Collection Date:** 8/23/2023 7:48:00 AM
Lab ID: 2308E55-010 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/28/2023 1:44:51 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/28/2023 1:44:51 PM
Surr: DNOP	85.9	69-147		%Rec	1	8/28/2023 1:44:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	8/26/2023 11:23:00 PM
Surr: BFB	92.7	15-244		%Rec	1	8/26/2023 11:23:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.021		mg/Kg	1	8/26/2023 11:23:00 PM
Toluene	ND	0.043		mg/Kg	1	8/26/2023 11:23:00 PM
Ethylbenzene	ND	0.043		mg/Kg	1	8/26/2023 11:23:00 PM
Xylenes, Total	ND	0.086		mg/Kg	1	8/26/2023 11:23:00 PM
Surr: 4-Bromofluorobenzene	87.3	39.1-146		%Rec	1	8/26/2023 11:23:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	91	60		mg/Kg	20	8/28/2023 10:20:23 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E55**
Date Reported: **9/5/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-128
Project: Delek Matador Produced Water **Collection Date:** 8/23/2023 7:52:00 AM
Lab ID: 2308E55-011 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	10	9.7		mg/Kg	1	8/28/2023 1:55:43 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/28/2023 1:55:43 PM
Surr: DNOP	84.8	69-147		%Rec	1	8/28/2023 1:55:43 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	8/26/2023 11:45:00 PM
Surr: BFB	95.2	15-244		%Rec	1	8/26/2023 11:45:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.021		mg/Kg	1	8/26/2023 11:45:00 PM
Toluene	ND	0.042		mg/Kg	1	8/26/2023 11:45:00 PM
Ethylbenzene	ND	0.042		mg/Kg	1	8/26/2023 11:45:00 PM
Xylenes, Total	ND	0.085		mg/Kg	1	8/26/2023 11:45:00 PM
Surr: 4-Bromofluorobenzene	89.6	39.1-146		%Rec	1	8/26/2023 11:45:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	270	60		mg/Kg	20	8/28/2023 10:32:48 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E55**
Date Reported: **9/5/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-129
Project: Delek Matador Produced Water **Collection Date:** 8/23/2023 7:54:00 AM
Lab ID: 2308E55-012 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	12	10		mg/Kg	1	8/28/2023 2:06:35 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/28/2023 2:06:35 PM
Surr: DNOP	86.3	69-147		%Rec	1	8/28/2023 2:06:35 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.2		mg/Kg	1	8/27/2023 12:07:00 AM
Surr: BFB	92.2	15-244		%Rec	1	8/27/2023 12:07:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.026		mg/Kg	1	8/27/2023 12:07:00 AM
Toluene	ND	0.052		mg/Kg	1	8/27/2023 12:07:00 AM
Ethylbenzene	ND	0.052		mg/Kg	1	8/27/2023 12:07:00 AM
Xylenes, Total	ND	0.10		mg/Kg	1	8/27/2023 12:07:00 AM
Surr: 4-Bromofluorobenzene	90.2	39.1-146		%Rec	1	8/27/2023 12:07:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	680	60		mg/Kg	20	8/28/2023 10:45:13 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E55**
Date Reported: **9/5/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-91
Project: Delek Matador Produced Water **Collection Date:** 8/23/2023 10:30:00 AM
Lab ID: 2308E55-013 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/28/2023 2:17:25 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/28/2023 2:17:25 PM
Surr: DNOP	93.5	69-147		%Rec	1	8/28/2023 2:17:25 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	8/27/2023 12:28:00 AM
Surr: BFB	99.2	15-244		%Rec	1	8/27/2023 12:28:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.017		mg/Kg	1	8/27/2023 12:28:00 AM
Toluene	ND	0.035		mg/Kg	1	8/27/2023 12:28:00 AM
Ethylbenzene	ND	0.035		mg/Kg	1	8/27/2023 12:28:00 AM
Xylenes, Total	ND	0.070		mg/Kg	1	8/27/2023 12:28:00 AM
Surr: 4-Bromofluorobenzene	90.5	39.1-146		%Rec	1	8/27/2023 12:28:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	430	60		mg/Kg	20	8/28/2023 10:57:37 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E55**
Date Reported: **9/5/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-92
Project: Delek Matador Produced Water **Collection Date:** 8/23/2023 10:32:00 AM
Lab ID: 2308E55-014 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/28/2023 2:28:16 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/28/2023 2:28:16 PM
Surr: DNOP	99.4	69-147		%Rec	1	8/28/2023 2:28:16 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	8/27/2023 12:50:00 AM
Surr: BFB	94.3	15-244		%Rec	1	8/27/2023 12:50:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.021		mg/Kg	1	8/27/2023 12:50:00 AM
Toluene	ND	0.043		mg/Kg	1	8/27/2023 12:50:00 AM
Ethylbenzene	ND	0.043		mg/Kg	1	8/27/2023 12:50:00 AM
Xylenes, Total	ND	0.085		mg/Kg	1	8/27/2023 12:50:00 AM
Surr: 4-Bromofluorobenzene	90.0	39.1-146		%Rec	1	8/27/2023 12:50:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	470	60		mg/Kg	20	8/28/2023 11:10:01 PM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308E55**

05-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **MB-77132**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **77132**	RunNo: **99300**
Prep Date: **8/28/2023**	Analysis Date: **8/28/2023**	SeqNo: **3622580** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77132**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **77132**	RunNo: **99300**
Prep Date: **8/28/2023**	Analysis Date: **8/28/2023**	SeqNo: **3622581** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.6	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308E55**

05-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **LCS-77121**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **77121**	RunNo: **99274**
Prep Date: **8/28/2023**	Analysis Date: **8/28/2023**	SeqNo: **3621136** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	101	61.9	130			
Surr: DNOP	4.5		5.000		90.3	69	147			

Sample ID: **MB-77121**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **77121**	RunNo: **99274**
Prep Date: **8/28/2023**	Analysis Date: **8/28/2023**	SeqNo: **3621137** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.8		10.00		97.8	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308E55**

05-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/26/2023**	SeqNo: **3620622** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.9	70	130			
Surr: BFB	2200		1000		218	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **R99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/26/2023**	SeqNo: **3620623** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	990		1000		99.3	15	244			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308E55**

05-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **BS99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/26/2023**	SeqNo: **3620694** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	94.6	70	130			
Toluene	0.96	0.050	1.000	0	96.1	70	130			
Ethylbenzene	0.99	0.050	1.000	0	98.8	70	130			
Xylenes, Total	3.0	0.10	3.000	0	99.4	70	130			
Surr: 4-Bromofluorobenzene	0.96		1.000		96.4	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **BS99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/26/2023**	SeqNo: **3620695** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.95		1.000		94.6	39.1	146			

Qualifiers:

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

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: GHD | Work Order Number: 2308E55 | RcptNo: 1

Received By: Cheyenne Cason 8/26/2023 8:25:00 AM

Completed By: Cheyenne Cason 8/26/2023 9:01:33 AM

Reviewed By: Jacqueline Rodriguez 8.26.23

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: 8/26/23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.7	Good	Not Present	Morty		
2	3.7	Good	Not Present	Morty		

Received by OCD: 12/4/2024 10:43:20 AM

Released to Imaging: 3/12/2025 11:29:45 AM

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy #400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: nate.Reece@ghd.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☐ Standard ☒ Rush 24hr

Project Name: Delek Matador Produced water

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna CraPO

On Ice: ☒ Yes ☐ No Monty

# of Coolers: 2 4.9-0.2=4.7

Cooler Temp(including CF): 3.9-0.2=3.7 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

needs tested to be for chloride

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308ESS	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8-23-23	0728	S	BH-116	1 Glass	N/A	001	X	X					X			
	0730		BH-117			002										
	0732		BH-118			003										
	0734		BH-119			004										
	0736		BH-120			005										
	0738		BH-121			006										
	0740		BH-122			007										
	0742		BH-123			008										
	0744		BH-124			009										
	0748		BH-126			010										
	0752		BH-128			011										
↓	0754	↓	BH-129	↓	↓	012	↓	↓					↓			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
8/23	1710				8/25/23	715
8/25/23	1900		CMC Comm		8/26/23	0825

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy
#400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: nate.Reece@ghd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 24hr

Project Name: DeleK Matador Produced water

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna CraPO

On Ice: ☒ Yes ☐ No

# of Coolers: 2

Cooler Temp (including CF): See first page (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

needs tested to be for Chloride

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308 E55	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8-23-23	1030	S	BH-91	1 glass	N/A	013	X	X					X			
↓	1032	↓	BH-92	↓	↓	014	↓	↓					↓			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
8/23	1710				8/25/23	715
8/25/23	1900				Date	Time
			Cmc Cuervo		8/26/23	0825

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 31, 2023

Nate Reece
GHD
6320 Rothway Ste 100
Houston, TX 77040
TEL: (713) 275-3838
FAX:

RE: Delek Matador Produced Water OrderNo.: 2308E56

Dear Nate Reece:

Hall Environmental Analysis Laboratory received 28 sample(s) on 8/26/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-108
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 7:30:00 AM
Lab ID: 2308E56-001 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/28/2023 6:00:55 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/28/2023 6:00:55 PM
Surr: DNOP	139	69-147		%Rec	1	8/28/2023 6:00:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	8/27/2023 1:12:00 AM
Surr: BFB	93.8	15-244		%Rec	1	8/27/2023 1:12:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.022		mg/Kg	1	8/27/2023 1:12:00 AM
Toluene	ND	0.044		mg/Kg	1	8/27/2023 1:12:00 AM
Ethylbenzene	ND	0.044		mg/Kg	1	8/27/2023 1:12:00 AM
Xylenes, Total	ND	0.088		mg/Kg	1	8/27/2023 1:12:00 AM
Surr: 4-Bromofluorobenzene	90.5	39.1-146		%Rec	1	8/27/2023 1:12:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	160	60		mg/Kg	20	8/28/2023 11:22:26 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-109
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 7:32:00 AM
Lab ID: 2308E56-002 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/28/2023 1:00:44 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/28/2023 1:00:44 PM
Surr: DNOP	97.7	69-147		%Rec	1	8/28/2023 1:00:44 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/27/2023 3:22:00 AM
Surr: BFB	96.0	15-244		%Rec	1	8/27/2023 3:22:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.023		mg/Kg	1	8/27/2023 3:22:00 AM
Toluene	ND	0.047		mg/Kg	1	8/27/2023 3:22:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	8/27/2023 3:22:00 AM
Xylenes, Total	ND	0.093		mg/Kg	1	8/27/2023 3:22:00 AM
Surr: 4-Bromofluorobenzene	90.0	39.1-146		%Rec	1	8/27/2023 3:22:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	850	60		mg/Kg	20	8/28/2023 11:34:50 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-97
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 7:34:00 AM
Lab ID: 2308E56-003 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/28/2023 1:24:33 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/28/2023 1:24:33 PM
Surr: DNOP	100	69-147		%Rec	1	8/28/2023 1:24:33 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	8/27/2023 3:44:00 AM
Surr: BFB	92.5	15-244		%Rec	1	8/27/2023 3:44:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.022		mg/Kg	1	8/27/2023 3:44:00 AM
Toluene	ND	0.044		mg/Kg	1	8/27/2023 3:44:00 AM
Ethylbenzene	ND	0.044		mg/Kg	1	8/27/2023 3:44:00 AM
Xylenes, Total	ND	0.088		mg/Kg	1	8/27/2023 3:44:00 AM
Surr: 4-Bromofluorobenzene	88.6	39.1-146		%Rec	1	8/27/2023 3:44:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	330	59		mg/Kg	20	8/28/2023 11:47:14 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-103
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 7:36:00 AM
Lab ID: 2308E56-004 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/28/2023 1:48:22 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/28/2023 1:48:22 PM
Surr: DNOP	100	69-147		%Rec	1	8/28/2023 1:48:22 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	8/27/2023 4:05:00 AM
Surr: BFB	94.6	15-244		%Rec	1	8/27/2023 4:05:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.020		mg/Kg	1	8/27/2023 4:05:00 AM
Toluene	ND	0.040		mg/Kg	1	8/27/2023 4:05:00 AM
Ethylbenzene	ND	0.040		mg/Kg	1	8/27/2023 4:05:00 AM
Xylenes, Total	ND	0.080		mg/Kg	1	8/27/2023 4:05:00 AM
Surr: 4-Bromofluorobenzene	89.2	39.1-146		%Rec	1	8/27/2023 4:05:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	620	60		mg/Kg	20	8/28/2023 11:59:39 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-19a
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 7:38:00 AM
Lab ID: 2308E56-005 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/28/2023 2:12:13 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/28/2023 2:12:13 PM
Surr: DNOP	99.8	69-147		%Rec	1	8/28/2023 2:12:13 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	8/27/2023 4:27:00 AM
Surr: BFB	99.1	15-244		%Rec	1	8/27/2023 4:27:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.022		mg/Kg	1	8/27/2023 4:27:00 AM
Toluene	ND	0.044		mg/Kg	1	8/27/2023 4:27:00 AM
Ethylbenzene	ND	0.044		mg/Kg	1	8/27/2023 4:27:00 AM
Xylenes, Total	ND	0.089		mg/Kg	1	8/27/2023 4:27:00 AM
Surr: 4-Bromofluorobenzene	89.9	39.1-146		%Rec	1	8/27/2023 4:27:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	220	60		mg/Kg	20	8/29/2023 12:36:53 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-193
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 7:40:00 AM
Lab ID: 2308E56-006 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/28/2023 2:36:07 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/28/2023 2:36:07 PM
Surr: DNOP	101	69-147		%Rec	1	8/28/2023 2:36:07 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	8/27/2023 4:49:00 AM
Surr: BFB	99.8	15-244		%Rec	1	8/27/2023 4:49:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.020		mg/Kg	1	8/27/2023 4:49:00 AM
Toluene	ND	0.040		mg/Kg	1	8/27/2023 4:49:00 AM
Ethylbenzene	ND	0.040		mg/Kg	1	8/27/2023 4:49:00 AM
Xylenes, Total	ND	0.080		mg/Kg	1	8/27/2023 4:49:00 AM
Surr: 4-Bromofluorobenzene	91.7	39.1-146		%Rec	1	8/27/2023 4:49:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	200	61		mg/Kg	20	8/29/2023 12:49:18 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-141
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 11:40:00 AM
Lab ID: 2308E56-007 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/28/2023 3:00:01 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/28/2023 3:00:01 PM
Surr: DNOP	102	69-147		%Rec	1	8/28/2023 3:00:01 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	8/27/2023 5:11:00 AM
Surr: BFB	96.7	15-244		%Rec	1	8/27/2023 5:11:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.023		mg/Kg	1	8/27/2023 5:11:00 AM
Toluene	ND	0.045		mg/Kg	1	8/27/2023 5:11:00 AM
Ethylbenzene	ND	0.045		mg/Kg	1	8/27/2023 5:11:00 AM
Xylenes, Total	ND	0.090		mg/Kg	1	8/27/2023 5:11:00 AM
Surr: 4-Bromofluorobenzene	91.6	39.1-146		%Rec	1	8/27/2023 5:11:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	580	60		mg/Kg	20	8/28/2023 2:17:09 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-142
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 11:50:00 AM
Lab ID: 2308E56-008 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/28/2023 3:23:54 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/28/2023 3:23:54 PM
Surr: DNOP	101	69-147		%Rec	1	8/28/2023 3:23:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	8/27/2023 5:32:00 AM
Surr: BFB	95.9	15-244		%Rec	1	8/27/2023 5:32:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.021		mg/Kg	1	8/27/2023 5:32:00 AM
Toluene	ND	0.042		mg/Kg	1	8/27/2023 5:32:00 AM
Ethylbenzene	ND	0.042		mg/Kg	1	8/27/2023 5:32:00 AM
Xylenes, Total	ND	0.085		mg/Kg	1	8/27/2023 5:32:00 AM
Surr: 4-Bromofluorobenzene	89.7	39.1-146		%Rec	1	8/27/2023 5:32:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	550	60		mg/Kg	20	8/28/2023 2:54:23 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-143
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 12:50:00 PM
Lab ID: 2308E56-009 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/28/2023 3:47:48 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/28/2023 3:47:48 PM
Surr: DNOP	106	69-147		%Rec	1	8/28/2023 3:47:48 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.2		mg/Kg	1	8/27/2023 5:54:00 AM
Surr: BFB	97.4	15-244		%Rec	1	8/27/2023 5:54:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.026		mg/Kg	1	8/27/2023 5:54:00 AM
Toluene	ND	0.052		mg/Kg	1	8/27/2023 5:54:00 AM
Ethylbenzene	ND	0.052		mg/Kg	1	8/27/2023 5:54:00 AM
Xylenes, Total	ND	0.10		mg/Kg	1	8/27/2023 5:54:00 AM
Surr: 4-Bromofluorobenzene	91.1	39.1-146		%Rec	1	8/27/2023 5:54:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	510	60		mg/Kg	20	8/28/2023 3:31:35 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** SW-7
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 12:44:00 PM
Lab ID: 2308E56-010 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/28/2023 4:11:43 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/28/2023 4:11:43 PM
Surr: DNOP	89.8	69-147		%Rec	1	8/28/2023 4:11:43 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.2		mg/Kg	1	8/27/2023 6:16:00 AM
Surr: BFB	96.7	15-244		%Rec	1	8/27/2023 6:16:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.026		mg/Kg	1	8/27/2023 6:16:00 AM
Toluene	ND	0.052		mg/Kg	1	8/27/2023 6:16:00 AM
Ethylbenzene	ND	0.052		mg/Kg	1	8/27/2023 6:16:00 AM
Xylenes, Total	ND	0.10		mg/Kg	1	8/27/2023 6:16:00 AM
Surr: 4-Bromofluorobenzene	90.0	39.1-146		%Rec	1	8/27/2023 6:16:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	600	60		mg/Kg	20	8/28/2023 3:43:59 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** SW-8
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 12:46:00 PM
Lab ID: 2308E56-011 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/28/2023 4:35:50 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/28/2023 4:35:50 PM
Surr: DNOP	80.2	69-147		%Rec	1	8/28/2023 4:35:50 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	6.3		mg/Kg	1	8/27/2023 6:37:00 AM
Surr: BFB	94.6	15-244		%Rec	1	8/27/2023 6:37:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.032		mg/Kg	1	8/27/2023 6:37:00 AM
Toluene	ND	0.063		mg/Kg	1	8/27/2023 6:37:00 AM
Ethylbenzene	ND	0.063		mg/Kg	1	8/27/2023 6:37:00 AM
Xylenes, Total	ND	0.13		mg/Kg	1	8/27/2023 6:37:00 AM
Surr: 4-Bromofluorobenzene	89.5	39.1-146		%Rec	1	8/27/2023 6:37:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	680	60		mg/Kg	20	8/28/2023 4:21:12 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** SW-9
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 12:48:00 PM
Lab ID: 2308E56-012 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/28/2023 5:24:31 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/28/2023 5:24:31 PM
Surr: DNOP	88.2	69-147		%Rec	1	8/28/2023 5:24:31 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/27/2023 8:47:00 AM
Surr: BFB	105	15-244		%Rec	1	8/27/2023 8:47:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.023		mg/Kg	1	8/27/2023 8:47:00 AM
Toluene	ND	0.046		mg/Kg	1	8/27/2023 8:47:00 AM
Ethylbenzene	ND	0.046		mg/Kg	1	8/27/2023 8:47:00 AM
Xylenes, Total	ND	0.092		mg/Kg	1	8/27/2023 8:47:00 AM
Surr: 4-Bromofluorobenzene	92.7	39.1-146		%Rec	1	8/27/2023 8:47:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	2600	150		mg/Kg	50	8/29/2023 10:32:04 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-110
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 2:10:00 PM
Lab ID: 2308E56-013 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/28/2023 5:48:55 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/28/2023 5:48:55 PM
Surr: DNOP	81.6	69-147		%Rec	1	8/28/2023 5:48:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/27/2023 9:09:00 AM
Surr: BFB	93.6	15-244		%Rec	1	8/27/2023 9:09:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.023		mg/Kg	1	8/27/2023 9:09:00 AM
Toluene	ND	0.047		mg/Kg	1	8/27/2023 9:09:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	8/27/2023 9:09:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	8/27/2023 9:09:00 AM
Surr: 4-Bromofluorobenzene	88.9	39.1-146		%Rec	1	8/27/2023 9:09:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	500	60		mg/Kg	20	8/28/2023 4:46:01 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-111
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 2:12:00 PM
Lab ID: 2308E56-014 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	8/28/2023 6:13:35 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/28/2023 6:13:35 PM
Surr: DNOP	83.9	69-147		%Rec	1	8/28/2023 6:13:35 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	8/27/2023 9:30:00 AM
Surr: BFB	97.5	15-244		%Rec	1	8/27/2023 9:30:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.022		mg/Kg	1	8/27/2023 9:30:00 AM
Toluene	ND	0.043		mg/Kg	1	8/27/2023 9:30:00 AM
Ethylbenzene	ND	0.043		mg/Kg	1	8/27/2023 9:30:00 AM
Xylenes, Total	ND	0.086		mg/Kg	1	8/27/2023 9:30:00 AM
Surr: 4-Bromofluorobenzene	90.5	39.1-146		%Rec	1	8/27/2023 9:30:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	410	60		mg/Kg	20	8/28/2023 4:58:26 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-112
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 2:14:00 PM
Lab ID: 2308E56-015 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/28/2023 6:38:20 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/28/2023 6:38:20 PM
Surr: DNOP	84.6	69-147		%Rec	1	8/28/2023 6:38:20 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/27/2023 9:52:00 AM
Surr: BFB	97.6	15-244		%Rec	1	8/27/2023 9:52:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.020		mg/Kg	1	8/27/2023 9:52:00 AM
Toluene	ND	0.039		mg/Kg	1	8/27/2023 9:52:00 AM
Ethylbenzene	ND	0.039		mg/Kg	1	8/27/2023 9:52:00 AM
Xylenes, Total	ND	0.079		mg/Kg	1	8/27/2023 9:52:00 AM
Surr: 4-Bromofluorobenzene	90.7	39.1-146		%Rec	1	8/27/2023 9:52:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	600	59		mg/Kg	20	8/28/2023 5:10:50 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-113
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 2:16:00 PM
Lab ID: 2308E56-016 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	8/28/2023 7:03:03 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/28/2023 7:03:03 PM
Surr: DNOP	85.1	69-147		%Rec	1	8/28/2023 7:03:03 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	8/27/2023 10:14:00 AM
Surr: BFB	102	15-244		%Rec	1	8/27/2023 10:14:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.022		mg/Kg	1	8/27/2023 10:14:00 AM
Toluene	ND	0.045		mg/Kg	1	8/27/2023 10:14:00 AM
Ethylbenzene	ND	0.045		mg/Kg	1	8/27/2023 10:14:00 AM
Xylenes, Total	ND	0.090		mg/Kg	1	8/27/2023 10:14:00 AM
Surr: 4-Bromofluorobenzene	90.9	39.1-146		%Rec	1	8/27/2023 10:14:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	630	60		mg/Kg	20	8/28/2023 5:23:14 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-114
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 2:18:00 PM
Lab ID: 2308E56-017 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/28/2023 7:27:46 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/28/2023 7:27:46 PM
Surr: DNOP	80.6	69-147		%Rec	1	8/28/2023 7:27:46 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	6.4		mg/Kg	1	8/27/2023 10:36:00 AM
Surr: BFB	97.0	15-244		%Rec	1	8/27/2023 10:36:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.032		mg/Kg	1	8/27/2023 10:36:00 AM
Toluene	ND	0.064		mg/Kg	1	8/27/2023 10:36:00 AM
Ethylbenzene	ND	0.064		mg/Kg	1	8/27/2023 10:36:00 AM
Xylenes, Total	ND	0.13		mg/Kg	1	8/27/2023 10:36:00 AM
Surr: 4-Bromofluorobenzene	91.1	39.1-146		%Rec	1	8/27/2023 10:36:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	230	60		mg/Kg	20	8/28/2023 5:35:39 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-115
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 2:20:00 PM
Lab ID: 2308E56-018 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/28/2023 7:52:21 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/28/2023 7:52:21 PM
Surr: DNOP	84.2	69-147		%Rec	1	8/28/2023 7:52:21 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	8/27/2023 10:58:00 AM
Surr: BFB	94.2	15-244		%Rec	1	8/27/2023 10:58:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.021		mg/Kg	1	8/27/2023 10:58:00 AM
Toluene	ND	0.042		mg/Kg	1	8/27/2023 10:58:00 AM
Ethylbenzene	ND	0.042		mg/Kg	1	8/27/2023 10:58:00 AM
Xylenes, Total	ND	0.083		mg/Kg	1	8/27/2023 10:58:00 AM
Surr: 4-Bromofluorobenzene	91.0	39.1-146		%Rec	1	8/27/2023 10:58:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	450	60		mg/Kg	20	8/28/2023 5:48:03 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-125
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 2:22:00 PM
Lab ID: 2308E56-019 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/28/2023 8:17:05 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/28/2023 8:17:05 PM
Surr: DNOP	84.6	69-147		%Rec	1	8/28/2023 8:17:05 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	8/27/2023 11:19:00 AM
Surr: BFB	95.9	15-244		%Rec	1	8/27/2023 11:19:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.021		mg/Kg	1	8/27/2023 11:19:00 AM
Toluene	ND	0.041		mg/Kg	1	8/27/2023 11:19:00 AM
Ethylbenzene	ND	0.041		mg/Kg	1	8/27/2023 11:19:00 AM
Xylenes, Total	ND	0.083		mg/Kg	1	8/27/2023 11:19:00 AM
Surr: 4-Bromofluorobenzene	90.0	39.1-146		%Rec	1	8/27/2023 11:19:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	100	60		mg/Kg	20	8/28/2023 6:00:28 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-127
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 2:24:00 PM
Lab ID: 2308E56-020 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/28/2023 8:41:44 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/28/2023 8:41:44 PM
Surr: DNOP	75.7	69-147		%Rec	1	8/28/2023 8:41:44 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	8/27/2023 11:41:00 AM
Surr: BFB	103	15-244		%Rec	1	8/27/2023 11:41:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.020		mg/Kg	1	8/27/2023 11:41:00 AM
Toluene	ND	0.040		mg/Kg	1	8/27/2023 11:41:00 AM
Ethylbenzene	ND	0.040		mg/Kg	1	8/27/2023 11:41:00 AM
Xylenes, Total	ND	0.079		mg/Kg	1	8/27/2023 11:41:00 AM
Surr: 4-Bromofluorobenzene	89.9	39.1-146		%Rec	1	8/27/2023 11:41:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	8/28/2023 6:12:52 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-130
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 2:26:00 PM
Lab ID: 2308E56-021 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/28/2023 9:06:20 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/28/2023 9:06:20 PM
Surr: DNOP	82.2	69-147		%Rec	1	8/28/2023 9:06:20 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	8/27/2023 12:03:00 PM
Surr: BFB	94.9	15-244		%Rec	1	8/27/2023 12:03:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.021		mg/Kg	1	8/27/2023 12:03:00 PM
Toluene	ND	0.042		mg/Kg	1	8/27/2023 12:03:00 PM
Ethylbenzene	ND	0.042		mg/Kg	1	8/27/2023 12:03:00 PM
Xylenes, Total	ND	0.084		mg/Kg	1	8/27/2023 12:03:00 PM
Surr: 4-Bromofluorobenzene	89.8	39.1-146		%Rec	1	8/27/2023 12:03:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	560	60		mg/Kg	20	8/28/2023 6:50:06 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-131
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 2:28:00 PM
Lab ID: 2308E56-022 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/28/2023 11:33:56 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/28/2023 11:33:56 PM
Surr: DNOP	96.1	69-147		%Rec	1	8/28/2023 11:33:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/27/2023 2:13:00 PM
Surr: BFB	101	15-244		%Rec	1	8/27/2023 2:13:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.020		mg/Kg	1	8/27/2023 2:13:00 PM
Toluene	ND	0.039		mg/Kg	1	8/27/2023 2:13:00 PM
Ethylbenzene	ND	0.039		mg/Kg	1	8/27/2023 2:13:00 PM
Xylenes, Total	ND	0.079		mg/Kg	1	8/27/2023 2:13:00 PM
Surr: 4-Bromofluorobenzene	92.2	39.1-146		%Rec	1	8/27/2023 2:13:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	280	60		mg/Kg	20	8/28/2023 7:02:31 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-132
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 4:00:00 PM
Lab ID: 2308E56-023 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/28/2023 11:58:36 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/28/2023 11:58:36 PM
Surr: DNOP	95.9	69-147		%Rec	1	8/28/2023 11:58:36 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	8/27/2023 2:35:00 PM
Surr: BFB	96.6	15-244		%Rec	1	8/27/2023 2:35:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.022		mg/Kg	1	8/27/2023 2:35:00 PM
Toluene	ND	0.044		mg/Kg	1	8/27/2023 2:35:00 PM
Ethylbenzene	ND	0.044		mg/Kg	1	8/27/2023 2:35:00 PM
Xylenes, Total	ND	0.088		mg/Kg	1	8/27/2023 2:35:00 PM
Surr: 4-Bromofluorobenzene	91.5	39.1-146		%Rec	1	8/27/2023 2:35:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	95	60		mg/Kg	20	8/28/2023 7:14:56 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-133
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 4:02:00 PM
Lab ID: 2308E56-024 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/29/2023 12:23:09 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/29/2023 12:23:09 AM
Surr: DNOP	97.7	69-147		%Rec	1	8/29/2023 12:23:09 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	6.2		mg/Kg	1	8/27/2023 2:57:00 PM
Surr: BFB	98.4	15-244		%Rec	1	8/27/2023 2:57:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.031		mg/Kg	1	8/27/2023 2:57:00 PM
Toluene	ND	0.062		mg/Kg	1	8/27/2023 2:57:00 PM
Ethylbenzene	ND	0.062		mg/Kg	1	8/27/2023 2:57:00 PM
Xylenes, Total	ND	0.12		mg/Kg	1	8/27/2023 2:57:00 PM
Surr: 4-Bromofluorobenzene	92.3	39.1-146		%Rec	1	8/27/2023 2:57:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	630	60		mg/Kg	20	8/28/2023 7:27:21 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-134
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 4:04:00 PM
Lab ID: 2308E56-025 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/29/2023 12:47:46 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/29/2023 12:47:46 AM
Surr: DNOP	99.4	69-147		%Rec	1	8/29/2023 12:47:46 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	8/27/2023 3:19:00 PM
Surr: BFB	97.8	15-244		%Rec	1	8/27/2023 3:19:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.023		mg/Kg	1	8/27/2023 3:19:00 PM
Toluene	ND	0.045		mg/Kg	1	8/27/2023 3:19:00 PM
Ethylbenzene	ND	0.045		mg/Kg	1	8/27/2023 3:19:00 PM
Xylenes, Total	ND	0.090		mg/Kg	1	8/27/2023 3:19:00 PM
Surr: 4-Bromofluorobenzene	91.6	39.1-146		%Rec	1	8/27/2023 3:19:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	490	60		mg/Kg	20	8/28/2023 7:39:44 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-137
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 4:10:00 PM
Lab ID: 2308E56-026 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/29/2023 1:12:20 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/29/2023 1:12:20 AM
Surr: DNOP	100	69-147		%Rec	1	8/29/2023 1:12:20 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.1		mg/Kg	1	8/27/2023 3:41:00 PM
Surr: BFB	100	15-244		%Rec	1	8/27/2023 3:41:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.026		mg/Kg	1	8/27/2023 3:41:00 PM
Toluene	ND	0.051		mg/Kg	1	8/27/2023 3:41:00 PM
Ethylbenzene	ND	0.051		mg/Kg	1	8/27/2023 3:41:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	8/27/2023 3:41:00 PM
Surr: 4-Bromofluorobenzene	92.1	39.1-146		%Rec	1	8/27/2023 3:41:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	460	60		mg/Kg	20	8/28/2023 7:52:09 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-139
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 4:14:00 PM
Lab ID: 2308E56-027 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/29/2023 1:36:53 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/29/2023 1:36:53 AM
Surr: DNOP	100	69-147		%Rec	1	8/29/2023 1:36:53 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/27/2023 4:03:00 PM
Surr: BFB	101	15-244		%Rec	1	8/27/2023 4:03:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.023		mg/Kg	1	8/27/2023 4:03:00 PM
Toluene	ND	0.047		mg/Kg	1	8/27/2023 4:03:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/27/2023 4:03:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	8/27/2023 4:03:00 PM
Surr: 4-Bromofluorobenzene	92.0	39.1-146		%Rec	1	8/27/2023 4:03:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	440	60		mg/Kg	20	8/29/2023 11:35:08 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308E56**
Date Reported: **8/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-140
Project: Delek Matador Produced Water **Collection Date:** 8/24/2023 4:16:00 PM
Lab ID: 2308E56-028 **Matrix:** MEOH (SOIL) **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/29/2023 2:01:36 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/29/2023 2:01:36 AM
Surr: DNOP	103	69-147		%Rec	1	8/29/2023 2:01:36 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.5		mg/Kg	1	8/27/2023 4:24:00 PM
Surr: BFB	101	15-244		%Rec	1	8/27/2023 4:24:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.027		mg/Kg	1	8/27/2023 4:24:00 PM
Toluene	ND	0.055		mg/Kg	1	8/27/2023 4:24:00 PM
Ethylbenzene	ND	0.055		mg/Kg	1	8/27/2023 4:24:00 PM
Xylenes, Total	ND	0.11		mg/Kg	1	8/27/2023 4:24:00 PM
Surr: 4-Bromofluorobenzene	91.9	39.1-146		%Rec	1	8/27/2023 4:24:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	270	60		mg/Kg	20	8/29/2023 11:47:33 AM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308E56**

31-Aug-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **MB-77133**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**								
Client ID: **PBS**	Batch ID: **77133**	RunNo: **99294**								
Prep Date: **8/28/2023**	Analysis Date: **8/28/2023**	SeqNo: **3622382**	Units: **mg/Kg**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77133**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**								
Client ID: **LCSS**	Batch ID: **77133**	RunNo: **99294**								
Prep Date: **8/28/2023**	Analysis Date: **8/28/2023**	SeqNo: **3622383**	Units: **mg/Kg**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.0	90	110			

Sample ID: **MB-77132**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**								
Client ID: **PBS**	Batch ID: **77132**	RunNo: **99300**								
Prep Date: **8/28/2023**	Analysis Date: **8/28/2023**	SeqNo: **3622580**	Units: **mg/Kg**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77132**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**								
Client ID: **LCSS**	Batch ID: **77132**	RunNo: **99300**								
Prep Date: **8/28/2023**	Analysis Date: **8/28/2023**	SeqNo: **3622581**	Units: **mg/Kg**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.6	90	110			

Sample ID: **MB-77163**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**								
Client ID: **PBS**	Batch ID: **77163**	RunNo: **99333**								
Prep Date: **8/29/2023**	Analysis Date: **8/29/2023**	SeqNo: **3624301**	Units: **mg/Kg**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77163**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**								
Client ID: **LCSS**	Batch ID: **77163**	RunNo: **99333**								
Prep Date: **8/29/2023**	Analysis Date: **8/29/2023**	SeqNo: **3624302**	Units: **mg/Kg**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.6	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308E56**

31-Aug-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **LCS-77121**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **77121**	RunNo: **99274**
Prep Date: **8/28/2023**	Analysis Date: **8/28/2023**	SeqNo: **3621136** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	101	61.9	130			
Surr: DNOP	4.5		5.000		90.3	69	147			

Sample ID: **MB-77121**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **77121**	RunNo: **99274**
Prep Date: **8/28/2023**	Analysis Date: **8/28/2023**	SeqNo: **3621137** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.8		10.00		97.8	69	147			

Sample ID: **2308E56-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH-108**	Batch ID: **77121**	RunNo: **99274**
Prep Date: **8/28/2023**	Analysis Date: **8/28/2023**	SeqNo: **3622733** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	9.7	48.50	0	110	54.2	135			
Surr: DNOP	5.2		4.850		108	69	147			

Sample ID: **2308E56-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH-108**	Batch ID: **77121**	RunNo: **99274**
Prep Date: **8/28/2023**	Analysis Date: **8/28/2023**	SeqNo: **3622734** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	9.7	48.45	0	100	54.2	135	9.55	29.2	
Surr: DNOP	4.6		4.845		95.4	69	147	0	0	

Sample ID: **MB-77123**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **77123**	RunNo: **99303**
Prep Date: **8/28/2023**	Analysis Date: **8/28/2023**	SeqNo: **3622759** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.4		10.00		93.7	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308E56**

31-Aug-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **LCS-77123**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **77123**	RunNo: **99303**
Prep Date: **8/28/2023**	Analysis Date: **8/28/2023**	SeqNo: **3622760** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	88.1	61.9	130			
Surr: DNOP	4.3		5.000		85.6	69	147			

Sample ID: **2308E56-021AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH-130**	Batch ID: **77123**	RunNo: **99303**
Prep Date: **8/28/2023**	Analysis Date: **8/28/2023**	SeqNo: **3622782** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.6	48.17	0	90.8	54.2	135			
Surr: DNOP	3.9		4.817		81.1	69	147			

Sample ID: **2308E56-021AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH-130**	Batch ID: **77123**	RunNo: **99303**
Prep Date: **8/28/2023**	Analysis Date: **8/28/2023**	SeqNo: **3622783** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.7	48.40	0	89.9	54.2	135	0.562	29.2	
Surr: DNOP	3.8		4.840		79.3	69	147	0	0	

Sample ID: **MB-77124**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **77124**	RunNo: **99303**
Prep Date: **8/28/2023**	Analysis Date: **8/28/2023**	SeqNo: **3622785** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		99.8	69	147			

Sample ID: **LCS-77124**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **77124**	RunNo: **99303**
Prep Date: **8/28/2023**	Analysis Date: **8/28/2023**	SeqNo: **3622786** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	88.6	61.9	130			
Surr: DNOP	3.9		5.000		77.4	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308E56**

31-Aug-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **2308E56-028AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH-140**	Batch ID: **77124**	RunNo: **99303**
Prep Date: **8/28/2023**	Analysis Date: **8/29/2023**	SeqNo: **3622794** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	9.3	46.64	0	91.4	54.2	135			
Surr: DNOP	3.9		4.664		83.4	69	147			

Sample ID: **2308E56-028AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH-140**	Batch ID: **77124**	RunNo: **99303**
Prep Date: **8/28/2023**	Analysis Date: **8/29/2023**	SeqNo: **3622795** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	9.9	49.55	0	90.9	54.2	135	5.45	29.2	
Surr: DNOP	4.1		4.955		83.6	69	147	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308E56**

31-Aug-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/26/2023**	SeqNo: **3620622** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.9	70	130			
Surr: BFB	2200		1000		218	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **R99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/26/2023**	SeqNo: **3620623** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	990		1000		99.3	15	244			

Sample ID: **2.5ug gro lcs 2**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **GS99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/27/2023**	SeqNo: **3620632** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.2	70	130			
Surr: BFB	2200		1000		216	15	244			

Sample ID: **mb 2**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **GS99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/27/2023**	SeqNo: **3620633** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	990		1000		98.7	15	244			

Sample ID: **2308E56-002ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH-109**	Batch ID: **GS99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/27/2023**	SeqNo: **3620644** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.7	23.36	0	91.7	70	130			
Surr: BFB	1800		934.6		196	15	244			

Sample ID: **2308E56-002amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH-109**	Batch ID: **GS99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/27/2023**	SeqNo: **3620645** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308E56**

31-Aug-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **2308E56-002amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH-109**	Batch ID: **GS99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/27/2023**	SeqNo: **3620645** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.7	23.36	0	90.2	70	130	1.63	20	
Surr: BFB	1900		934.6		204	15	244	0	0	

Sample ID: **2.5ug gro lcs 3**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **G99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/27/2023**	SeqNo: **3620656** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	92.0	70	130			
Surr: BFB	2200		1000		217	15	244			

Sample ID: **mb 3**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **G99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/27/2023**	SeqNo: **3620657** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		104	15	244			

Sample ID: **2308E56-022ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH-131**	Batch ID: **G99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/27/2023**	SeqNo: **3620665** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	3.9	19.64	0	93.0	70	130			
Surr: BFB	1700		785.5		214	15	244			

Sample ID: **2308E56-022amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH-131**	Batch ID: **G99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/27/2023**	SeqNo: **3620666** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	3.9	19.64	0	89.2	70	130	4.08	20	
Surr: BFB	1600		785.5		209	15	244	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308E56**

31-Aug-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **BS99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/26/2023**	SeqNo: **3620694** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	94.6	70	130			
Toluene	0.96	0.050	1.000	0	96.1	70	130			
Ethylbenzene	0.99	0.050	1.000	0	98.8	70	130			
Xylenes, Total	3.0	0.10	3.000	0	99.4	70	130			
Surr: 4-Bromofluorobenzene	0.96		1.000		96.4	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **BS99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/26/2023**	SeqNo: **3620695** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.95		1.000		94.6	39.1	146			

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **BSS99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/27/2023**	SeqNo: **3620718** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	101	70	130			
Toluene	1.0	0.050	1.000	0	102	70	130			
Ethylbenzene	1.0	0.050	1.000	0	103	70	130			
Xylenes, Total	3.1	0.10	3.000	0	103	70	130			
Surr: 4-Bromofluorobenzene	0.93		1.000		93.1	39.1	146			

Sample ID: **mb 2**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **BSS99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/27/2023**	SeqNo: **3620719** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.92		1.000		91.5	39.1	146			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308E56**

31-Aug-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **2308E56-003ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-97**	Batch ID: **BSS99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/27/2023**	SeqNo: **3620730** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.022	0.8757	0	98.7	70	130			
Toluene	0.87	0.044	0.8757	0	99.9	70	130			
Ethylbenzene	0.89	0.044	0.8757	0	102	70	130			
Xylenes, Total	2.7	0.088	2.627	0	102	70	130			
Surr: 4-Bromofluorobenzene	0.79		0.8757		90.3	39.1	146			

Sample ID: **2308E56-003amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-97**	Batch ID: **BSS99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/27/2023**	SeqNo: **3620731** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.022	0.8757	0	97.8	70	130	0.934	20	
Toluene	0.87	0.044	0.8757	0	99.4	70	130	0.438	20	
Ethylbenzene	0.88	0.044	0.8757	0	101	70	130	1.19	20	
Xylenes, Total	2.6	0.088	2.627	0	101	70	130	1.15	20	
Surr: 4-Bromofluorobenzene	0.78		0.8757		88.9	39.1	146	0	0	

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **B99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/27/2023**	SeqNo: **3620742** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	102	70	130			
Toluene	1.0	0.050	1.000	0	103	70	130			
Ethylbenzene	1.0	0.050	1.000	0	104	70	130			
Xylenes, Total	3.1	0.10	3.000	0	105	70	130			
Surr: 4-Bromofluorobenzene	0.94		1.000		94.4	39.1	146			

Sample ID: **mb 3**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **B99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/27/2023**	SeqNo: **3620743** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.93		1.000		93.3	39.1	146			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308E56**

31-Aug-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **2308E56-023ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-132**	Batch ID: **B99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/27/2023**	SeqNo: **3620751** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.022	0.8826	0	94.6	70	130			
Toluene	0.84	0.044	0.8826	0	95.4	70	130			
Ethylbenzene	0.86	0.044	0.8826	0	96.9	70	130			
Xylenes, Total	2.6	0.088	2.648	0	97.2	70	130			
Surr: 4-Bromofluorobenzene	0.80		0.8826		90.5	39.1	146			

Sample ID: **2308E56-023amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-132**	Batch ID: **B99264**	RunNo: **99264**
Prep Date:	Analysis Date: **8/27/2023**	SeqNo: **3620752** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.82	0.022	0.8826	0	93.2	70	130	1.54	20	
Toluene	0.83	0.044	0.8826	0	94.0	70	130	1.48	20	
Ethylbenzene	0.85	0.044	0.8826	0	95.9	70	130	1.11	20	
Xylenes, Total	2.5	0.088	2.648	0	96.0	70	130	1.15	20	
Surr: 4-Bromofluorobenzene	0.80		0.8826		90.3	39.1	146	0	0	

Qualifiers:

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

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: GHD Work Order Number: 2308E56 RcptNo: 1

Received By: **Cheyenne Cason** 8/26/2023 8:25:00 AM

Completed By: **Cheyenne Cason** 8/26/2023 9:09:47 AM

Reviewed By: Jacqueline Rodriguez 8.26.23

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: CM 8/26/23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.7	Good	Not Present	Morty		
2	3.7	Good	Not Present	Morty		

Received by OCD: 12/4/2024 10:43:20 AM

Released to Imaging: 3/12/2025 11:29:45 AM

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy #400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: nate.Reece@ghd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 24hr

Project Name: DeleK Matador Produced water

Project #: 126018492

Project Manager: Nate Reece

Sampler: Tristanna CrapO

On Ice: ☒ Yes ☐ No Marty

# of Coolers: 2 4.9 - 0.2 = 4.7

Cooler Temp (including CF): 3.9 - 0.2 = 3.7 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

needs to be tested for chloride

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308E56	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8-24-23	0730	S	BH-108	1 Glass	N/A	001	X	X					X			
	0732		BH-109			002										
	0734		BH-97			003										
	0736		BH-103			004										
	0738		BH-19a			006 005										
	0740		BH-193			007 006										
	1140		BH-141			007										
	1150		BH-142			008										
	1250		BH-143			009										
	1244		SW-7			010										
	1246		SW-8			011										
	1248		SW-9			012										

Date: 8/24 Time: 1710 Relinquished by:

Date: 8/24/23 Time: 1900 Relinquished by:

Received by: Via: Date: 8/25/23 Time: 715

Received by: Via: Date: 8/26/23 Time: 0825

Remarks:

Any sub-contracted data will be clearly notated on the analytical report.

Released to Imaging: 3/12/2025 11:29:45 AM

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy #400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: nate.Reece@ghd.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☐ Standard ☒ Rush 24hr

Project Name: DeLeK Matador Produced water

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna CrapO

On Ice: ☒ Yes ☐ No

# of Coolers: 2

Cooler Temp(including CF): See 1st page (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

needs to be tested for chloride

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308E56	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8-24-23	1410	S	BH-110	1 glass	N/A	013	X	X					X			
	1412		BH-111			014										
	1414		BH-112			015										
	1416		BH-113			016										
	1418		BH-114			017										
	1420		BH-115			018										
	1422		BH-125			019										
	1424		BH-127			020										
	1426		BH-130			021										
	1428		BH-131			022										
	1600		BH-132			023										
	1602		BH-133			023										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
8/24	1710					
8/25/23	940				8/25/23	715
			Cmc Courier		8/26/23	0825

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy #400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: nate.Reece@ghd.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☐ Standard ☒ Rush 24hr

Project Name: DelcK Matador Produced water

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna Crapo

On Ice: ☒ Yes ☐ No

# of Coolers: 2

Cooler Temp (including CF): See 1st page (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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needs to be tested for chloride

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308E56	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8-24-23	1604	S	BH-134	1 glass	N/A	025	X	X					X			
	1610		BH-137			026										
	1614		BH-139			027										
	1616		BH-140			028										

Remarks:

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
8/24	1710				8/24/23	715
8/25/23	1910			Courier	8/26/23	0825

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 08, 2023

Nate Reece
GHD
6320 Rothway Ste 100
Houston, TX 77040
TEL: (713) 275-3838
FAX:

RE: Delek Matador Produced Water OrderNo.: 2308G08

Dear Nate Reece:

Hall Environmental Analysis Laboratory received 46 sample(s) on 8/30/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-135
Project: Delek Matador Produced Water **Collection Date:** 8/25/2023 7:20:00 AM
Lab ID: 2308G08-001 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/30/2023 12:50:46 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/30/2023 12:50:46 PM
Surr: DNOP	107	69-147		%Rec	1	8/30/2023 12:50:46 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/30/2023 1:16:00 PM
Surr: BFB	99.2	15-244		%Rec	1	8/30/2023 1:16:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/30/2023 1:16:00 PM
Toluene	ND	0.048		mg/Kg	1	8/30/2023 1:16:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/30/2023 1:16:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	8/30/2023 1:16:00 PM
Surr: 4-Bromofluorobenzene	95.1	39.1-146		%Rec	1	8/30/2023 1:16:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	170	60		mg/Kg	20	8/30/2023 7:11:57 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-136
Project: Delek Matador Produced Water **Collection Date:** 8/25/2023 7:22:00 AM
Lab ID: 2308G08-002 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/30/2023 1:14:37 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/30/2023 1:14:37 PM
Surr: DNOP	110	69-147		%Rec	1	8/30/2023 1:14:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	8/30/2023 2:21:00 PM
Surr: BFB	101	15-244		%Rec	1	8/30/2023 2:21:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.020		mg/Kg	1	8/30/2023 2:21:00 PM
Toluene	ND	0.040		mg/Kg	1	8/30/2023 2:21:00 PM
Ethylbenzene	ND	0.040		mg/Kg	1	8/30/2023 2:21:00 PM
Xylenes, Total	ND	0.079		mg/Kg	1	8/30/2023 2:21:00 PM
Surr: 4-Bromofluorobenzene	93.2	39.1-146		%Rec	1	8/30/2023 2:21:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	620	60		mg/Kg	20	8/30/2023 7:49:11 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-138
Project: Delek Matador Produced Water **Collection Date:** 8/25/2023 7:24:00 AM
Lab ID: 2308G08-003 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	8/30/2023 1:38:27 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/30/2023 1:38:27 PM
Surr: DNOP	111	69-147		%Rec	1	8/30/2023 1:38:27 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/30/2023 3:26:00 PM
Surr: BFB	102	15-244		%Rec	1	8/30/2023 3:26:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/30/2023 3:26:00 PM
Toluene	ND	0.048		mg/Kg	1	8/30/2023 3:26:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/30/2023 3:26:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	8/30/2023 3:26:00 PM
Surr: 4-Bromofluorobenzene	94.3	39.1-146		%Rec	1	8/30/2023 3:26:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	480	60		mg/Kg	20	8/30/2023 8:51:15 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-89
Project: Delek Matador Produced Water **Collection Date:** 8/25/2023 7:26:00 AM
Lab ID: 2308G08-004 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/30/2023 2:02:17 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/30/2023 2:02:17 PM
Surr: DNOP	110	69-147		%Rec	1	8/30/2023 2:02:17 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/30/2023 3:48:00 PM
Surr: BFB	101	15-244		%Rec	1	8/30/2023 3:48:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.020		mg/Kg	1	8/30/2023 3:48:00 PM
Toluene	ND	0.039		mg/Kg	1	8/30/2023 3:48:00 PM
Ethylbenzene	ND	0.039		mg/Kg	1	8/30/2023 3:48:00 PM
Xylenes, Total	ND	0.078		mg/Kg	1	8/30/2023 3:48:00 PM
Surr: 4-Bromofluorobenzene	95.3	39.1-146		%Rec	1	8/30/2023 3:48:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	600	60		mg/Kg	20	8/30/2023 9:03:39 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-90
Project: Delek Matador Produced Water **Collection Date:** 8/25/2023 7:28:00 AM
Lab ID: 2308G08-005 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/30/2023 2:26:09 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/30/2023 2:26:09 PM
Surr: DNOP	100	69-147		%Rec	1	8/30/2023 2:26:09 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	8/30/2023 4:10:00 PM
Surr: BFB	101	15-244		%Rec	1	8/30/2023 4:10:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.019		mg/Kg	1	8/30/2023 4:10:00 PM
Toluene	ND	0.038		mg/Kg	1	8/30/2023 4:10:00 PM
Ethylbenzene	ND	0.038		mg/Kg	1	8/30/2023 4:10:00 PM
Xylenes, Total	ND	0.076		mg/Kg	1	8/30/2023 4:10:00 PM
Surr: 4-Bromofluorobenzene	94.5	39.1-146		%Rec	1	8/30/2023 4:10:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	690	60		mg/Kg	20	8/30/2023 9:16:03 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-93
Project: Delek Matador Produced Water **Collection Date:** 8/25/2023 7:30:00 AM
Lab ID: 2308G08-006 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/30/2023 2:49:59 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/30/2023 2:49:59 PM
Surr: DNOP	103	69-147		%Rec	1	8/30/2023 2:49:59 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/30/2023 4:32:00 PM
Surr: BFB	100	15-244		%Rec	1	8/30/2023 4:32:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.020		mg/Kg	1	8/30/2023 4:32:00 PM
Toluene	ND	0.039		mg/Kg	1	8/30/2023 4:32:00 PM
Ethylbenzene	ND	0.039		mg/Kg	1	8/30/2023 4:32:00 PM
Xylenes, Total	ND	0.079		mg/Kg	1	8/30/2023 4:32:00 PM
Surr: 4-Bromofluorobenzene	94.9	39.1-146		%Rec	1	8/30/2023 4:32:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	770	60		mg/Kg	20	8/30/2023 9:28:27 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-95
Project: Delek Matador Produced Water **Collection Date:** 8/25/2023 7:32:00 AM
Lab ID: 2308G08-007 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	8/30/2023 3:13:54 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/30/2023 3:13:54 PM
Surr: DNOP	102	69-147		%Rec	1	8/30/2023 3:13:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	5.1		mg/Kg	1	8/30/2023 4:53:00 PM
Surr: BFB	101	15-244		%Rec	1	8/30/2023 4:53:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.025		mg/Kg	1	8/30/2023 4:53:00 PM
Toluene	ND	0.051		mg/Kg	1	8/30/2023 4:53:00 PM
Ethylbenzene	ND	0.051		mg/Kg	1	8/30/2023 4:53:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	8/30/2023 4:53:00 PM
Surr: 4-Bromofluorobenzene	94.4	39.1-146		%Rec	1	8/30/2023 4:53:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	490	60		mg/Kg	20	8/30/2023 9:40:52 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-144
Project: Delek Matador Produced Water **Collection Date:** 8/25/2023 1:14:00 PM
Lab ID: 2308G08-008 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	8/30/2023 3:37:46 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/30/2023 3:37:46 PM
Surr: DNOP	102	69-147		%Rec	1	8/30/2023 3:37:46 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	8/30/2023 5:37:00 PM
Surr: BFB	99.8	15-244		%Rec	1	8/30/2023 5:37:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.020		mg/Kg	1	8/30/2023 5:37:00 PM
Toluene	ND	0.040		mg/Kg	1	8/30/2023 5:37:00 PM
Ethylbenzene	ND	0.040		mg/Kg	1	8/30/2023 5:37:00 PM
Xylenes, Total	ND	0.080		mg/Kg	1	8/30/2023 5:37:00 PM
Surr: 4-Bromofluorobenzene	93.7	39.1-146		%Rec	1	8/30/2023 5:37:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	450	59		mg/Kg	20	8/30/2023 9:53:17 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-145
Project: Delek Matador Produced Water **Collection Date:** 8/25/2023 1:16:00 PM
Lab ID: 2308G08-009 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/30/2023 4:01:41 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/30/2023 4:01:41 PM
Surr: DNOP	103	69-147		%Rec	1	8/30/2023 4:01:41 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	8/30/2023 5:59:00 PM
Surr: BFB	97.3	15-244		%Rec	1	8/30/2023 5:59:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.019		mg/Kg	1	8/30/2023 5:59:00 PM
Toluene	ND	0.038		mg/Kg	1	8/30/2023 5:59:00 PM
Ethylbenzene	ND	0.038		mg/Kg	1	8/30/2023 5:59:00 PM
Xylenes, Total	ND	0.076		mg/Kg	1	8/30/2023 5:59:00 PM
Surr: 4-Bromofluorobenzene	92.5	39.1-146		%Rec	1	8/30/2023 5:59:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	690	60		mg/Kg	20	8/30/2023 10:05:41 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-146
Project: Delek Matador Produced Water **Collection Date:** 8/25/2023 1:18:00 PM
Lab ID: 2308G08-010 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/30/2023 4:49:33 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/30/2023 4:49:33 PM
Surr: DNOP	103	69-147		%Rec	1	8/30/2023 4:49:33 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	8/30/2023 6:21:00 PM
Surr: BFB	98.2	15-244		%Rec	1	8/30/2023 6:21:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.022		mg/Kg	1	8/30/2023 6:21:00 PM
Toluene	ND	0.044		mg/Kg	1	8/30/2023 6:21:00 PM
Ethylbenzene	ND	0.044		mg/Kg	1	8/30/2023 6:21:00 PM
Xylenes, Total	ND	0.088		mg/Kg	1	8/30/2023 6:21:00 PM
Surr: 4-Bromofluorobenzene	92.2	39.1-146		%Rec	1	8/30/2023 6:21:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	560	60		mg/Kg	20	8/30/2023 10:18:06 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-147
Project: Delek Matador Produced Water **Collection Date:** 8/25/2023 1:20:00 PM
Lab ID: 2308G08-011 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/30/2023 5:13:36 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/30/2023 5:13:36 PM
Surr: DNOP	104	69-147		%Rec	1	8/30/2023 5:13:36 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/30/2023 6:43:00 PM
Surr: BFB	98.3	15-244		%Rec	1	8/30/2023 6:43:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.020		mg/Kg	1	8/30/2023 6:43:00 PM
Toluene	ND	0.039		mg/Kg	1	8/30/2023 6:43:00 PM
Ethylbenzene	ND	0.039		mg/Kg	1	8/30/2023 6:43:00 PM
Xylenes, Total	ND	0.079		mg/Kg	1	8/30/2023 6:43:00 PM
Surr: 4-Bromofluorobenzene	93.3	39.1-146		%Rec	1	8/30/2023 6:43:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	570	60		mg/Kg	20	8/30/2023 10:30:30 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-148
Project: Delek Matador Produced Water **Collection Date:** 8/25/2023 1:22:00 PM
Lab ID: 2308G08-012 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	8/30/2023 5:37:40 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/30/2023 5:37:40 PM
Surr: DNOP	104	69-147		%Rec	1	8/30/2023 5:37:40 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/30/2023 7:05:00 PM
Surr: BFB	98.8	15-244		%Rec	1	8/30/2023 7:05:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.019		mg/Kg	1	8/30/2023 7:05:00 PM
Toluene	ND	0.039		mg/Kg	1	8/30/2023 7:05:00 PM
Ethylbenzene	ND	0.039		mg/Kg	1	8/30/2023 7:05:00 PM
Xylenes, Total	ND	0.077		mg/Kg	1	8/30/2023 7:05:00 PM
Surr: 4-Bromofluorobenzene	91.3	39.1-146		%Rec	1	8/30/2023 7:05:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	410	59		mg/Kg	20	8/30/2023 10:42:55 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-149
Project: Delek Matador Produced Water **Collection Date:** 8/25/2023 1:24:00 PM
Lab ID: 2308G08-013 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/30/2023 6:02:07 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/30/2023 6:02:07 PM
Surr: DNOP	102	69-147		%Rec	1	8/30/2023 6:02:07 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	8/30/2023 7:26:00 PM
Surr: BFB	105	15-244		%Rec	1	8/30/2023 7:26:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.019		mg/Kg	1	8/30/2023 7:26:00 PM
Toluene	ND	0.038		mg/Kg	1	8/30/2023 7:26:00 PM
Ethylbenzene	ND	0.038		mg/Kg	1	8/30/2023 7:26:00 PM
Xylenes, Total	ND	0.075		mg/Kg	1	8/30/2023 7:26:00 PM
Surr: 4-Bromofluorobenzene	93.0	39.1-146		%Rec	1	8/30/2023 7:26:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	600	61		mg/Kg	20	8/30/2023 11:20:09 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-150
Project: Delek Matador Produced Water **Collection Date:** 8/25/2023 1:26:00 PM
Lab ID: 2308G08-014 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/30/2023 6:26:53 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/30/2023 6:26:53 PM
Surr: DNOP	98.9	69-147		%Rec	1	8/30/2023 6:26:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	8/30/2023 7:48:00 PM
Surr: BFB	97.8	15-244		%Rec	1	8/30/2023 7:48:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.019		mg/Kg	1	8/30/2023 7:48:00 PM
Toluene	ND	0.038		mg/Kg	1	8/30/2023 7:48:00 PM
Ethylbenzene	ND	0.038		mg/Kg	1	8/30/2023 7:48:00 PM
Xylenes, Total	ND	0.076		mg/Kg	1	8/30/2023 7:48:00 PM
Surr: 4-Bromofluorobenzene	92.2	39.1-146		%Rec	1	8/30/2023 7:48:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	510	60		mg/Kg	20	8/30/2023 11:32:33 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-151
Project: Delek Matador Produced Water **Collection Date:** 8/25/2023 1:28:00 PM
Lab ID: 2308G08-015 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/30/2023 6:51:39 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/30/2023 6:51:39 PM
Surr: DNOP	97.8	69-147		%Rec	1	8/30/2023 6:51:39 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	8/30/2023 8:10:00 PM
Surr: BFB	98.9	15-244		%Rec	1	8/30/2023 8:10:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.018		mg/Kg	1	8/30/2023 8:10:00 PM
Toluene	ND	0.036		mg/Kg	1	8/30/2023 8:10:00 PM
Ethylbenzene	ND	0.036		mg/Kg	1	8/30/2023 8:10:00 PM
Xylenes, Total	ND	0.072		mg/Kg	1	8/30/2023 8:10:00 PM
Surr: 4-Bromofluorobenzene	92.7	39.1-146		%Rec	1	8/30/2023 8:10:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	730	60		mg/Kg	20	8/30/2023 11:44:58 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-152
Project: Delek Matador Produced Water **Collection Date:** 8/25/2023 2:20:00 PM
Lab ID: 2308G08-016 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	8/30/2023 7:16:19 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/30/2023 7:16:19 PM
Surr: DNOP	99.2	69-147		%Rec	1	8/30/2023 7:16:19 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	8/30/2023 8:32:00 PM
Surr: BFB	98.6	15-244		%Rec	1	8/30/2023 8:32:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.021		mg/Kg	1	8/30/2023 8:32:00 PM
Toluene	ND	0.042		mg/Kg	1	8/30/2023 8:32:00 PM
Ethylbenzene	ND	0.042		mg/Kg	1	8/30/2023 8:32:00 PM
Xylenes, Total	ND	0.084		mg/Kg	1	8/30/2023 8:32:00 PM
Surr: 4-Bromofluorobenzene	90.6	39.1-146		%Rec	1	8/30/2023 8:32:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	940	60		mg/Kg	20	8/30/2023 11:57:23 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-153
Project: Delek Matador Produced Water **Collection Date:** 8/25/2023 2:22:00 PM
Lab ID: 2308G08-017 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/30/2023 7:40:56 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/30/2023 7:40:56 PM
Surr: DNOP	98.4	69-147		%Rec	1	8/30/2023 7:40:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	8/30/2023 8:54:00 PM
Surr: BFB	100	15-244		%Rec	1	8/30/2023 8:54:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.022		mg/Kg	1	8/30/2023 8:54:00 PM
Toluene	ND	0.044		mg/Kg	1	8/30/2023 8:54:00 PM
Ethylbenzene	ND	0.044		mg/Kg	1	8/30/2023 8:54:00 PM
Xylenes, Total	ND	0.088		mg/Kg	1	8/30/2023 8:54:00 PM
Surr: 4-Bromofluorobenzene	91.5	39.1-146		%Rec	1	8/30/2023 8:54:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	370	60		mg/Kg	20	8/31/2023 12:09:47 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-154
Project: Delek Matador Produced Water **Collection Date:** 8/25/2023 2:24:00 PM
Lab ID: 2308G08-018 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	8/30/2023 8:05:32 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/30/2023 8:05:32 PM
Surr: DNOP	99.4	69-147		%Rec	1	8/30/2023 8:05:32 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/30/2023 11:04:00 PM
Surr: BFB	97.8	15-244		%Rec	1	8/30/2023 11:04:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	8/30/2023 11:04:00 PM
Toluene	ND	0.046		mg/Kg	1	8/30/2023 11:04:00 PM
Ethylbenzene	ND	0.046		mg/Kg	1	8/30/2023 11:04:00 PM
Xylenes, Total	ND	0.092		mg/Kg	1	8/30/2023 11:04:00 PM
Surr: 4-Bromofluorobenzene	90.8	39.1-146		%Rec	1	8/30/2023 11:04:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	810	60		mg/Kg	20	8/31/2023 12:22:12 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-77a
Project: Delek Matador Produced Water **Collection Date:** 8/25/2023 3:00:00 PM
Lab ID: 2308G08-019 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/30/2023 8:30:04 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/30/2023 8:30:04 PM
Surr: DNOP	97.5	69-147		%Rec	1	8/30/2023 8:30:04 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	8/31/2023 12:09:00 AM
Surr: BFB	98.0	15-244		%Rec	1	8/31/2023 12:09:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.020		mg/Kg	1	8/31/2023 12:09:00 AM
Toluene	ND	0.040		mg/Kg	1	8/31/2023 12:09:00 AM
Ethylbenzene	ND	0.040		mg/Kg	1	8/31/2023 12:09:00 AM
Xylenes, Total	ND	0.079		mg/Kg	1	8/31/2023 12:09:00 AM
Surr: 4-Bromofluorobenzene	91.7	39.1-146		%Rec	1	8/31/2023 12:09:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	560	60		mg/Kg	20	8/31/2023 12:34:35 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-72a
Project: Delek Matador Produced Water **Collection Date:** 8/25/2023 3:02:00 PM
Lab ID: 2308G08-020 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/30/2023 8:54:46 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/30/2023 8:54:46 PM
Surr: DNOP	98.8	69-147		%Rec	1	8/30/2023 8:54:46 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/31/2023 1:14:00 AM
Surr: BFB	97.0	15-244		%Rec	1	8/31/2023 1:14:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	8/31/2023 1:14:00 AM
Toluene	ND	0.046		mg/Kg	1	8/31/2023 1:14:00 AM
Ethylbenzene	ND	0.046		mg/Kg	1	8/31/2023 1:14:00 AM
Xylenes, Total	ND	0.092		mg/Kg	1	8/31/2023 1:14:00 AM
Surr: 4-Bromofluorobenzene	92.6	39.1-146		%Rec	1	8/31/2023 1:14:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	280	60		mg/Kg	20	8/31/2023 12:47:00 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-56a
Project: Delek Matador Produced Water **Collection Date:** 8/28/2023 11:00:00 AM
Lab ID: 2308G08-021 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/30/2023 11:22:10 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/30/2023 11:22:10 PM
Surr: DNOP	94.6	69-147		%Rec	1	8/30/2023 11:22:10 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	8/31/2023 1:36:00 AM
Surr: BFB	94.1	15-244		%Rec	1	8/31/2023 1:36:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.021		mg/Kg	1	8/31/2023 1:36:00 AM
Toluene	ND	0.043		mg/Kg	1	8/31/2023 1:36:00 AM
Ethylbenzene	ND	0.043		mg/Kg	1	8/31/2023 1:36:00 AM
Xylenes, Total	ND	0.086		mg/Kg	1	8/31/2023 1:36:00 AM
Surr: 4-Bromofluorobenzene	89.2	39.1-146		%Rec	1	8/31/2023 1:36:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	390	60		mg/Kg	20	8/30/2023 8:04:18 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-57a
Project: Delek Matador Produced Water **Collection Date:** 8/28/2023 11:02:00 AM
Lab ID: 2308G08-022 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	8/30/2023 11:46:49 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/30/2023 11:46:49 PM
Surr: DNOP	99.2	69-147		%Rec	1	8/30/2023 11:46:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	8/31/2023 1:57:00 AM
Surr: BFB	96.3	15-244		%Rec	1	8/31/2023 1:57:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.019		mg/Kg	1	8/31/2023 1:57:00 AM
Toluene	ND	0.038		mg/Kg	1	8/31/2023 1:57:00 AM
Ethylbenzene	ND	0.038		mg/Kg	1	8/31/2023 1:57:00 AM
Xylenes, Total	ND	0.076		mg/Kg	1	8/31/2023 1:57:00 AM
Surr: 4-Bromofluorobenzene	90.4	39.1-146		%Rec	1	8/31/2023 1:57:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	370	60		mg/Kg	20	8/30/2023 8:16:38 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-58a
Project: Delek Matador Produced Water **Collection Date:** 8/28/2023 11:04:00 AM
Lab ID: 2308G08-023 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	8/31/2023 12:11:27 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	8/31/2023 12:11:27 AM
Surr: DNOP	97.0	69-147		%Rec	1	8/31/2023 12:11:27 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	8/31/2023 2:19:00 AM
Surr: BFB	101	15-244		%Rec	1	8/31/2023 2:19:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.019		mg/Kg	1	8/31/2023 2:19:00 AM
Toluene	ND	0.038		mg/Kg	1	8/31/2023 2:19:00 AM
Ethylbenzene	ND	0.038		mg/Kg	1	8/31/2023 2:19:00 AM
Xylenes, Total	ND	0.075		mg/Kg	1	8/31/2023 2:19:00 AM
Surr: 4-Bromofluorobenzene	91.1	39.1-146		%Rec	1	8/31/2023 2:19:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	730	60		mg/Kg	20	8/30/2023 8:28:59 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-61a
Project: Delek Matador Produced Water **Collection Date:** 8/28/2023 11:06:00 AM
Lab ID: 2308G08-024 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/31/2023 12:36:04 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/31/2023 12:36:04 AM
Surr: DNOP	99.1	69-147		%Rec	1	8/31/2023 12:36:04 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	8/31/2023 2:41:00 AM
Surr: BFB	97.8	15-244		%Rec	1	8/31/2023 2:41:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.021		mg/Kg	1	8/31/2023 2:41:00 AM
Toluene	ND	0.041		mg/Kg	1	8/31/2023 2:41:00 AM
Ethylbenzene	ND	0.041		mg/Kg	1	8/31/2023 2:41:00 AM
Xylenes, Total	ND	0.083		mg/Kg	1	8/31/2023 2:41:00 AM
Surr: 4-Bromofluorobenzene	90.5	39.1-146		%Rec	1	8/31/2023 2:41:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	900	60		mg/Kg	20	8/30/2023 8:41:20 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-62a
Project: Delek Matador Produced Water **Collection Date:** 8/28/2023 11:08:00 AM
Lab ID: 2308G08-025 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/31/2023 1:00:42 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/31/2023 1:00:42 AM
Surr: DNOP	98.7	69-147		%Rec	1	8/31/2023 1:00:42 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	8/31/2023 3:02:00 AM
Surr: BFB	97.1	15-244		%Rec	1	8/31/2023 3:02:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.021		mg/Kg	1	8/31/2023 3:02:00 AM
Toluene	ND	0.042		mg/Kg	1	8/31/2023 3:02:00 AM
Ethylbenzene	ND	0.042		mg/Kg	1	8/31/2023 3:02:00 AM
Xylenes, Total	ND	0.084		mg/Kg	1	8/31/2023 3:02:00 AM
Surr: 4-Bromofluorobenzene	89.4	39.1-146		%Rec	1	8/31/2023 3:02:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	630	60		mg/Kg	20	8/30/2023 9:18:23 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** SW-10
Project: Delek Matador Produced Water **Collection Date:** 8/28/2023 11:10:00 AM
Lab ID: 2308G08-026 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/31/2023 1:25:19 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/31/2023 1:25:19 AM
Surr: DNOP	98.0	69-147		%Rec	1	8/31/2023 1:25:19 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	5.7		mg/Kg	1	8/31/2023 3:24:00 AM
Surr: BFB	92.7	15-244		%Rec	1	8/31/2023 3:24:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.028		mg/Kg	1	8/31/2023 3:24:00 AM
Toluene	ND	0.057		mg/Kg	1	8/31/2023 3:24:00 AM
Ethylbenzene	ND	0.057		mg/Kg	1	8/31/2023 3:24:00 AM
Xylenes, Total	ND	0.11		mg/Kg	1	8/31/2023 3:24:00 AM
Surr: 4-Bromofluorobenzene	89.8	39.1-146		%Rec	1	8/31/2023 3:24:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	89	60		mg/Kg	20	8/30/2023 9:30:44 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** SW-11
Project: Delek Matador Produced Water **Collection Date:** 8/28/2023 11:12:00 AM
Lab ID: 2308G08-027 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/31/2023 1:49:57 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/31/2023 1:49:57 AM
Surr: DNOP	99.0	69-147		%Rec	1	8/31/2023 1:49:57 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	8/31/2023 3:46:00 AM
Surr: BFB	94.4	15-244		%Rec	1	8/31/2023 3:46:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.018		mg/Kg	1	8/31/2023 3:46:00 AM
Toluene	ND	0.036		mg/Kg	1	8/31/2023 3:46:00 AM
Ethylbenzene	ND	0.036		mg/Kg	1	8/31/2023 3:46:00 AM
Xylenes, Total	ND	0.071		mg/Kg	1	8/31/2023 3:46:00 AM
Surr: 4-Bromofluorobenzene	88.7	39.1-146		%Rec	1	8/31/2023 3:46:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	80	60		mg/Kg	20	8/30/2023 9:43:04 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** SW-12
Project: Delek Matador Produced Water **Collection Date:** 8/28/2023 11:14:00 AM
Lab ID: 2308G08-028 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	8/31/2023 2:14:36 AM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	8/31/2023 2:14:36 AM
Surr: DNOP	99.4	69-147		%Rec	1	8/31/2023 2:14:36 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	8/31/2023 4:29:00 AM
Surr: BFB	95.2	15-244		%Rec	1	8/31/2023 4:29:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.018		mg/Kg	1	8/31/2023 4:29:00 AM
Toluene	ND	0.037		mg/Kg	1	8/31/2023 4:29:00 AM
Ethylbenzene	ND	0.037		mg/Kg	1	8/31/2023 4:29:00 AM
Xylenes, Total	ND	0.074		mg/Kg	1	8/31/2023 4:29:00 AM
Surr: 4-Bromofluorobenzene	90.3	39.1-146		%Rec	1	8/31/2023 4:29:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	8/30/2023 9:55:24 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** SW-20
Project: Delek Matador Produced Water **Collection Date:** 8/28/2023 1:30:00 PM
Lab ID: 2308G08-036 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	8/31/2023 3:03:47 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/31/2023 3:03:47 AM
Surr: DNOP	100	69-147		%Rec	1	8/31/2023 3:03:47 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	8/31/2023 4:51:00 AM
Surr: BFB	96.3	15-244		%Rec	1	8/31/2023 4:51:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.020		mg/Kg	1	8/31/2023 4:51:00 AM
Toluene	ND	0.041		mg/Kg	1	8/31/2023 4:51:00 AM
Ethylbenzene	ND	0.041		mg/Kg	1	8/31/2023 4:51:00 AM
Xylenes, Total	ND	0.081		mg/Kg	1	8/31/2023 4:51:00 AM
Surr: 4-Bromofluorobenzene	91.4	39.1-146		%Rec	1	8/31/2023 4:51:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	110	60		mg/Kg	20	8/30/2023 10:07:45 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** SW-21
Project: Delek Matador Produced Water **Collection Date:** 8/28/2023 1:32:00 PM
Lab ID: 2308G08-037 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	8/31/2023 3:28:17 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/31/2023 3:28:17 AM
Surr: DNOP	98.3	69-147		%Rec	1	8/31/2023 3:28:17 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/31/2023 5:13:00 AM
Surr: BFB	95.5	15-244		%Rec	1	8/31/2023 5:13:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.020		mg/Kg	1	8/31/2023 5:13:00 AM
Toluene	ND	0.039		mg/Kg	1	8/31/2023 5:13:00 AM
Ethylbenzene	ND	0.039		mg/Kg	1	8/31/2023 5:13:00 AM
Xylenes, Total	ND	0.079		mg/Kg	1	8/31/2023 5:13:00 AM
Surr: 4-Bromofluorobenzene	89.9	39.1-146		%Rec	1	8/31/2023 5:13:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	250	60		mg/Kg	20	8/30/2023 10:20:05 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** SW-22
Project: Delek Matador Produced Water **Collection Date:** 8/28/2023 1:34:00 PM
Lab ID: 2308G08-038 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/31/2023 3:52:46 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/31/2023 3:52:46 AM
Surr: DNOP	102	69-147		%Rec	1	8/31/2023 3:52:46 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	8/31/2023 5:34:00 AM
Surr: BFB	96.4	15-244		%Rec	1	8/31/2023 5:34:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.021		mg/Kg	1	8/31/2023 5:34:00 AM
Toluene	ND	0.042		mg/Kg	1	8/31/2023 5:34:00 AM
Ethylbenzene	ND	0.042		mg/Kg	1	8/31/2023 5:34:00 AM
Xylenes, Total	ND	0.083		mg/Kg	1	8/31/2023 5:34:00 AM
Surr: 4-Bromofluorobenzene	89.9	39.1-146		%Rec	1	8/31/2023 5:34:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	250	60		mg/Kg	20	8/30/2023 10:32:25 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** SW-23
Project: Delek Matador Produced Water **Collection Date:** 8/28/2023 1:36:00 PM
Lab ID: 2308G08-039 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	8/31/2023 4:17:01 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/31/2023 4:17:01 AM
Surr: DNOP	100	69-147		%Rec	1	8/31/2023 4:17:01 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/31/2023 5:56:00 AM
Surr: BFB	93.8	15-244		%Rec	1	8/31/2023 5:56:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/31/2023 5:56:00 AM
Toluene	ND	0.048		mg/Kg	1	8/31/2023 5:56:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/31/2023 5:56:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	8/31/2023 5:56:00 AM
Surr: 4-Bromofluorobenzene	90.5	39.1-146		%Rec	1	8/31/2023 5:56:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	240	60		mg/Kg	20	8/30/2023 10:44:46 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** SW-24
Project: Delek Matador Produced Water **Collection Date:** 8/28/2023 1:38:00 PM
Lab ID: 2308G08-040 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/31/2023 4:41:09 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/31/2023 4:41:09 AM
Surr: DNOP	105	69-147		%Rec	1	8/31/2023 4:41:09 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	8/31/2023 6:18:00 AM
Surr: BFB	99.1	15-244		%Rec	1	8/31/2023 6:18:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.021		mg/Kg	1	8/31/2023 6:18:00 AM
Toluene	ND	0.042		mg/Kg	1	8/31/2023 6:18:00 AM
Ethylbenzene	ND	0.042		mg/Kg	1	8/31/2023 6:18:00 AM
Xylenes, Total	ND	0.084		mg/Kg	1	8/31/2023 6:18:00 AM
Surr: 4-Bromofluorobenzene	90.8	39.1-146		%Rec	1	8/31/2023 6:18:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	130	60		mg/Kg	20	8/30/2023 10:57:08 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** SW-25
Project: Delek Matador Produced Water **Collection Date:** 8/28/2023 1:40:00 PM
Lab ID: 2308G08-041 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/31/2023 5:05:19 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/31/2023 5:05:19 AM
Surr: DNOP	105	69-147		%Rec	1	8/31/2023 5:05:19 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	5.8		mg/Kg	1	8/31/2023 6:40:00 AM
Surr: BFB	98.2	15-244		%Rec	1	8/31/2023 6:40:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.029		mg/Kg	1	8/31/2023 6:40:00 AM
Toluene	ND	0.058		mg/Kg	1	8/31/2023 6:40:00 AM
Ethylbenzene	ND	0.058		mg/Kg	1	8/31/2023 6:40:00 AM
Xylenes, Total	ND	0.12		mg/Kg	1	8/31/2023 6:40:00 AM
Surr: 4-Bromofluorobenzene	90.4	39.1-146		%Rec	1	8/31/2023 6:40:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	420	60		mg/Kg	20	8/30/2023 11:09:28 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308G08**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-94
Project: Delek Matador Produced Water **Collection Date:** 8/25/2023 7:32:00 AM
Lab ID: 2308G08-046 **Matrix:** MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	8.6		mg/Kg	1	8/31/2023 5:29:25 AM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	8/31/2023 5:29:25 AM
Surr: DNOP	95.1	69-147		%Rec	1	8/31/2023 5:29:25 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	9/1/2023 12:41:00 PM
Surr: BFB	97.8	15-244		%Rec	1	9/1/2023 12:41:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.019		mg/Kg	1	9/1/2023 12:41:00 PM
Toluene	ND	0.038		mg/Kg	1	9/1/2023 12:41:00 PM
Ethylbenzene	ND	0.038		mg/Kg	1	9/1/2023 12:41:00 PM
Xylenes, Total	ND	0.076		mg/Kg	1	9/1/2023 12:41:00 PM
Surr: 4-Bromofluorobenzene	91.2	39.1-146		%Rec	1	9/1/2023 12:41:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	520	60		mg/Kg	20	8/30/2023 11:46:29 PM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308G08**

08-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **MB-77202**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **77202**	RunNo: **99377**							
Prep Date: **8/30/2023**	Analysis Date: **8/30/2023**	SeqNo: **3626354**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77202**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **77202**	RunNo: **99377**							
Prep Date: **8/30/2023**	Analysis Date: **8/30/2023**	SeqNo: **3626355**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.7	90	110			

Sample ID: **MB-77219**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **77219**	RunNo: **99393**							
Prep Date: **8/30/2023**	Analysis Date: **8/30/2023**	SeqNo: **3626972**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77219**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **77219**	RunNo: **99393**							
Prep Date: **8/30/2023**	Analysis Date: **8/30/2023**	SeqNo: **3626973**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.8	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308G08**

08-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **MB-77193**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **77193**	RunNo: **99363**
Prep Date: **8/30/2023**	Analysis Date: **8/30/2023**	SeqNo: **3625803** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		109	69	147			

Sample ID: **LCS-77193**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **77193**	RunNo: **99363**
Prep Date: **8/30/2023**	Analysis Date: **8/30/2023**	SeqNo: **3625804** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	90.6	61.9	130			
Surr: DNOP	4.2		5.000		84.3	69	147			

Sample ID: **2308G08-020AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH-72a**	Batch ID: **77193**	RunNo: **99363**
Prep Date: **8/30/2023**	Analysis Date: **8/30/2023**	SeqNo: **3625826** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.3	46.47	0	108	54.2	135			
Surr: DNOP	4.5		4.647		96.0	69	147			

Sample ID: **2308G08-020AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH-72a**	Batch ID: **77193**	RunNo: **99363**
Prep Date: **8/30/2023**	Analysis Date: **8/30/2023**	SeqNo: **3625827** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.2	45.91	0	105	54.2	135	4.04	29.2	
Surr: DNOP	4.4		4.591		95.9	69	147	0	0	

Sample ID: **MB-77197**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **77197**	RunNo: **99363**
Prep Date: **8/30/2023**	Analysis Date: **8/30/2023**	SeqNo: **3625829** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.9		10.00		99.2	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308G08**

08-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **LCS-77197**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **77197**	RunNo: **99363**
Prep Date: **8/30/2023**	Analysis Date: **8/30/2023**	SeqNo: **3625830** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	105	61.9	130			
Surr: DNOP	4.7		5.000		94.0	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308G08**

08-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/30/2023**	SeqNo: **3625421** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2200		1000		220	15	244			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **R99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/30/2023**	SeqNo: **3625422** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	980		1000		98.3	15	244			

Sample ID: **2308G08-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH-135**	Batch ID: **G99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/30/2023**	SeqNo: **3625676** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.8	24.22	0	98.4	70	130			
Surr: BFB	2000		969.0		211	15	244			

Sample ID: **2308G08-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH-135**	Batch ID: **G99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/30/2023**	SeqNo: **3625677** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.8	24.22	0	91.4	70	130	7.38	20	
Surr: BFB	2000		969.0		209	15	244	0	0	

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/30/2023**	SeqNo: **3625694** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2100		1000		212	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **R99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/30/2023**	SeqNo: **3625695** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	980		1000		97.8	15	244			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308G08**

08-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **2308G08-018ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH-154**	Batch ID: **G99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/30/2023**	SeqNo: **3625697** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.6	22.92	0	92.8	70	130			
Surr: BFB	1900		916.6		207	15	244			

Sample ID: **2308G08-018amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH-154**	Batch ID: **G99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/30/2023**	SeqNo: **3625698** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.6	22.92	0	90.3	70	130	2.75	20	
Surr: BFB	1800		916.6		200	15	244	0	0	

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R99415**	RunNo: **99415**
Prep Date:	Analysis Date: **9/1/2023**	SeqNo: **3628340** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2200		1000		216	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **R99415**	RunNo: **99415**
Prep Date:	Analysis Date: **9/1/2023**	SeqNo: **3628341** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		100	15	244			

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R99415**	RunNo: **99415**
Prep Date:	Analysis Date: **9/2/2023**	SeqNo: **3629541** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2100		1000		211	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **R99415**	RunNo: **99415**
Prep Date:	Analysis Date: **9/2/2023**	SeqNo: **3629542** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		102	15	244			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308G08**

08-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **R99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/30/2023**	SeqNo: **3625434** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	94.4	70	130			
Toluene	0.95	0.050	1.000	0	95.2	70	130			
Ethylbenzene	0.97	0.050	1.000	0	97.2	70	130			
Xylenes, Total	2.9	0.10	3.000	0	97.2	70	130			
Surr: 4-Bromofluorobenzene	0.96		1.000		95.5	39.1	146			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **R99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/30/2023**	SeqNo: **3625436** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.91		1.000		91.1	39.1	146			

Sample ID: **2308G08-002ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-136**	Batch ID: **R99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/30/2023**	SeqNo: **3625719** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.74	0.020	0.7930	0	92.9	70	130			
Toluene	0.74	0.040	0.7930	0	92.8	70	130			
Ethylbenzene	0.76	0.040	0.7930	0	95.6	70	130			
Xylenes, Total	2.3	0.079	2.379	0	95.8	70	130			
Surr: 4-Bromofluorobenzene	0.74		0.7930		93.9	39.1	146			

Sample ID: **2308G08-002amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-136**	Batch ID: **R99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/30/2023**	SeqNo: **3625720** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.73	0.020	0.7930	0	92.5	70	130	0.436	20	
Toluene	0.74	0.040	0.7930	0	93.0	70	130	0.203	20	
Ethylbenzene	0.75	0.040	0.7930	0	94.6	70	130	1.03	20	
Xylenes, Total	2.3	0.079	2.379	0	94.9	70	130	0.928	20	
Surr: 4-Bromofluorobenzene	0.75		0.7930		94.9	39.1	146	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308G08**

08-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **R99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/30/2023**	SeqNo: **3625736** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	95.4	70	130			
Toluene	0.97	0.050	1.000	0	96.5	70	130			
Ethylbenzene	0.98	0.050	1.000	0	97.6	70	130			
Xylenes, Total	2.9	0.10	3.000	0	97.9	70	130			
Surr: 4-Bromofluorobenzene	0.94		1.000		94.3	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **R99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/30/2023**	SeqNo: **3625737** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.92		1.000		91.5	39.1	146			

Sample ID: **2308G08-019ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-77a**	Batch ID: **R99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/31/2023**	SeqNo: **3625740** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.73	0.020	0.7949	0	92.3	70	130			
Toluene	0.74	0.040	0.7949	0	92.8	70	130			
Ethylbenzene	0.75	0.040	0.7949	0	94.6	70	130			
Xylenes, Total	2.3	0.079	2.385	0	94.9	70	130			
Surr: 4-Bromofluorobenzene	0.74		0.7949		92.5	39.1	146			

Sample ID: **2308G08-019amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-77a**	Batch ID: **R99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/31/2023**	SeqNo: **3625741** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.71	0.020	0.7949	0	89.9	70	130	2.62	20	
Toluene	0.72	0.040	0.7949	0	90.2	70	130	2.92	20	
Ethylbenzene	0.73	0.040	0.7949	0	91.3	70	130	3.60	20	
Xylenes, Total	2.2	0.079	2.385	0	91.2	70	130	3.94	20	
Surr: 4-Bromofluorobenzene	0.70		0.7949		88.4	39.1	146	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308G08**

08-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **R99415**	RunNo: **99415**
Prep Date:	Analysis Date: **9/1/2023**	SeqNo: **3628346** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	89.9	70	130			
Toluene	0.90	0.050	1.000	0	90.0	70	130			
Ethylbenzene	0.93	0.050	1.000	0	92.6	70	130			
Xylenes, Total	2.8	0.10	3.000	0	92.9	70	130			
Surr: 4-Bromofluorobenzene	0.94		1.000		93.8	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **R99415**	RunNo: **99415**
Prep Date:	Analysis Date: **9/1/2023**	SeqNo: **3628347** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.93		1.000		92.9	39.1	146			

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **R99415**	RunNo: **99415**
Prep Date:	Analysis Date: **9/2/2023**	SeqNo: **3629607** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	91.7	70	130			
Toluene	0.92	0.050	1.000	0	91.7	70	130			
Ethylbenzene	0.93	0.050	1.000	0	93.1	70	130			
Xylenes, Total	2.8	0.10	3.000	0	93.2	70	130			
Surr: 4-Bromofluorobenzene	0.92		1.000		92.3	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **R99415**	RunNo: **99415**
Prep Date:	Analysis Date: **9/2/2023**	SeqNo: **3629608** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.93		1.000		93.4	39.1	146			

Qualifiers:

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

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: GHD Work Order Number: 2308G08 RcptNo: 1

Received By: Tracy Casarrubias 8/30/2023 7:10:00 AM

Completed By: Tracy Casarrubias 8/30/2023 7:55:21 AM

Reviewed By: 8-30-23

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: YMS 8/30/23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.0	Good	Yes	Yogi		
2	0.7	Good	Yes	Yogi		
3	2.8	Good	Yes	Yogi		
4	1.4	Good	Yes	Yogi		

Received by OCD: 12/4/2024 10:43:20 AM

Released to Imaging: 3/12/2025 11:29:45 AM

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy #400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: Nate.Reece@ghd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 24hr

Project Name: DelcK Matador Produced water

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna Crapo

On Ice: ☑ Yes ☐ No

# of Coolers: 4

Cooler Temp(including CF): See Checklist (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

needs tested to be for chloride

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308608	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8-28-23	1100	S	BH-56a	1 glass	N/A	021	X	X					X			
	1102		BH-57a			022										
	1104		BH-58a			023										
	1106		BH-61a			024										
	1108		BH-62a			025										
	1110		SW-10			026										
	1112		SW-11			027										
	1114		SW-12			028										
	1116		SW-13			029										
	1118		SW-14			030										
	1120		SW-15			031										
↓	1122	↓	SW-16	↓	↓	032	↓	↓					↓			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
8/29	830				8/29/23	830
8/29/23	1900			Courier	9/5/23	7:00

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy #400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: nate.Reece@ghd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 24hr

Project Name: Delek Matador Produced water

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna Crapo

On Ice: ☑ Yes ☐ No

# of Coolers: 4

Cooler Temp(including CF): See Chellist (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

needs to be tested for chloride

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308G08	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8-25-23	1324	S	BH-149	1 glass	N/A	013	X	X					X			
	1326		BH-150			014										
	1328		BH-151			015										
	1420		BH-152			016										
	1422		BH-153			017										
	1424		BH-154			018										
	1500		BH-77a			019										
	1502		BH-72a			020										

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
8/25	1650				8/29/23	850
8/29/23	1900				8/30/23	7:10

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy #400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: nate.Reece@ghd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 24hr

Project Name: DeleK Matador Produced water

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna Crapo

On Ice: ☒ Yes ☐ No

# of Coolers: 4

Cooler Temp(including CF): See Checklist (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

needs tested to be for chloride

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308608	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8-25-23	0720	S	BH-135	1glass	N/A	001	X	X					X			
	0722		BH-136			002										
	0724		BH-138			003										
	0726		BH-89			004										
	0728		BH-90			005										
	0730		BH-93			006										
	0732		BH-95			007										
	1314		BH-144			008										
	1316		BH-145			009										
	1318		BH-146			010										
	1320		BH-147			011										
	1322		BH-148			012										

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
8/25	1650				8/29/23	830
8/29/23	1900			courier	8/30/23	7:10

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy #400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: nate.Reece@ghd.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☐ Standard ☒ Rush 24hr

Project Name: Delek Matador Produced water

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna Crapo

On Ice: ☒ Yes ☐ No

# of Coolers: 4

Cooler Temp (Including CF): See Checklist (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

needs tested to be for chloride

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308G05	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8-28-23	1124	S	SW-17	1 glass	N/A	033	X	X					X			
	1126		SW-18			034										
	1128		SW-19			035										
	1330		SW-20			036										
	1332		SW-21			037										
	1334		SW-22			038										
	1336		SW-23			039										
	1338		SW-24			040										
	1340		SW-25			041										
	1342		SW-26			042										
	1344		SW-27			043										
	1346		SW-28			044										

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
8/29	830				8/29/23	830
8/29/23	1900			courier	8/30/23	7:10

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy #400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: nate.Reece@ghd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 24hr

Project Name: Delek Matador Produced water

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna Crapo

On Ice: ☒ Yes ☐ No

# of Coolers: 4

Cooler Temp(including CF): 5.1 (Chilled) (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

needs test to be for chlorid

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308b08	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8-28-23	1348	S	SW-29	1 glass	N/A	045	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
8/29	830				8/29/23	830
8/29/23	1900			courier	8/30/23	7:10

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 11, 2023

Nate Reece
GHD
6320 Rothway Ste 100
Houston, TX 77040
TEL: (713) 275-3838
FAX:

RE: Delek Matador Produced Water OrderNo.: 2309017

Dear Nate Reece:

Hall Environmental Analysis Laboratory received 48 sample(s) on 9/1/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-155
Project: Delek Matador Produced Water **Collection Date:** 8/29/2023 7:20:00 AM
Lab ID: 2309017-001 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/1/2023 1:46:35 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/1/2023 1:46:35 PM
Surr: DNOP	89.8	69-147		%Rec	1	9/1/2023 1:46:35 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/1/2023 9:32:45 PM
Surr: BFB	95.3	15-244		%Rec	1	9/1/2023 9:32:45 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	9/1/2023 9:32:45 PM
Toluene	ND	0.048		mg/Kg	1	9/1/2023 9:32:45 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/1/2023 9:32:45 PM
Xylenes, Total	ND	0.096		mg/Kg	1	9/1/2023 9:32:45 PM
Surr: 4-Bromofluorobenzene	107	39.1-146		%Rec	1	9/1/2023 9:32:45 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	190	60		mg/Kg	20	9/1/2023 5:23:51 PM

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

CLIENT: GHD **Client Sample ID:** BH-156
Project: Delek Matador Produced Water **Collection Date:** 8/29/2023 7:22:00 AM
Lab ID: 2309017-002 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	9/1/2023 2:37:28 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/1/2023 2:37:28 PM
Surr: DNOP	96.9	69-147		%Rec	1	9/1/2023 2:37:28 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	9/1/2023 9:56:14 PM
Surr: BFB	93.4	15-244		%Rec	1	9/1/2023 9:56:14 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	9/1/2023 9:56:14 PM
Toluene	ND	0.045		mg/Kg	1	9/1/2023 9:56:14 PM
Ethylbenzene	ND	0.045		mg/Kg	1	9/1/2023 9:56:14 PM
Xylenes, Total	ND	0.091		mg/Kg	1	9/1/2023 9:56:14 PM
Surr: 4-Bromofluorobenzene	105	39.1-146		%Rec	1	9/1/2023 9:56:14 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	90	60		mg/Kg	20	9/1/2023 5:36:15 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-157
Project: Delek Matador Produced Water **Collection Date:** 8/29/2023 7:24:00 AM
Lab ID: 2309017-003 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	9/1/2023 2:48:15 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/1/2023 2:48:15 PM
Surr: DNOP	89.2	69-147		%Rec	1	9/1/2023 2:48:15 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.7		mg/Kg	1	9/1/2023 10:19:43 PM
Surr: BFB	91.6	15-244		%Rec	1	9/1/2023 10:19:43 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.028		mg/Kg	1	9/1/2023 10:19:43 PM
Toluene	ND	0.057		mg/Kg	1	9/1/2023 10:19:43 PM
Ethylbenzene	ND	0.057		mg/Kg	1	9/1/2023 10:19:43 PM
Xylenes, Total	ND	0.11		mg/Kg	1	9/1/2023 10:19:43 PM
Surr: 4-Bromofluorobenzene	102	39.1-146		%Rec	1	9/1/2023 10:19:43 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	400	60		mg/Kg	20	9/1/2023 5:48:40 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-158
Project: Delek Matador Produced Water **Collection Date:** 8/29/2023 7:26:00 AM
Lab ID: 2309017-004 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	8.6		mg/Kg	1	9/1/2023 3:09:40 PM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	9/1/2023 3:09:40 PM
Surr: DNOP	93.1	69-147		%Rec	1	9/1/2023 3:09:40 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.1		mg/Kg	1	9/1/2023 11:06:33 PM
Surr: BFB	90.0	15-244		%Rec	1	9/1/2023 11:06:33 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.026		mg/Kg	1	9/1/2023 11:06:33 PM
Toluene	ND	0.051		mg/Kg	1	9/1/2023 11:06:33 PM
Ethylbenzene	ND	0.051		mg/Kg	1	9/1/2023 11:06:33 PM
Xylenes, Total	ND	0.10		mg/Kg	1	9/1/2023 11:06:33 PM
Surr: 4-Bromofluorobenzene	101	39.1-146		%Rec	1	9/1/2023 11:06:33 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	760	60		mg/Kg	20	9/1/2023 5:56:49 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-159
Project: Delek Matador Produced Water **Collection Date:** 8/29/2023 7:28:00 AM
Lab ID: 2309017-005 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	9/1/2023 3:20:38 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	9/1/2023 3:20:38 PM
Surr: DNOP	96.6	69-147		%Rec	1	9/1/2023 3:20:38 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.1		mg/Kg	1	9/1/2023 11:29:55 PM
Surr: BFB	92.6	15-244		%Rec	1	9/1/2023 11:29:55 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	9/1/2023 11:29:55 PM
Toluene	ND	0.051		mg/Kg	1	9/1/2023 11:29:55 PM
Ethylbenzene	ND	0.051		mg/Kg	1	9/1/2023 11:29:55 PM
Xylenes, Total	ND	0.10		mg/Kg	1	9/1/2023 11:29:55 PM
Surr: 4-Bromofluorobenzene	105	39.1-146		%Rec	1	9/1/2023 11:29:55 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	190	60		mg/Kg	20	9/1/2023 6:34:02 PM

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

CLIENT: GHD **Client Sample ID:** BH-160
Project: Delek Matador Produced Water **Collection Date:** 8/29/2023 7:30:00 AM
Lab ID: 2309017-006 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/1/2023 3:31:33 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/1/2023 3:31:33 PM
Surr: DNOP	94.0	69-147		%Rec	1	9/1/2023 3:31:33 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	9/1/2023 11:53:12 PM
Surr: BFB	92.2	15-244		%Rec	1	9/1/2023 11:53:12 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.021		mg/Kg	1	9/1/2023 11:53:12 PM
Toluene	ND	0.043		mg/Kg	1	9/1/2023 11:53:12 PM
Ethylbenzene	ND	0.043		mg/Kg	1	9/1/2023 11:53:12 PM
Xylenes, Total	ND	0.086		mg/Kg	1	9/1/2023 11:53:12 PM
Surr: 4-Bromofluorobenzene	104	39.1-146		%Rec	1	9/1/2023 11:53:12 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	250	60		mg/Kg	20	9/1/2023 7:11:16 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-161
Project: Delek Matador Produced Water **Collection Date:** 8/29/2023 7:32:00 AM
Lab ID: 2309017-007 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	9/1/2023 3:42:28 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/1/2023 3:42:28 PM
Surr: DNOP	93.2	69-147		%Rec	1	9/1/2023 3:42:28 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.2		mg/Kg	1	9/2/2023 12:16:33 AM
Surr: BFB	89.2	15-244		%Rec	1	9/2/2023 12:16:33 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.026		mg/Kg	1	9/2/2023 12:16:33 AM
Toluene	ND	0.052		mg/Kg	1	9/2/2023 12:16:33 AM
Ethylbenzene	ND	0.052		mg/Kg	1	9/2/2023 12:16:33 AM
Xylenes, Total	ND	0.10		mg/Kg	1	9/2/2023 12:16:33 AM
Surr: 4-Bromofluorobenzene	100	39.1-146		%Rec	1	9/2/2023 12:16:33 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	490	60		mg/Kg	20	9/1/2023 7:23:40 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-162
Project: Delek Matador Produced Water **Collection Date:** 8/29/2023 7:34:00 AM
Lab ID: 2309017-008 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	9/1/2023 4:06:17 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	9/1/2023 4:06:17 PM
Surr: DNOP	87.9	69-147		%Rec	1	9/1/2023 4:06:17 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	9/2/2023 12:39:49 AM
Surr: BFB	91.5	15-244		%Rec	1	9/2/2023 12:39:49 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	9/2/2023 12:39:49 AM
Toluene	ND	0.046		mg/Kg	1	9/2/2023 12:39:49 AM
Ethylbenzene	ND	0.046		mg/Kg	1	9/2/2023 12:39:49 AM
Xylenes, Total	ND	0.092		mg/Kg	1	9/2/2023 12:39:49 AM
Surr: 4-Bromofluorobenzene	104	39.1-146		%Rec	1	9/2/2023 12:39:49 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	390	61		mg/Kg	20	9/1/2023 8:00:54 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-163
Project: Delek Matador Produced Water **Collection Date:** 8/29/2023 7:36:00 AM
Lab ID: 2309017-009 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	9/1/2023 4:17:11 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/1/2023 4:17:11 PM
Surr: DNOP	89.4	69-147		%Rec	1	9/1/2023 4:17:11 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/2/2023 1:03:07 AM
Surr: BFB	93.4	15-244		%Rec	1	9/2/2023 1:03:07 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	9/2/2023 1:03:07 AM
Toluene	ND	0.049		mg/Kg	1	9/2/2023 1:03:07 AM
Ethylbenzene	ND	0.049		mg/Kg	1	9/2/2023 1:03:07 AM
Xylenes, Total	ND	0.098		mg/Kg	1	9/2/2023 1:03:07 AM
Surr: 4-Bromofluorobenzene	106	39.1-146		%Rec	1	9/2/2023 1:03:07 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	940	60		mg/Kg	20	9/1/2023 8:13:19 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-164
Project: Delek Matador Produced Water **Collection Date:** 8/29/2023 7:38:00 AM
Lab ID: 2309017-010 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	9/1/2023 4:28:04 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/1/2023 4:28:04 PM
Surr: DNOP	90.1	69-147		%Rec	1	9/1/2023 4:28:04 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	9/2/2023 1:26:24 AM
Surr: BFB	93.2	15-244		%Rec	1	9/2/2023 1:26:24 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.022		mg/Kg	1	9/2/2023 1:26:24 AM
Toluene	ND	0.043		mg/Kg	1	9/2/2023 1:26:24 AM
Ethylbenzene	ND	0.043		mg/Kg	1	9/2/2023 1:26:24 AM
Xylenes, Total	ND	0.087		mg/Kg	1	9/2/2023 1:26:24 AM
Surr: 4-Bromofluorobenzene	106	39.1-146		%Rec	1	9/2/2023 1:26:24 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	740	60		mg/Kg	20	9/1/2023 8:25:43 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-165
Project: Delek Matador Produced Water **Collection Date:** 8/29/2023 8:42:00 AM
Lab ID: 2309017-011 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	27	9.1		mg/Kg	1	9/1/2023 4:38:55 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/1/2023 4:38:55 PM
Surr: DNOP	94.0	69-147		%Rec	1	9/1/2023 4:38:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	9/2/2023 1:49:42 AM
Surr: BFB	87.1	15-244		%Rec	1	9/2/2023 1:49:42 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.016		mg/Kg	1	9/2/2023 1:49:42 AM
Toluene	ND	0.033		mg/Kg	1	9/2/2023 1:49:42 AM
Ethylbenzene	ND	0.033		mg/Kg	1	9/2/2023 1:49:42 AM
Xylenes, Total	ND	0.066		mg/Kg	1	9/2/2023 1:49:42 AM
Surr: 4-Bromofluorobenzene	99.6	39.1-146		%Rec	1	9/2/2023 1:49:42 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	570	60		mg/Kg	20	9/1/2023 8:38:08 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-166
Project: Delek Matador Produced Water **Collection Date:** 8/29/2023 8:44:00 AM
Lab ID: 2309017-012 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	14	9.3		mg/Kg	1	9/1/2023 4:49:45 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/1/2023 4:49:45 PM
Surr: DNOP	90.5	69-147		%Rec	1	9/1/2023 4:49:45 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	9/2/2023 2:13:00 AM
Surr: BFB	90.2	15-244		%Rec	1	9/2/2023 2:13:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.017		mg/Kg	1	9/2/2023 2:13:00 AM
Toluene	ND	0.033		mg/Kg	1	9/2/2023 2:13:00 AM
Ethylbenzene	ND	0.033		mg/Kg	1	9/2/2023 2:13:00 AM
Xylenes, Total	ND	0.066		mg/Kg	1	9/2/2023 2:13:00 AM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	9/2/2023 2:13:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	250	60		mg/Kg	20	9/1/2023 8:50:32 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-171
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 7:40:00 AM
Lab ID: 2309017-013 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	9/1/2023 5:11:13 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/1/2023 5:11:13 PM
Surr: DNOP	92.5	69-147		%Rec	1	9/1/2023 5:11:13 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/2/2023 2:36:23 AM
Surr: BFB	93.6	15-244		%Rec	1	9/2/2023 2:36:23 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	9/2/2023 2:36:23 AM
Toluene	ND	0.050		mg/Kg	1	9/2/2023 2:36:23 AM
Ethylbenzene	ND	0.050		mg/Kg	1	9/2/2023 2:36:23 AM
Xylenes, Total	ND	0.10		mg/Kg	1	9/2/2023 2:36:23 AM
Surr: 4-Bromofluorobenzene	106	39.1-146		%Rec	1	9/2/2023 2:36:23 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	210	60		mg/Kg	20	9/1/2023 9:02:56 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-172
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 7:45:00 AM
Lab ID: 2309017-014 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	33	9.8		mg/Kg	1	9/1/2023 5:22:01 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/1/2023 5:22:01 PM
Surr: DNOP	87.9	69-147		%Rec	1	9/1/2023 5:22:01 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/2/2023 3:23:21 AM
Surr: BFB	90.1	15-244		%Rec	1	9/2/2023 3:23:21 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	9/2/2023 3:23:21 AM
Toluene	ND	0.049		mg/Kg	1	9/2/2023 3:23:21 AM
Ethylbenzene	ND	0.049		mg/Kg	1	9/2/2023 3:23:21 AM
Xylenes, Total	ND	0.098		mg/Kg	1	9/2/2023 3:23:21 AM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	9/2/2023 3:23:21 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	1500	60		mg/Kg	20	9/1/2023 9:15:20 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-173
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 7:50:00 AM
Lab ID: 2309017-015 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	28	8.4		mg/Kg	1	9/1/2023 5:32:49 PM
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	9/1/2023 5:32:49 PM
Surr: DNOP	92.2	69-147		%Rec	1	9/1/2023 5:32:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	9/2/2023 3:46:42 AM
Surr: BFB	90.6	15-244		%Rec	1	9/2/2023 3:46:42 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.018		mg/Kg	1	9/2/2023 3:46:42 AM
Toluene	ND	0.036		mg/Kg	1	9/2/2023 3:46:42 AM
Ethylbenzene	ND	0.036		mg/Kg	1	9/2/2023 3:46:42 AM
Xylenes, Total	ND	0.071		mg/Kg	1	9/2/2023 3:46:42 AM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	9/2/2023 3:46:42 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	860	60		mg/Kg	20	9/1/2023 9:27:45 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-174
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 7:55:00 AM
Lab ID: 2309017-016 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	9/1/2023 5:43:39 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/1/2023 5:43:39 PM
Surr: DNOP	92.2	69-147		%Rec	1	9/1/2023 5:43:39 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	9/2/2023 4:10:02 AM
Surr: BFB	92.6	15-244		%Rec	1	9/2/2023 4:10:02 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.018		mg/Kg	1	9/2/2023 4:10:02 AM
Toluene	ND	0.036		mg/Kg	1	9/2/2023 4:10:02 AM
Ethylbenzene	ND	0.036		mg/Kg	1	9/2/2023 4:10:02 AM
Xylenes, Total	ND	0.072		mg/Kg	1	9/2/2023 4:10:02 AM
Surr: 4-Bromofluorobenzene	105	39.1-146		%Rec	1	9/2/2023 4:10:02 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	150	60		mg/Kg	20	9/1/2023 9:40:09 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-175
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 8:00:00 AM
Lab ID: 2309017-017 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	9/1/2023 5:54:34 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	9/1/2023 5:54:34 PM
Surr: DNOP	91.1	69-147		%Rec	1	9/1/2023 5:54:34 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	9/2/2023 4:33:23 AM
Surr: BFB	91.6	15-244		%Rec	1	9/2/2023 4:33:23 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.019		mg/Kg	1	9/2/2023 4:33:23 AM
Toluene	ND	0.038		mg/Kg	1	9/2/2023 4:33:23 AM
Ethylbenzene	ND	0.038		mg/Kg	1	9/2/2023 4:33:23 AM
Xylenes, Total	ND	0.077		mg/Kg	1	9/2/2023 4:33:23 AM
Surr: 4-Bromofluorobenzene	104	39.1-146		%Rec	1	9/2/2023 4:33:23 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	89	60		mg/Kg	20	9/1/2023 9:52:34 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-176
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 8:05:00 AM
Lab ID: 2309017-018 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	9/1/2023 6:05:33 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/1/2023 6:05:33 PM
Surr: DNOP	90.6	69-147		%Rec	1	9/1/2023 6:05:33 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	9/2/2023 4:56:49 AM
Surr: BFB	94.7	15-244		%Rec	1	9/2/2023 4:56:49 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.018		mg/Kg	1	9/2/2023 4:56:49 AM
Toluene	ND	0.036		mg/Kg	1	9/2/2023 4:56:49 AM
Ethylbenzene	ND	0.036		mg/Kg	1	9/2/2023 4:56:49 AM
Xylenes, Total	ND	0.072		mg/Kg	1	9/2/2023 4:56:49 AM
Surr: 4-Bromofluorobenzene	107	39.1-146		%Rec	1	9/2/2023 4:56:49 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	120	60		mg/Kg	20	9/1/2023 10:29:48 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-177
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 8:10:00 AM
Lab ID: 2309017-019 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	9/1/2023 6:16:33 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	9/1/2023 6:16:33 PM
Surr: DNOP	87.2	69-147		%Rec	1	9/1/2023 6:16:33 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	9/2/2023 5:20:20 AM
Surr: BFB	93.8	15-244		%Rec	1	9/2/2023 5:20:20 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.016		mg/Kg	1	9/2/2023 5:20:20 AM
Toluene	ND	0.032		mg/Kg	1	9/2/2023 5:20:20 AM
Ethylbenzene	ND	0.032		mg/Kg	1	9/2/2023 5:20:20 AM
Xylenes, Total	ND	0.064		mg/Kg	1	9/2/2023 5:20:20 AM
Surr: 4-Bromofluorobenzene	106	39.1-146		%Rec	1	9/2/2023 5:20:20 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	68	60		mg/Kg	20	9/1/2023 10:42:12 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-178
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 8:15:00 AM
Lab ID: 2309017-020 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	9/1/2023 6:27:37 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	9/1/2023 6:27:37 PM
Surr: DNOP	102	69-147		%Rec	1	9/1/2023 6:27:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	9/2/2023 5:43:52 AM
Surr: BFB	91.1	15-244		%Rec	1	9/2/2023 5:43:52 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.019		mg/Kg	1	9/2/2023 5:43:52 AM
Toluene	ND	0.037		mg/Kg	1	9/2/2023 5:43:52 AM
Ethylbenzene	ND	0.037		mg/Kg	1	9/2/2023 5:43:52 AM
Xylenes, Total	ND	0.074		mg/Kg	1	9/2/2023 5:43:52 AM
Surr: 4-Bromofluorobenzene	104	39.1-146		%Rec	1	9/2/2023 5:43:52 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	370	60		mg/Kg	20	9/1/2023 10:54:37 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-179
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 8:20:00 AM
Lab ID: 2309017-021 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/1/2023 9:12:04 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/1/2023 9:12:04 PM
Surr: DNOP	91.1	69-147		%Rec	1	9/1/2023 9:12:04 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	9/2/2023 9:42:00 AM
Surr: BFB	94.7	15-244		%Rec	1	9/2/2023 9:42:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.020		mg/Kg	1	9/2/2023 9:42:00 AM
Toluene	ND	0.040		mg/Kg	1	9/2/2023 9:42:00 AM
Ethylbenzene	ND	0.040		mg/Kg	1	9/2/2023 9:42:00 AM
Xylenes, Total	ND	0.080		mg/Kg	1	9/2/2023 9:42:00 AM
Surr: 4-Bromofluorobenzene	89.9	39.1-146		%Rec	1	9/2/2023 9:42:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	170	60		mg/Kg	20	9/1/2023 11:07:01 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-180
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 8:25:00 AM
Lab ID: 2309017-022 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/1/2023 9:22:57 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/1/2023 9:22:57 PM
Surr: DNOP	88.5	69-147		%Rec	1	9/1/2023 9:22:57 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	9/2/2023 10:47:00 AM
Surr: BFB	97.5	15-244		%Rec	1	9/2/2023 10:47:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.019		mg/Kg	1	9/2/2023 10:47:00 AM
Toluene	ND	0.039		mg/Kg	1	9/2/2023 10:47:00 AM
Ethylbenzene	ND	0.039		mg/Kg	1	9/2/2023 10:47:00 AM
Xylenes, Total	ND	0.077		mg/Kg	1	9/2/2023 10:47:00 AM
Surr: 4-Bromofluorobenzene	90.6	39.1-146		%Rec	1	9/2/2023 10:47:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	180	60		mg/Kg	20	9/1/2023 11:19:26 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-181
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 8:30:00 AM
Lab ID: 2309017-023 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	9/1/2023 9:33:49 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/1/2023 9:33:49 PM
Surr: DNOP	85.0	69-147		%Rec	1	9/1/2023 9:33:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	9/2/2023 11:51:00 AM
Surr: BFB	96.1	15-244		%Rec	1	9/2/2023 11:51:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.018		mg/Kg	1	9/2/2023 11:51:00 AM
Toluene	ND	0.037		mg/Kg	1	9/2/2023 11:51:00 AM
Ethylbenzene	ND	0.037		mg/Kg	1	9/2/2023 11:51:00 AM
Xylenes, Total	ND	0.074		mg/Kg	1	9/2/2023 11:51:00 AM
Surr: 4-Bromofluorobenzene	91.1	39.1-146		%Rec	1	9/2/2023 11:51:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	390	60		mg/Kg	20	9/1/2023 11:31:51 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-182
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 8:35:00 AM
Lab ID: 2309017-024 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	8.6		mg/Kg	1	9/1/2023 9:13:19 PM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	9/1/2023 9:13:19 PM
Surr: DNOP	89.4	69-147		%Rec	1	9/1/2023 9:13:19 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	9/2/2023 12:13:00 PM
Surr: BFB	97.8	15-244		%Rec	1	9/2/2023 12:13:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.021		mg/Kg	1	9/2/2023 12:13:00 PM
Toluene	ND	0.042		mg/Kg	1	9/2/2023 12:13:00 PM
Ethylbenzene	ND	0.042		mg/Kg	1	9/2/2023 12:13:00 PM
Xylenes, Total	ND	0.084		mg/Kg	1	9/2/2023 12:13:00 PM
Surr: 4-Bromofluorobenzene	90.4	39.1-146		%Rec	1	9/2/2023 12:13:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	460	60		mg/Kg	20	9/1/2023 8:30:00 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-183
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 8:40:00 AM
Lab ID: 2309017-025 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/1/2023 9:37:15 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/1/2023 9:37:15 PM
Surr: DNOP	89.5	69-147		%Rec	1	9/1/2023 9:37:15 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	9/2/2023 12:35:00 PM
Surr: BFB	95.3	15-244		%Rec	1	9/2/2023 12:35:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.018		mg/Kg	1	9/2/2023 12:35:00 PM
Toluene	ND	0.036		mg/Kg	1	9/2/2023 12:35:00 PM
Ethylbenzene	ND	0.036		mg/Kg	1	9/2/2023 12:35:00 PM
Xylenes, Total	ND	0.073		mg/Kg	1	9/2/2023 12:35:00 PM
Surr: 4-Bromofluorobenzene	90.3	39.1-146		%Rec	1	9/2/2023 12:35:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	180	60		mg/Kg	20	9/1/2023 9:07:14 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-184
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 8:45:00 AM
Lab ID: 2309017-026 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	9/1/2023 10:01:06 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/1/2023 10:01:06 PM
Surr: DNOP	89.1	69-147		%Rec	1	9/1/2023 10:01:06 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	5.2		mg/Kg	1	9/2/2023 12:57:00 PM
Surr: BFB	98.9	15-244		%Rec	1	9/2/2023 12:57:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.026		mg/Kg	1	9/2/2023 12:57:00 PM
Toluene	ND	0.052		mg/Kg	1	9/2/2023 12:57:00 PM
Ethylbenzene	ND	0.052		mg/Kg	1	9/2/2023 12:57:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	9/2/2023 12:57:00 PM
Surr: 4-Bromofluorobenzene	91.4	39.1-146		%Rec	1	9/2/2023 12:57:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	200	60		mg/Kg	20	9/1/2023 10:09:17 PM

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

CLIENT: GHD **Client Sample ID:** BH-185
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 8:50:00 AM
Lab ID: 2309017-027 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	88	10		mg/Kg	1	9/1/2023 10:24:55 PM
Motor Oil Range Organics (MRO)	64	50		mg/Kg	1	9/1/2023 10:24:55 PM
Surr: DNOP	97.6	69-147		%Rec	1	9/1/2023 10:24:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	9/2/2023 1:19:00 PM
Surr: BFB	98.0	15-244		%Rec	1	9/2/2023 1:19:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.022		mg/Kg	1	9/2/2023 1:19:00 PM
Toluene	ND	0.043		mg/Kg	1	9/2/2023 1:19:00 PM
Ethylbenzene	ND	0.043		mg/Kg	1	9/2/2023 1:19:00 PM
Xylenes, Total	ND	0.087		mg/Kg	1	9/2/2023 1:19:00 PM
Surr: 4-Bromofluorobenzene	92.3	39.1-146		%Rec	1	9/2/2023 1:19:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	320	60		mg/Kg	20	9/1/2023 10:21:42 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-186
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 8:55:00 AM
Lab ID: 2309017-028 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	9/1/2023 10:48:53 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/1/2023 10:48:53 PM
Surr: DNOP	87.9	69-147		%Rec	1	9/1/2023 10:48:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	9/2/2023 1:40:00 PM
Surr: BFB	94.3	15-244		%Rec	1	9/2/2023 1:40:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.019		mg/Kg	1	9/2/2023 1:40:00 PM
Toluene	ND	0.038		mg/Kg	1	9/2/2023 1:40:00 PM
Ethylbenzene	ND	0.038		mg/Kg	1	9/2/2023 1:40:00 PM
Xylenes, Total	ND	0.076		mg/Kg	1	9/2/2023 1:40:00 PM
Surr: 4-Bromofluorobenzene	91.4	39.1-146		%Rec	1	9/2/2023 1:40:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	130	60		mg/Kg	20	9/1/2023 10:34:07 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-187
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 9:00:00 AM
Lab ID: 2309017-029 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	9/1/2023 11:12:44 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	9/1/2023 11:12:44 PM
Surr: DNOP	89.1	69-147		%Rec	1	9/1/2023 11:12:44 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/2/2023 2:02:00 PM
Surr: BFB	101	15-244		%Rec	1	9/2/2023 2:02:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	9/2/2023 2:02:00 PM
Toluene	ND	0.047		mg/Kg	1	9/2/2023 2:02:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	9/2/2023 2:02:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	9/2/2023 2:02:00 PM
Surr: 4-Bromofluorobenzene	94.3	39.1-146		%Rec	1	9/2/2023 2:02:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	130	60		mg/Kg	20	9/1/2023 10:46:31 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-188
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 9:05:00 AM
Lab ID: 2309017-030 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	9/1/2023 11:36:36 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/1/2023 11:36:36 PM
Surr: DNOP	88.9	69-147		%Rec	1	9/1/2023 11:36:36 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	5.1		mg/Kg	1	9/2/2023 2:24:00 PM
Surr: BFB	103	15-244		%Rec	1	9/2/2023 2:24:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.026		mg/Kg	1	9/2/2023 2:24:00 PM
Toluene	ND	0.051		mg/Kg	1	9/2/2023 2:24:00 PM
Ethylbenzene	ND	0.051		mg/Kg	1	9/2/2023 2:24:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	9/2/2023 2:24:00 PM
Surr: 4-Bromofluorobenzene	93.0	39.1-146		%Rec	1	9/2/2023 2:24:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	82	60		mg/Kg	20	9/1/2023 10:58:56 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-189
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 9:10:00 AM
Lab ID: 2309017-031 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	8.6		mg/Kg	1	9/2/2023 12:00:27 AM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	9/2/2023 12:00:27 AM
Surr: DNOP	86.8	69-147		%Rec	1	9/2/2023 12:00:27 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	9/2/2023 3:08:00 PM
Surr: BFB	100	15-244		%Rec	1	9/2/2023 3:08:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.017		mg/Kg	1	9/2/2023 3:08:00 PM
Toluene	ND	0.034		mg/Kg	1	9/2/2023 3:08:00 PM
Ethylbenzene	ND	0.034		mg/Kg	1	9/2/2023 3:08:00 PM
Xylenes, Total	ND	0.068		mg/Kg	1	9/2/2023 3:08:00 PM
Surr: 4-Bromofluorobenzene	92.1	39.1-146		%Rec	1	9/2/2023 3:08:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	190	60		mg/Kg	20	9/1/2023 11:11:20 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-190
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 9:15:00 AM
Lab ID: 2309017-032 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	9/2/2023 12:24:14 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	9/2/2023 12:24:14 AM
Surr: DNOP	88.3	69-147		%Rec	1	9/2/2023 12:24:14 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	9/2/2023 3:30:00 PM
Surr: BFB	101	15-244		%Rec	1	9/2/2023 3:30:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.018		mg/Kg	1	9/2/2023 3:30:00 PM
Toluene	ND	0.037		mg/Kg	1	9/2/2023 3:30:00 PM
Ethylbenzene	ND	0.037		mg/Kg	1	9/2/2023 3:30:00 PM
Xylenes, Total	ND	0.074		mg/Kg	1	9/2/2023 3:30:00 PM
Surr: 4-Bromofluorobenzene	91.2	39.1-146		%Rec	1	9/2/2023 3:30:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	140	60		mg/Kg	20	9/1/2023 11:23:45 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-191
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 9:20:00 AM
Lab ID: 2309017-033 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	9/2/2023 1:11:52 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/2/2023 1:11:52 AM
Surr: DNOP	84.2	69-147		%Rec	1	9/2/2023 1:11:52 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	9/2/2023 3:52:00 PM
Surr: BFB	100	15-244		%Rec	1	9/2/2023 3:52:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.018		mg/Kg	1	9/2/2023 3:52:00 PM
Toluene	ND	0.035		mg/Kg	1	9/2/2023 3:52:00 PM
Ethylbenzene	ND	0.035		mg/Kg	1	9/2/2023 3:52:00 PM
Xylenes, Total	ND	0.071		mg/Kg	1	9/2/2023 3:52:00 PM
Surr: 4-Bromofluorobenzene	92.9	39.1-146		%Rec	1	9/2/2023 3:52:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	200	60		mg/Kg	20	9/1/2023 11:36:10 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-192
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 9:25:00 AM
Lab ID: 2309017-034 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	9/2/2023 1:35:44 AM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	9/2/2023 1:35:44 AM
Surr: DNOP	86.7	69-147		%Rec	1	9/2/2023 1:35:44 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	9/2/2023 4:13:00 PM
Surr: BFB	99.7	15-244		%Rec	1	9/2/2023 4:13:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.017		mg/Kg	1	9/2/2023 4:13:00 PM
Toluene	ND	0.034		mg/Kg	1	9/2/2023 4:13:00 PM
Ethylbenzene	ND	0.034		mg/Kg	1	9/2/2023 4:13:00 PM
Xylenes, Total	ND	0.068		mg/Kg	1	9/2/2023 4:13:00 PM
Surr: 4-Bromofluorobenzene	92.4	39.1-146		%Rec	1	9/2/2023 4:13:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	170	60		mg/Kg	20	9/2/2023 12:13:23 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-194
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 9:35:00 AM
Lab ID: 2309017-035 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	8.4		mg/Kg	1	9/2/2023 1:59:35 AM
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	9/2/2023 1:59:35 AM
Surr: DNOP	90.5	69-147		%Rec	1	9/2/2023 1:59:35 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	9/2/2023 4:35:00 PM
Surr: BFB	102	15-244		%Rec	1	9/2/2023 4:35:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.019		mg/Kg	1	9/2/2023 4:35:00 PM
Toluene	ND	0.037		mg/Kg	1	9/2/2023 4:35:00 PM
Ethylbenzene	ND	0.037		mg/Kg	1	9/2/2023 4:35:00 PM
Xylenes, Total	ND	0.074		mg/Kg	1	9/2/2023 4:35:00 PM
Surr: 4-Bromofluorobenzene	93.3	39.1-146		%Rec	1	9/2/2023 4:35:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	320	60		mg/Kg	20	9/2/2023 12:25:48 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-195
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 9:40:00 AM
Lab ID: 2309017-036 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	9/2/2023 2:23:23 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/2/2023 2:23:23 AM
Surr: DNOP	106	69-147		%Rec	1	9/2/2023 2:23:23 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	9/2/2023 4:57:00 PM
Surr: BFB	99.7	15-244		%Rec	1	9/2/2023 4:57:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.018		mg/Kg	1	9/2/2023 4:57:00 PM
Toluene	ND	0.035		mg/Kg	1	9/2/2023 4:57:00 PM
Ethylbenzene	ND	0.035		mg/Kg	1	9/2/2023 4:57:00 PM
Xylenes, Total	ND	0.071		mg/Kg	1	9/2/2023 4:57:00 PM
Surr: 4-Bromofluorobenzene	93.5	39.1-146		%Rec	1	9/2/2023 4:57:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	9/2/2023 12:38:12 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-196
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 9:45:00 AM
Lab ID: 2309017-037 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	9/2/2023 2:47:11 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/2/2023 2:47:11 AM
Surr: DNOP	86.4	69-147		%Rec	1	9/2/2023 2:47:11 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	9/2/2023 5:19:00 PM
Surr: BFB	106	15-244		%Rec	1	9/2/2023 5:19:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.017		mg/Kg	1	9/2/2023 5:19:00 PM
Toluene	ND	0.033		mg/Kg	1	9/2/2023 5:19:00 PM
Ethylbenzene	ND	0.033		mg/Kg	1	9/2/2023 5:19:00 PM
Xylenes, Total	ND	0.066		mg/Kg	1	9/2/2023 5:19:00 PM
Surr: 4-Bromofluorobenzene	93.2	39.1-146		%Rec	1	9/2/2023 5:19:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	70	60		mg/Kg	20	9/2/2023 12:50:37 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-197
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 9:50:00 AM
Lab ID: 2309017-038 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	9/2/2023 3:11:02 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/2/2023 3:11:02 AM
Surr: DNOP	87.2	69-147		%Rec	1	9/2/2023 3:11:02 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	9/2/2023 5:41:00 PM
Surr: BFB	101	15-244		%Rec	1	9/2/2023 5:41:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.018		mg/Kg	1	9/2/2023 5:41:00 PM
Toluene	ND	0.035		mg/Kg	1	9/2/2023 5:41:00 PM
Ethylbenzene	ND	0.035		mg/Kg	1	9/2/2023 5:41:00 PM
Xylenes, Total	ND	0.070		mg/Kg	1	9/2/2023 5:41:00 PM
Surr: 4-Bromofluorobenzene	93.8	39.1-146		%Rec	1	9/2/2023 5:41:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	71	60		mg/Kg	20	9/2/2023 1:03:02 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

CLIENT: GHD **Client Sample ID:** BH-198
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 9:55:00 AM
Lab ID: 2309017-039 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	9/2/2023 3:34:53 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/2/2023 3:34:53 AM
Surr: DNOP	85.8	69-147		%Rec	1	9/2/2023 3:34:53 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	9/2/2023 6:03:00 PM
Surr: BFB	101	15-244		%Rec	1	9/2/2023 6:03:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.020		mg/Kg	1	9/2/2023 6:03:00 PM
Toluene	ND	0.040		mg/Kg	1	9/2/2023 6:03:00 PM
Ethylbenzene	ND	0.040		mg/Kg	1	9/2/2023 6:03:00 PM
Xylenes, Total	ND	0.081		mg/Kg	1	9/2/2023 6:03:00 PM
Surr: 4-Bromofluorobenzene	93.0	39.1-146		%Rec	1	9/2/2023 6:03:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	96	60		mg/Kg	20	9/2/2023 1:15:27 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-199
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 10:00:00 AM
Lab ID: 2309017-040 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	9/2/2023 3:58:45 AM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	9/2/2023 3:58:45 AM
Surr: DNOP	82.3	69-147		%Rec	1	9/2/2023 3:58:45 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	9/2/2023 6:25:00 PM
Surr: BFB	99.9	15-244		%Rec	1	9/2/2023 6:25:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.016		mg/Kg	1	9/2/2023 6:25:00 PM
Toluene	ND	0.033		mg/Kg	1	9/2/2023 6:25:00 PM
Ethylbenzene	ND	0.033		mg/Kg	1	9/2/2023 6:25:00 PM
Xylenes, Total	ND	0.065		mg/Kg	1	9/2/2023 6:25:00 PM
Surr: 4-Bromofluorobenzene	93.4	39.1-146		%Rec	1	9/2/2023 6:25:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	72	60		mg/Kg	20	9/2/2023 1:27:51 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-200
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 10:05:00 AM
Lab ID: 2309017-041 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	9/2/2023 4:22:39 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	9/2/2023 4:22:39 AM
Surr: DNOP	78.6	69-147		%Rec	1	9/2/2023 4:22:39 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	9/3/2023 3:35:42 PM
Surr: BFB	102	15-244		%Rec	1	9/3/2023 3:35:42 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.021		mg/Kg	1	9/3/2023 3:35:42 PM
Toluene	ND	0.043		mg/Kg	1	9/3/2023 3:35:42 PM
Ethylbenzene	ND	0.043		mg/Kg	1	9/3/2023 3:35:42 PM
Xylenes, Total	ND	0.086		mg/Kg	1	9/3/2023 3:35:42 PM
Surr: 4-Bromofluorobenzene	111	39.1-146		%Rec	1	9/3/2023 3:35:42 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	85	60		mg/Kg	20	9/2/2023 1:40:15 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

CLIENT: GHD **Client Sample ID:** BH-201
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 10:10:00 AM
Lab ID: 2309017-042 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	9/2/2023 4:46:29 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/2/2023 4:46:29 AM
Surr: DNOP	86.2	69-147		%Rec	1	9/2/2023 4:46:29 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	9/3/2023 3:59:21 PM
Surr: BFB	99.8	15-244		%Rec	1	9/3/2023 3:59:21 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.020		mg/Kg	1	9/3/2023 3:59:21 PM
Toluene	ND	0.039		mg/Kg	1	9/3/2023 3:59:21 PM
Ethylbenzene	ND	0.039		mg/Kg	1	9/3/2023 3:59:21 PM
Xylenes, Total	ND	0.079		mg/Kg	1	9/3/2023 3:59:21 PM
Surr: 4-Bromofluorobenzene	110	39.1-146		%Rec	1	9/3/2023 3:59:21 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	9/2/2023 1:52:39 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-202
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 10:15:00 AM
Lab ID: 2309017-043 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	9/2/2023 5:10:19 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	9/2/2023 5:10:19 AM
Surr: DNOP	85.9	69-147		%Rec	1	9/2/2023 5:10:19 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	9/3/2023 4:23:02 PM
Surr: BFB	99.7	15-244		%Rec	1	9/3/2023 4:23:02 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.021		mg/Kg	1	9/3/2023 4:23:02 PM
Toluene	ND	0.041		mg/Kg	1	9/3/2023 4:23:02 PM
Ethylbenzene	ND	0.041		mg/Kg	1	9/3/2023 4:23:02 PM
Xylenes, Total	ND	0.082		mg/Kg	1	9/3/2023 4:23:02 PM
Surr: 4-Bromofluorobenzene	108	39.1-146		%Rec	1	9/3/2023 4:23:02 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	110	60		mg/Kg	20	9/2/2023 2:05:04 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-203
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 10:20:00 AM
Lab ID: 2309017-044 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	9/1/2023 9:44:45 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/1/2023 9:44:45 PM
Surr: DNOP	103	69-147		%Rec	1	9/1/2023 9:44:45 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	9/3/2023 4:46:41 PM
Surr: BFB	101	15-244		%Rec	1	9/3/2023 4:46:41 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.021		mg/Kg	1	9/3/2023 4:46:41 PM
Toluene	ND	0.041		mg/Kg	1	9/3/2023 4:46:41 PM
Ethylbenzene	ND	0.041		mg/Kg	1	9/3/2023 4:46:41 PM
Xylenes, Total	ND	0.083		mg/Kg	1	9/3/2023 4:46:41 PM
Surr: 4-Bromofluorobenzene	110	39.1-146		%Rec	1	9/3/2023 4:46:41 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	580	60		mg/Kg	20	9/5/2023 11:49:14 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-204
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 10:25:00 AM
Lab ID: 2309017-045 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/1/2023 9:55:38 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/1/2023 9:55:38 PM
Surr: DNOP	87.2	69-147		%Rec	1	9/1/2023 9:55:38 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	9/3/2023 5:10:19 PM
Surr: BFB	99.6	15-244		%Rec	1	9/3/2023 5:10:19 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.020		mg/Kg	1	9/3/2023 5:10:19 PM
Toluene	ND	0.040		mg/Kg	1	9/3/2023 5:10:19 PM
Ethylbenzene	ND	0.040		mg/Kg	1	9/3/2023 5:10:19 PM
Xylenes, Total	ND	0.080		mg/Kg	1	9/3/2023 5:10:19 PM
Surr: 4-Bromofluorobenzene	109	39.1-146		%Rec	1	9/3/2023 5:10:19 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	700	60		mg/Kg	20	9/5/2023 12:01:39 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-205
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 10:30:00 AM
Lab ID: 2309017-046 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/1/2023 10:06:35 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/1/2023 10:06:35 PM
Surr: DNOP	82.8	69-147		%Rec	1	9/1/2023 10:06:35 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	9/3/2023 5:34:02 PM
Surr: BFB	103	15-244		%Rec	1	9/3/2023 5:34:02 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.021		mg/Kg	1	9/3/2023 5:34:02 PM
Toluene	ND	0.041		mg/Kg	1	9/3/2023 5:34:02 PM
Ethylbenzene	ND	0.041		mg/Kg	1	9/3/2023 5:34:02 PM
Xylenes, Total	ND	0.083		mg/Kg	1	9/3/2023 5:34:02 PM
Surr: 4-Bromofluorobenzene	112	39.1-146		%Rec	1	9/3/2023 5:34:02 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	70	60		mg/Kg	20	9/5/2023 12:14:04 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-206
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 10:35:00 AM
Lab ID: 2309017-047 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/1/2023 10:17:31 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/1/2023 10:17:31 PM
Surr: DNOP	95.3	69-147		%Rec	1	9/1/2023 10:17:31 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.2		mg/Kg	1	9/3/2023 5:57:40 PM
Surr: BFB	98.7	15-244		%Rec	1	9/3/2023 5:57:40 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.026		mg/Kg	1	9/3/2023 5:57:40 PM
Toluene	ND	0.052		mg/Kg	1	9/3/2023 5:57:40 PM
Ethylbenzene	ND	0.052		mg/Kg	1	9/3/2023 5:57:40 PM
Xylenes, Total	ND	0.10		mg/Kg	1	9/3/2023 5:57:40 PM
Surr: 4-Bromofluorobenzene	107	39.1-146		%Rec	1	9/3/2023 5:57:40 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	9/5/2023 12:26:29 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309017**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-207
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 10:40:00 AM
Lab ID: 2309017-048 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	9/1/2023 10:28:26 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/1/2023 10:28:26 PM
Surr: DNOP	84.8	69-147		%Rec	1	9/1/2023 10:28:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	9/3/2023 6:21:17 PM
Surr: BFB	102	15-244		%Rec	1	9/3/2023 6:21:17 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.021		mg/Kg	1	9/3/2023 6:21:17 PM
Toluene	ND	0.041		mg/Kg	1	9/3/2023 6:21:17 PM
Ethylbenzene	ND	0.041		mg/Kg	1	9/3/2023 6:21:17 PM
Xylenes, Total	ND	0.083		mg/Kg	1	9/3/2023 6:21:17 PM
Surr: 4-Bromofluorobenzene	111	39.1-146		%Rec	1	9/3/2023 6:21:17 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	110	60		mg/Kg	20	9/5/2023 1:03:43 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309017**

11-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **MB-77265**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **77265**	RunNo: **99424**							
Prep Date: **9/1/2023**	Analysis Date: **9/1/2023**	SeqNo: **3629935**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77265**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **77265**	RunNo: **99424**							
Prep Date: **9/1/2023**	Analysis Date: **9/1/2023**	SeqNo: **3629936**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.0	90	110			

Sample ID: **MB-77260**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **77260**	RunNo: **99442**							
Prep Date: **9/1/2023**	Analysis Date: **9/1/2023**	SeqNo: **3630002**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77260**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **77260**	RunNo: **99442**							
Prep Date: **9/1/2023**	Analysis Date: **9/1/2023**	SeqNo: **3630003**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.4	90	110			

Sample ID: **MB-77264**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **77264**	RunNo: **99442**							
Prep Date: **9/1/2023**	Analysis Date: **9/1/2023**	SeqNo: **3630035**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77264**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **77264**	RunNo: **99442**							
Prep Date: **9/1/2023**	Analysis Date: **9/1/2023**	SeqNo: **3630036**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309017**

11-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **MB-77283**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **77283**	RunNo: **99451**
Prep Date: **9/5/2023**	Analysis Date: **9/5/2023**	SeqNo: **3631474** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77283**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **77283**	RunNo: **99451**
Prep Date: **9/5/2023**	Analysis Date: **9/5/2023**	SeqNo: **3631475** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.8	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309017**

11-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **LCS-77257**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **77257**	RunNo: **99417**
Prep Date: **9/1/2023**	Analysis Date: **9/1/2023**	SeqNo: **3628437** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	94.8	61.9	130			
Surr: DNOP	4.3		5.000		85.5	69	147			

Sample ID: **MB-77257**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **77257**	RunNo: **99417**
Prep Date: **9/1/2023**	Analysis Date: **9/1/2023**	SeqNo: **3628438** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.2		10.00		91.7	69	147			

Sample ID: **2309017-020AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH-178**	Batch ID: **77257**	RunNo: **99417**
Prep Date: **9/1/2023**	Analysis Date: **9/1/2023**	SeqNo: **3629077** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	9.0	45.13	0	102	54.2	135			
Surr: DNOP	4.2		4.513		93.3	69	147			

Sample ID: **2309017-020AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH-178**	Batch ID: **77257**	RunNo: **99417**
Prep Date: **9/1/2023**	Analysis Date: **9/1/2023**	SeqNo: **3629078** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	9.4	47.08	0	95.2	54.2	135	2.59	29.2	
Surr: DNOP	3.7		4.708		77.8	69	147	0	0	

Sample ID: **LCS-77261**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **77261**	RunNo: **99417**
Prep Date: **9/1/2023**	Analysis Date: **9/1/2023**	SeqNo: **3629087** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.5	61.9	130			
Surr: DNOP	3.8		5.000		76.5	69	147			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309017**

11-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **MB-77261**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **77261**	RunNo: **99417**
Prep Date: **9/1/2023**	Analysis Date: **9/1/2023**	SeqNo: **3629088** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.2		10.00		81.9	69	147			

Sample ID: **MB-77259**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **77259**	RunNo: **99439**
Prep Date: **9/1/2023**	Analysis Date: **9/1/2023**	SeqNo: **3629636** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.0		10.00		80.3	69	147			

Sample ID: **LCS-77259**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **77259**	RunNo: **99439**
Prep Date: **9/1/2023**	Analysis Date: **9/1/2023**	SeqNo: **3629637** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	99.8	61.9	130			
Surr: DNOP	3.8		5.000		75.8	69	147			

Sample ID: **2309017-043AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH-202**	Batch ID: **77259**	RunNo: **99439**
Prep Date: **9/1/2023**	Analysis Date: **9/2/2023**	SeqNo: **3629672** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	8.7	43.52	0	109	54.2	135			
Surr: DNOP	3.4		4.352		79.3	69	147			

Sample ID: **2309017-043AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH-202**	Batch ID: **77259**	RunNo: **99439**
Prep Date: **9/1/2023**	Analysis Date: **9/2/2023**	SeqNo: **3629673** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	8.9	44.52	0	108	54.2	135	0.997	29.2	
Surr: DNOP	3.5		4.452		77.6	69	147	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309017**

11-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R99415**	RunNo: **99415**
Prep Date:	Analysis Date: **9/1/2023**	SeqNo: **3628340** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.3	70	130			
Surr: BFB	2200		1000		216	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **R99415**	RunNo: **99415**
Prep Date:	Analysis Date: **9/1/2023**	SeqNo: **3628341** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		100	15	244			

Sample ID: **lcs-77172**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **77172**	RunNo: **99411**
Prep Date: **8/29/2023**	Analysis Date: **9/2/2023**	SeqNo: **3628857** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1900		1000		191	15	244			

Sample ID: **mb-77172**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **77172**	RunNo: **99411**
Prep Date: **8/29/2023**	Analysis Date: **9/2/2023**	SeqNo: **3628859** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	940		1000		93.5	15	244			

Sample ID: **2309017-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH-155**	Batch ID: **GS99411**	RunNo: **99411**
Prep Date:	Analysis Date: **9/2/2023**	SeqNo: **3628892** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.8	24.04	0	90.4	70	130			
Surr: BFB	1900		961.5		194	15	244			

Sample ID: **2309017-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH-155**	Batch ID: **GS99411**	RunNo: **99411**
Prep Date:	Analysis Date: **9/2/2023**	SeqNo: **3628893** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.8	24.04	0	90.2	70	130	0.266	20	
Surr: BFB	1900		961.5		194	15	244	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309017**

11-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **GS99411**	RunNo: **99411**
Prep Date:	Analysis Date: **9/1/2023**	SeqNo: **3628913** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.1	70	130			
Surr: BFB	2000		1000		203	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **GS99411**	RunNo: **99411**
Prep Date:	Analysis Date: **9/1/2023**	SeqNo: **3628914** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	950		1000		95.5	15	244			

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **GS99436**	RunNo: **99436**
Prep Date:	Analysis Date: **9/3/2023**	SeqNo: **3629275** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.6	70	130			
Surr: BFB	2000		1000		201	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **GS99436**	RunNo: **99436**
Prep Date:	Analysis Date: **9/3/2023**	SeqNo: **3629279** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		102	15	244			

Sample ID: **2309017-041ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH-200**	Batch ID: **GS99436**	RunNo: **99436**
Prep Date:	Analysis Date: **9/3/2023**	SeqNo: **3629339** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.3	21.38	0	93.7	70	130			
Surr: BFB	1800		855.4		205	15	244			

Sample ID: **2309017-041amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH-200**	Batch ID: **GS99436**	RunNo: **99436**
Prep Date:	Analysis Date: **9/4/2023**	SeqNo: **3629340** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309017**

11-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **2309017-041amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH-200**	Batch ID: **GS99436**	RunNo: **99436**
Prep Date:	Analysis Date: **9/4/2023**	SeqNo: **3629340** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.3	21.38	0	92.8	70	130	0.901	20	
Surr: BFB	1700		855.4		203	15	244	0	0	

Sample ID: **lcs-77209**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **77209**	RunNo: **99415**
Prep Date: **8/30/2023**	Analysis Date: **9/1/2023**	SeqNo: **3629500** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2200		1000		216	15	244			

Sample ID: **mb-77209**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **77209**	RunNo: **99415**
Prep Date: **8/30/2023**	Analysis Date: **9/1/2023**	SeqNo: **3629501** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	980		1000		98.1	15	244			

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R99415**	RunNo: **99415**
Prep Date:	Analysis Date: **9/2/2023**	SeqNo: **3629541** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	83.9	70	130			
Surr: BFB	2100		1000		211	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **R99415**	RunNo: **99415**
Prep Date:	Analysis Date: **9/2/2023**	SeqNo: **3629542** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		102	15	244			

Sample ID: **2309017-021ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH-179**	Batch ID: **G99415**	RunNo: **99415**
Prep Date:	Analysis Date: **9/2/2023**	SeqNo: **3629544** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	4.0	20.00	0	90.7	70	130			
Surr: BFB	1600		800.0		202	15	244			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309017**

11-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **2309017-021amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **BH-179**	Batch ID: **G99415**	RunNo: **99415**							
Prep Date:	Analysis Date: **9/2/2023**	SeqNo: **3629545**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	17	4.0	20.00	0	87.0	70	130	4.14	20	
Surr: BFB	1600		800.0		202	15	244	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309017**

11-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **R99415**	RunNo: **99415**
Prep Date:	Analysis Date: **9/1/2023**	SeqNo: **3628346** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	89.9	70	130			
Toluene	0.90	0.050	1.000	0	90.0	70	130			
Ethylbenzene	0.93	0.050	1.000	0	92.6	70	130			
Xylenes, Total	2.8	0.10	3.000	0	92.9	70	130			
Surr: 4-Bromofluorobenzene	0.94		1.000		93.8	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **R99415**	RunNo: **99415**
Prep Date:	Analysis Date: **9/1/2023**	SeqNo: **3628347** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.93		1.000		92.9	39.1	146			

Sample ID: **2309017-002ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-156**	Batch ID: **BS99411**	RunNo: **99411**
Prep Date:	Analysis Date: **9/2/2023**	SeqNo: **3628948** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.023	0.9066	0	109	70	130			
Toluene	0.99	0.045	0.9066	0	109	70	130			
Ethylbenzene	0.99	0.045	0.9066	0	109	70	130			
Xylenes, Total	3.0	0.091	2.720	0	110	70	130			
Surr: 4-Bromofluorobenzene	0.93		0.9066		103	39.1	146			

Sample ID: **2309017-002amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-156**	Batch ID: **BS99411**	RunNo: **99411**
Prep Date:	Analysis Date: **9/2/2023**	SeqNo: **3628949** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.023	0.9066	0	106	70	130	2.12	20	
Toluene	0.96	0.045	0.9066	0	106	70	130	2.80	20	
Ethylbenzene	0.98	0.045	0.9066	0	108	70	130	1.26	20	
Xylenes, Total	2.9	0.091	2.720	0	108	70	130	1.82	20	
Surr: 4-Bromofluorobenzene	0.97		0.9066		107	39.1	146	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309017**

11-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **BS99411**	RunNo: **99411**
Prep Date:	Analysis Date: **9/1/2023**	SeqNo: **3628968** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	108	70	130			
Toluene	1.1	0.050	1.000	0	108	70	130			
Ethylbenzene	1.1	0.050	1.000	0	108	70	130			
Xylenes, Total	3.3	0.10	3.000	0	109	70	130			
Surr: 4-Bromofluorobenzene	1.1		1.000		110	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **BS99411**	RunNo: **99411**
Prep Date:	Analysis Date: **9/1/2023**	SeqNo: **3628969** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		106	39.1	146			

Sample ID: **LCS-77172**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **77172**	RunNo: **99411**
Prep Date: **8/29/2023**	Analysis Date: **9/2/2023**	SeqNo: **3628971** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		108	39.1	146			

Sample ID: **mb-77172**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **77172**	RunNo: **99411**
Prep Date: **8/29/2023**	Analysis Date: **9/2/2023**	SeqNo: **3628973** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		105	39.1	146			

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **BS99436**	RunNo: **99436**
Prep Date:	Analysis Date: **9/3/2023**	SeqNo: **3629355** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	108	70	130			
Toluene	1.1	0.050	1.000	0	109	70	130			
Ethylbenzene	1.1	0.050	1.000	0	110	70	130			
Xylenes, Total	3.3	0.10	3.000	0	111	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309017**

11-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **BS99436**	RunNo: **99436**
Prep Date:	Analysis Date: **9/3/2023**	SeqNo: **3629355** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		113	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **BS99436**	RunNo: **99436**
Prep Date:	Analysis Date: **9/3/2023**	SeqNo: **3629359** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		111	39.1	146			

Sample ID: **2309017-042ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-201**	Batch ID: **BS99436**	RunNo: **99436**
Prep Date:	Analysis Date: **9/4/2023**	SeqNo: **3629410** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.020	0.7880	0	105	70	130			
Toluene	0.84	0.039	0.7880	0	106	70	130			
Ethylbenzene	0.84	0.039	0.7880	0	106	70	130			
Xylenes, Total	2.6	0.079	2.364	0	109	70	130			
Surr: 4-Bromofluorobenzene	0.86		0.7880		109	39.1	146			

Sample ID: **2309017-042amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-201**	Batch ID: **BS99436**	RunNo: **99436**
Prep Date:	Analysis Date: **9/4/2023**	SeqNo: **3629411** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.020	0.7880	0	102	70	130	3.18	20	
Toluene	0.81	0.039	0.7880	0	103	70	130	3.37	20	
Ethylbenzene	0.82	0.039	0.7880	0	104	70	130	2.04	20	
Xylenes, Total	2.5	0.079	2.364	0	105	70	130	3.50	20	
Surr: 4-Bromofluorobenzene	0.82		0.7880		104	39.1	146	0	0	

Sample ID: **lcs-77209**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **77209**	RunNo: **99415**
Prep Date: **8/30/2023**	Analysis Date: **9/1/2023**	SeqNo: **3629583** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309017**

11-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **lcs-77209**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **77209**	RunNo: **99415**
Prep Date: **8/30/2023**	Analysis Date: **9/1/2023**	SeqNo: **3629583** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.91		1.000		90.9	39.1	146			

Sample ID: **mb-77209**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **77209**	RunNo: **99415**
Prep Date: **8/30/2023**	Analysis Date: **9/1/2023**	SeqNo: **3629584** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.91		1.000		90.6	39.1	146			

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **R99415**	RunNo: **99415**
Prep Date:	Analysis Date: **9/2/2023**	SeqNo: **3629607** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	91.7	70	130			
Toluene	0.92	0.050	1.000	0	91.7	70	130			
Ethylbenzene	0.93	0.050	1.000	0	93.1	70	130			
Xylenes, Total	2.8	0.10	3.000	0	93.2	70	130			
Surr: 4-Bromofluorobenzene	0.92		1.000		92.3	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **R99415**	RunNo: **99415**
Prep Date:	Analysis Date: **9/2/2023**	SeqNo: **3629608** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.93		1.000		93.4	39.1	146			

Sample ID: **2309017-022ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-180**	Batch ID: **R99415**	RunNo: **99415**
Prep Date:	Analysis Date: **9/2/2023**	SeqNo: **3629611** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.64	0.019	0.7740	0	82.6	70	130			
Toluene	0.64	0.039	0.7740	0	82.9	70	130			
Ethylbenzene	0.66	0.039	0.7740	0	84.8	70	130			
Xylenes, Total	2.0	0.077	2.322	0	84.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309017**

11-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **2309017-022ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-180**	Batch ID: **R99415**	RunNo: **99415**
Prep Date:	Analysis Date: **9/2/2023**	SeqNo: **3629611** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.71		0.7740		91.7	39.1	146			

Sample ID: **2309017-022amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-180**	Batch ID: **R99415**	RunNo: **99415**
Prep Date:	Analysis Date: **9/2/2023**	SeqNo: **3629612** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.63	0.019	0.7740	0	81.5	70	130	1.33	20	
Toluene	0.63	0.039	0.7740	0	81.9	70	130	1.31	20	
Ethylbenzene	0.64	0.039	0.7740	0	83.3	70	130	1.83	20	
Xylenes, Total	1.9	0.077	2.322	0	83.1	70	130	2.24	20	
Surr: 4-Bromofluorobenzene	0.69		0.7740		89.5	39.1	146	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: GHD | Work Order Number: 2309017 | RcptNo: 1

Received By: Steve McQuiston 9/1/2023 7:25:00 AM

Completed By: Desiree Dominguez 9/1/2023 9:08:45 AM

Reviewed By: SCM 9/1/23

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
	Samples not frozen.		
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☑	No ☐	NA ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: SCM 9/1/23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	-2.3	Good	Yes	Yogi		

Received by OCD: 12/4/2024 10:43:20 AM

Released to Imaging: 3/12/2025 11:29:45 AM

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy #400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: nate.Reece@ghd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 24hr

Project Name: Delek Matador Produced water

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna Crapo

On Ice: ☒ Yes ☐ No

# of Coolers: 1 YOC

Cooler Temp (including CF): 3.4-0=3.4 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

needs tested to be for chloride

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2309017	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8-29-23	0720	S	BH-155	1 glass	N/A	-001	X	X					X			
	0722		BH-156			-002										
	0724		BH-157			-003										
	0726		BH-158			-004										
	0728		BH-159			-005										
	0730		BH-160			-006										
	0732		BH-161			-007										
	0734		BH-162			-008										
	0736		BH-163			-009										
	0738		BH-164			-010										
	0842		BH-165			-011										
	0844		BH-166			-012										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
8/30	1710				8/31/23	800
8/31/23	1900		SCM	COURIER	9/1/23	0735

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy #400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: Nate.Reece@ghd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 24hr

Project Name: Delek Matador Produced water

Project #: 126184492

Project Manager: Nate Reece

Sampler: Tristanna Crapo

On Ice: ☒ Yes ☐ No

# of Coolers: 1 VOC

Cooler Temp (Including CF): 3.4 -0 = 3.4 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

needs tested for chloride to be

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2309017	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8-30-23	0740	S	BH-171	1 Glass	N/A	-013	X	X					X			
	0745		BH-172			-014										
	0750		BH-173			-015										
	0755		BH-174			-016										
	0800		BH-175			-017										
	0805		BH-176			-018										
	0810		BH-177			-019										
	0815		BH-178			-020										
	0820		BH-179			-021										
	0825		BH-180			-022										
	0830		BH-181			-023										
	0835		BH-182			-024										

Remarks:

Relinquished by:	Date	Time	Received by:	Via:	Date	Time
	8/30	1645				
	8/31/23	1900			8/31/23	800
			SCM	COURIER	9/1/23	0735

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Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy ~~#~~ 400, Houston, TX 77079

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email or Fax#: nate.Reece@ghd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 24hr

Project Name: DeleK Matador Produced water

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna CrapO

On Ice: ☒ Yes ☐ No

# of Coolers: 1 YOGT

Cooler Temp(including CF): 3.4-0=3.4 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
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4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

needs tested to be for chloride

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2309017	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8-30-23	0840	S	BH-183	1 Glass	N/A	-025	X	X					X			
	0845		BH-184			-026										
	0850		BH-185			-027										
	0855		BH-186			-028										
	0900		BH-187			-029										
	0905		BH-188			-030										
	0910		BH-189			-031										
	0915		BH-190			-032										
	0920		BH-191			-033										
	0925		BH-192			-034										
	0935		BH-194			-035										
	0940		BH-195			-036										

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
8/30	1645					
8/31/23	1900		SCM	COURIER	9/1/23	0735

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy
*400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: nate.Reece@ghd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 24hr

Project Name:
DelcK Matador Produced water

Project #:
12618492

Project Manager:
Nate Reece

Sampler: Tristanna Crapo

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 3.4 - 0 = 3.4 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

needs tested to be for chloride

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2309017	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8-30-23	0945	S	BH-196	1 Glass	N/A	-037	X	X					X			
	0950		BH-197			-038										
	0955		BH-198			-039										
	1000		BH-199			-040										
	1005		BH-200			-041										
	1010		BH-201			-042										
	1015		BH-202			-043										
	1020		BH-203			-044										
	1025		BH-204			-045										
	1030		BH-205			-046										
	1035		BH-206			-047										
	1040		BH-207			-048										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
8/30	1645				8/31/23	800
8/31/23	1900		SCM	COURIER	9/1/23	0735

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 11, 2023

Nate Reece
GHD
6320 Rothway Ste 100
Houston, TX 77040
TEL: (713) 275-3838
FAX:

RE: Delek Matador Produced Water OrderNo.: 2309016

Dear Nate Reece:

Hall Environmental Analysis Laboratory received 1 sample(s) on 9/1/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2309016**
Date Reported: **9/11/2023**

CLIENT: GHD **Client Sample ID:** BH-208
Project: Delek Matador Produced Water **Collection Date:** 8/30/2023 10:45:00 AM
Lab ID: 2309016-001 **Matrix:** MEOH (SOIL) **Received Date:** 9/1/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/1/2023 9:01:13 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/1/2023 9:01:13 PM
Surr: DNOP	86.6	69-147		%Rec	1	9/1/2023 9:01:13 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	9/3/2023 6:44:51 PM
Surr: BFB	100	15-244		%Rec	1	9/3/2023 6:44:51 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.022		mg/Kg	1	9/3/2023 6:44:51 PM
Toluene	ND	0.044		mg/Kg	1	9/3/2023 6:44:51 PM
Ethylbenzene	ND	0.044		mg/Kg	1	9/3/2023 6:44:51 PM
Xylenes, Total	ND	0.089		mg/Kg	1	9/3/2023 6:44:51 PM
Surr: 4-Bromofluorobenzene	110	39.1-146		%Rec	1	9/3/2023 6:44:51 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	9/1/2023 5:11:27 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309016**

11-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **MB-77260**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **77260**	RunNo: **99442**
Prep Date: **9/1/2023**	Analysis Date: **9/1/2023**	SeqNo: **3630002** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77260**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **77260**	RunNo: **99442**
Prep Date: **9/1/2023**	Analysis Date: **9/1/2023**	SeqNo: **3630003** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309016**

11-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **LCS-77261**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **77261**	RunNo: **99417**
Prep Date: **9/1/2023**	Analysis Date: **9/1/2023**	SeqNo: **3629087** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.5	61.9	130			
Surr: DNOP	3.8		5.000		76.5	69	147			

Sample ID: **MB-77261**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **77261**	RunNo: **99417**
Prep Date: **9/1/2023**	Analysis Date: **9/1/2023**	SeqNo: **3629088** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.2		10.00		81.9	69	147			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309016**

11-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **GS99436**	RunNo: **99436**
Prep Date:	Analysis Date: **9/3/2023**	SeqNo: **3629275** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.6	70	130			
Surr: BFB	2000		1000		201	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **GS99436**	RunNo: **99436**
Prep Date:	Analysis Date: **9/3/2023**	SeqNo: **3629279** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		102	15	244			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309016**

11-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **BS99436**	RunNo: **99436**
Prep Date:	Analysis Date: **9/3/2023**	SeqNo: **3629355** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	108	70	130			
Toluene	1.1	0.050	1.000	0	109	70	130			
Ethylbenzene	1.1	0.050	1.000	0	110	70	130			
Xylenes, Total	3.3	0.10	3.000	0	111	70	130			
Surr: 4-Bromofluorobenzene	1.1		1.000		113	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **BS99436**	RunNo: **99436**
Prep Date:	Analysis Date: **9/3/2023**	SeqNo: **3629359** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		111	39.1	146			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: GHD | Work Order Number: 2309016 | RcptNo: 1

Received By: Steve McQuiston 9/1/2023 7:25:00 AM

Completed By: Desiree Dominguez 9/1/2023 9:03:37 AM

Reviewed By: JHA 9/1/23

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
	Samples not frozen.		
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: SCM 9/1/23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	-2.3	Good	Yes	Yogi		

Received by OCD: 12/4/2024 10:43:20 AM

Released to Imaging: 3/12/2025 11:29:45 AM

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy #400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: nate.Reece@ghd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 24hr

Project Name: Delek Matador Produced water

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna Crapo

On Ice: ☒ Yes ☐ No

# of Coolers: 1 YOC 1

Cooler Temp (including CF): -2.3+0=-2.3 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

needs tested for chloride to be

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8-30-23	1045	S	BH-208	1 Glass	N/A	2309016-001	X	X					X			

Remarks:
SAMPLES NOT FROZEN.
SCM 9/1/23

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
8/30						
8/31/23	1900		SCM	COURIER	9/1/23	0735

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 12, 2023

Nate Reece
GHD
6320 Rothway Ste 100
Houston, TX 77040
TEL: (713) 275-3838
FAX:

RE: Delek Matador Produced Water OrderNo.: 2309073

Dear Nate Reece:

Hall Environmental Analysis Laboratory received 12 sample(s) on 9/2/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2309073**
Date Reported: **9/12/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** SW-26
Project: Delek Matador Produced Water **Collection Date:** 8/31/2023 8:30:00 AM
Lab ID: 2309073-001 **Matrix:** MEOH (SOIL) **Received Date:** 9/2/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	12	10		mg/Kg	1	9/5/2023 3:11:04 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/5/2023 3:11:04 PM
Surr: DNOP	87.1	69-147		%Rec	1	9/5/2023 3:11:04 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/5/2023 2:20:00 PM
Surr: BFB	97.0	15-244		%Rec	1	9/5/2023 2:20:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	9/5/2023 2:20:00 PM
Toluene	ND	0.047		mg/Kg	1	9/5/2023 2:20:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	9/5/2023 2:20:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	9/5/2023 2:20:00 PM
Surr: 4-Bromofluorobenzene	88.2	39.1-146		%Rec	1	9/5/2023 2:20:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	490	60		mg/Kg	20	9/5/2023 5:00:02 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309073**
Date Reported: **9/12/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** SW-27
Project: Delek Matador Produced Water **Collection Date:** 8/31/2023 8:32:00 AM
Lab ID: 2309073-002 **Matrix:** MEOH (SOIL) **Received Date:** 9/2/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	9/5/2023 3:21:56 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/5/2023 3:21:56 PM
Surr: DNOP	84.9	69-147		%Rec	1	9/5/2023 3:21:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	9/5/2023 2:41:00 PM
Surr: BFB	103	15-244		%Rec	1	9/5/2023 2:41:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.022		mg/Kg	1	9/5/2023 2:41:00 PM
Toluene	ND	0.045		mg/Kg	1	9/5/2023 2:41:00 PM
Ethylbenzene	ND	0.045		mg/Kg	1	9/5/2023 2:41:00 PM
Xylenes, Total	ND	0.090		mg/Kg	1	9/5/2023 2:41:00 PM
Surr: 4-Bromofluorobenzene	91.1	39.1-146		%Rec	1	9/5/2023 2:41:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	120	60		mg/Kg	20	9/5/2023 5:12:26 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309073**
Date Reported: **9/12/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** SW-28
Project: Delek Matador Produced Water **Collection Date:** 8/31/2023 8:40:00 AM
Lab ID: 2309073-003 **Matrix:** MEOH (SOIL) **Received Date:** 9/2/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	68	9.7		mg/Kg	1	9/5/2023 3:32:47 PM
Motor Oil Range Organics (MRO)	54	49		mg/Kg	1	9/5/2023 3:32:47 PM
Surr: DNOP	87.5	69-147		%Rec	1	9/5/2023 3:32:47 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	9/5/2023 3:03:00 PM
Surr: BFB	97.0	15-244		%Rec	1	9/5/2023 3:03:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.020		mg/Kg	1	9/5/2023 3:03:00 PM
Toluene	ND	0.039		mg/Kg	1	9/5/2023 3:03:00 PM
Ethylbenzene	ND	0.039		mg/Kg	1	9/5/2023 3:03:00 PM
Xylenes, Total	ND	0.079		mg/Kg	1	9/5/2023 3:03:00 PM
Surr: 4-Bromofluorobenzene	90.2	39.1-146		%Rec	1	9/5/2023 3:03:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	1500	60		mg/Kg	20	9/5/2023 5:49:39 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309073**
Date Reported: **9/12/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** SW-29
Project: Delek Matador Produced Water **Collection Date:** 8/31/2023 8:45:00 AM
Lab ID: 2309073-004 **Matrix:** MEOH (SOIL) **Received Date:** 9/2/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	56	9.8		mg/Kg	1	9/5/2023 3:43:40 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/5/2023 3:43:40 PM
Surr: DNOP	86.3	69-147		%Rec	1	9/5/2023 3:43:40 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	9/5/2023 3:25:00 PM
Surr: BFB	103	15-244		%Rec	1	9/5/2023 3:25:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.021		mg/Kg	1	9/5/2023 3:25:00 PM
Toluene	ND	0.043		mg/Kg	1	9/5/2023 3:25:00 PM
Ethylbenzene	ND	0.043		mg/Kg	1	9/5/2023 3:25:00 PM
Xylenes, Total	ND	0.086		mg/Kg	1	9/5/2023 3:25:00 PM
Surr: 4-Bromofluorobenzene	91.9	39.1-146		%Rec	1	9/5/2023 3:25:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	560	60		mg/Kg	20	9/5/2023 6:02:04 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309073**
Date Reported: **9/12/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-103a
Project: Delek Matador Produced Water **Collection Date:** 8/31/2023 8:50:00 AM
Lab ID: 2309073-005 **Matrix:** MEOH (SOIL) **Received Date:** 9/2/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/5/2023 4:08:21 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/5/2023 4:08:21 PM
Surr: DNOP	80.1	69-147		%Rec	1	9/5/2023 4:08:21 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	9/5/2023 4:09:00 PM
Surr: BFB	107	15-244		%Rec	1	9/5/2023 4:09:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.021		mg/Kg	1	9/5/2023 4:09:00 PM
Toluene	ND	0.042		mg/Kg	1	9/5/2023 4:09:00 PM
Ethylbenzene	ND	0.042		mg/Kg	1	9/5/2023 4:09:00 PM
Xylenes, Total	ND	0.083		mg/Kg	1	9/5/2023 4:09:00 PM
Surr: 4-Bromofluorobenzene	92.3	39.1-146		%Rec	1	9/5/2023 4:09:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	610	60		mg/Kg	20	9/5/2023 6:14:29 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309073**
Date Reported: **9/12/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-109a
Project: Delek Matador Produced Water **Collection Date:** 8/31/2023 8:52:00 AM
Lab ID: 2309073-006 **Matrix:** MEOH (SOIL) **Received Date:** 9/2/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	9/5/2023 4:19:11 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/5/2023 4:19:11 PM
Surr: DNOP	81.6	69-147		%Rec	1	9/5/2023 4:19:11 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	9/5/2023 4:30:00 PM
Surr: BFB	107	15-244		%Rec	1	9/5/2023 4:30:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.019		mg/Kg	1	9/5/2023 4:30:00 PM
Toluene	ND	0.039		mg/Kg	1	9/5/2023 4:30:00 PM
Ethylbenzene	ND	0.039		mg/Kg	1	9/5/2023 4:30:00 PM
Xylenes, Total	ND	0.078		mg/Kg	1	9/5/2023 4:30:00 PM
Surr: 4-Bromofluorobenzene	89.7	39.1-146		%Rec	1	9/5/2023 4:30:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	380	60		mg/Kg	20	9/5/2023 6:26:54 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309073**
Date Reported: **9/12/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-113a
Project: Delek Matador Produced Water **Collection Date:** 8/31/2023 8:54:00 AM
Lab ID: 2309073-007 **Matrix:** MEOH (SOIL) **Received Date:** 9/2/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	9/5/2023 4:30:02 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/5/2023 4:30:02 PM
Surr: DNOP	81.9	69-147		%Rec	1	9/5/2023 4:30:02 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	9/5/2023 4:52:00 PM
Surr: BFB	103	15-244		%Rec	1	9/5/2023 4:52:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.019		mg/Kg	1	9/5/2023 4:52:00 PM
Toluene	ND	0.038		mg/Kg	1	9/5/2023 4:52:00 PM
Ethylbenzene	ND	0.038		mg/Kg	1	9/5/2023 4:52:00 PM
Xylenes, Total	ND	0.075		mg/Kg	1	9/5/2023 4:52:00 PM
Surr: 4-Bromofluorobenzene	90.4	39.1-146		%Rec	1	9/5/2023 4:52:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	490	60		mg/Kg	20	9/5/2023 6:39:19 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309073**
Date Reported: **9/12/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-129a
Project: Delek Matador Produced Water **Collection Date:** 8/31/2023 9:20:00 AM
Lab ID: 2309073-008 **Matrix:** MEOH (SOIL) **Received Date:** 9/2/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/5/2023 4:40:55 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/5/2023 4:40:55 PM
Surr: DNOP	79.2	69-147		%Rec	1	9/5/2023 4:40:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	9/5/2023 5:14:00 PM
Surr: BFB	99.2	15-244		%Rec	1	9/5/2023 5:14:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.022		mg/Kg	1	9/5/2023 5:14:00 PM
Toluene	ND	0.045		mg/Kg	1	9/5/2023 5:14:00 PM
Ethylbenzene	ND	0.045		mg/Kg	1	9/5/2023 5:14:00 PM
Xylenes, Total	ND	0.089		mg/Kg	1	9/5/2023 5:14:00 PM
Surr: 4-Bromofluorobenzene	88.7	39.1-146		%Rec	1	9/5/2023 5:14:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	1100	60		mg/Kg	20	9/5/2023 6:51:42 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309073**
Date Reported: **9/12/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-133a
Project: Delek Matador Produced Water **Collection Date:** 8/31/2023 9:22:00 AM
Lab ID: 2309073-009 **Matrix:** MEOH (SOIL) **Received Date:** 9/2/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	9/5/2023 4:51:51 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/5/2023 4:51:51 PM
Surr: DNOP	81.1	69-147		%Rec	1	9/5/2023 4:51:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	9/5/2023 5:35:00 PM
Surr: BFB	104	15-244		%Rec	1	9/5/2023 5:35:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.020		mg/Kg	1	9/5/2023 5:35:00 PM
Toluene	ND	0.040		mg/Kg	1	9/5/2023 5:35:00 PM
Ethylbenzene	ND	0.040		mg/Kg	1	9/5/2023 5:35:00 PM
Xylenes, Total	ND	0.080		mg/Kg	1	9/5/2023 5:35:00 PM
Surr: 4-Bromofluorobenzene	92.6	39.1-146		%Rec	1	9/5/2023 5:35:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	910	61		mg/Kg	20	9/5/2023 8:55:23 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309073**
Date Reported: **9/12/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-209
Project: Delek Matador Produced Water **Collection Date:** 8/31/2023 9:30:00 AM
Lab ID: 2309073-010 **Matrix:** MEOH (SOIL) **Received Date:** 9/2/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	15	9.5		mg/Kg	1	9/5/2023 5:02:43 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/5/2023 5:02:43 PM
Surr: DNOP	81.9	69-147		%Rec	1	9/5/2023 5:02:43 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	9/5/2023 5:57:00 PM
Surr: BFB	102	15-244		%Rec	1	9/5/2023 5:57:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.022		mg/Kg	1	9/5/2023 5:57:00 PM
Toluene	ND	0.044		mg/Kg	1	9/5/2023 5:57:00 PM
Ethylbenzene	ND	0.044		mg/Kg	1	9/5/2023 5:57:00 PM
Xylenes, Total	ND	0.087		mg/Kg	1	9/5/2023 5:57:00 PM
Surr: 4-Bromofluorobenzene	90.7	39.1-146		%Rec	1	9/5/2023 5:57:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	400	60		mg/Kg	20	9/5/2023 9:07:47 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309073**
Date Reported: **9/12/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** SW-8a
Project: Delek Matador Produced Water **Collection Date:** 8/31/2023 2:40:00 PM
Lab ID: 2309073-011 **Matrix:** MEOH (SOIL) **Received Date:** 9/2/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/5/2023 5:13:51 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/5/2023 5:13:51 PM
Surr: DNOP	75.7	69-147		%Rec	1	9/5/2023 5:13:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	9/5/2023 6:19:00 PM
Surr: BFB	100	15-244		%Rec	1	9/5/2023 6:19:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	9/5/2023 6:19:00 PM
Toluene	ND	0.045		mg/Kg	1	9/5/2023 6:19:00 PM
Ethylbenzene	ND	0.045		mg/Kg	1	9/5/2023 6:19:00 PM
Xylenes, Total	ND	0.091		mg/Kg	1	9/5/2023 6:19:00 PM
Surr: 4-Bromofluorobenzene	90.6	39.1-146		%Rec	1	9/5/2023 6:19:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	580	60		mg/Kg	20	9/5/2023 9:20:11 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309073**
Date Reported: **9/12/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** SW-9a
Project: Delek Matador Produced Water **Collection Date:** 8/31/2023 2:45:00 PM
Lab ID: 2309073-012 **Matrix:** MEOH (SOIL) **Received Date:** 9/2/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	9/5/2023 5:24:58 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/5/2023 5:24:58 PM
Surr: DNOP	80.1	69-147		%Rec	1	9/5/2023 5:24:58 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	9/5/2023 6:41:00 PM
Surr: BFB	99.2	15-244		%Rec	1	9/5/2023 6:41:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.021		mg/Kg	1	9/5/2023 6:41:00 PM
Toluene	ND	0.042		mg/Kg	1	9/5/2023 6:41:00 PM
Ethylbenzene	ND	0.042		mg/Kg	1	9/5/2023 6:41:00 PM
Xylenes, Total	ND	0.085		mg/Kg	1	9/5/2023 6:41:00 PM
Surr: 4-Bromofluorobenzene	89.6	39.1-146		%Rec	1	9/5/2023 6:41:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	670	60		mg/Kg	20	9/5/2023 9:32:35 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309073**

12-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **MB-77309**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **77309**	RunNo: **99451**							
Prep Date: **9/5/2023**	Analysis Date: **9/5/2023**	SeqNo: **3631507**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77309**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **77309**	RunNo: **99451**							
Prep Date: **9/5/2023**	Analysis Date: **9/5/2023**	SeqNo: **3631508**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.5	90	110			

Sample ID: **MB-77295**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **77295**	RunNo: **99450**							
Prep Date: **9/5/2023**	Analysis Date: **9/5/2023**	SeqNo: **3631539**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77295**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **77295**	RunNo: **99450**							
Prep Date: **9/5/2023**	Analysis Date: **9/5/2023**	SeqNo: **3631540**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.8	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309073**

12-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **LCS-77281**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **77281**	RunNo: **99448**
Prep Date: **9/5/2023**	Analysis Date: **9/5/2023**	SeqNo: **3630277** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	101	61.9	130			
Surr: DNOP	4.1		5.000		82.7	69	147			

Sample ID: **MB-77281**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **77281**	RunNo: **99448**
Prep Date: **9/5/2023**	Analysis Date: **9/5/2023**	SeqNo: **3630279** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.8		10.00		88.3	69	147			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309073**

12-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **G99443**	RunNo: **99443**
Prep Date:	Analysis Date: **9/5/2023**	SeqNo: **3630078** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	101	70	130			
Surr: BFB	2300		1000		226	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **G99443**	RunNo: **99443**
Prep Date:	Analysis Date: **9/5/2023**	SeqNo: **3630079** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		103	15	244			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309073**

12-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **R99443**	RunNo: **99443**
Prep Date:	Analysis Date: **9/5/2023**	SeqNo: **3630087** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.3	70	130			
Toluene	0.94	0.050	1.000	0	94.3	70	130			
Ethylbenzene	0.96	0.050	1.000	0	96.0	70	130			
Xylenes, Total	2.9	0.10	3.000	0	96.0	70	130			
Surr: 4-Bromofluorobenzene	0.94		1.000		94.1	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **R99443**	RunNo: **99443**
Prep Date:	Analysis Date: **9/5/2023**	SeqNo: **3630088** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.94		1.000		94.1	39.1	146			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: GHD | Work Order Number: 2309073 | RcptNo: 1

Received By: Tracy Casarrubias 9/2/2023 7:45:00 AM

Completed By: Tracy Casarrubias 9/2/2023 8:00:38 AM

Reviewed By: JN 9/5/23

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: TMC 9/2/23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.6	Good	Yes	Yogi		

Received by OCD: 12/4/2024 10:43:20 AM

Released to Imaging: 3/12/2025 11:29:45 AM

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy #400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: nate.Reece@ghd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 24hr

Project Name: Delek Matador Produced water

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna Crapo

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 0.0-0.8=0.6 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

needs to be tested for chloride

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2309073	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8-31-23	0830	S	SW-26	1 glass	N/A	001	X	X					X			
	0832		SW-27			002										
	0840		SW-28			003										
	0845		SW-29			004										
	0850		BH-103a			005										
	0852		BH-109a			006										
	0854		BH-113a			007										
	0920		BH-129a			008										
	0922		BH-133a			009										
	0930		BH-209			010										
	1440		SW-8a			011										
	1445		SW-9a			012										

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
8/31	1630				9/1/23	830
9/1/23	1900			Courier	9/2/23	7:45

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 26, 2023

Nate Reece
GHD
6320 Rothway Ste 100
Houston, TX 77040
TEL: (713) 275-3838
FAX:

RE: Delek Matador Produced Water OrderNo.: 2309917

Dear Nate Reece:

Hall Environmental Analysis Laboratory received 17 sample(s) on 9/16/2023 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued September 25, 2023.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2309917**
Date Reported: **9/26/2023**

CLIENT: GHD
Client Sample ID: BH-58B
Project: Delek Matador Produced Water
Collection Date: 9/14/2023 12:30:00 PM
Lab ID: 2309917-001 **Matrix:** SOIL
Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	310	60		mg/Kg	20	9/18/2023 8:38:56 PM	77578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/18/2023 5:03:40 PM	77562
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/18/2023 5:03:40 PM	77562
Surr: DNOP	101	69-147		%Rec	1	9/18/2023 5:03:40 PM	77562
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**	
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	9/18/2023 3:23:00 PM	R99784
Surr: BFB	98.5	15-244		%Rec	1	9/18/2023 3:23:00 PM	R99784
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	0.018		mg/Kg	1	9/18/2023 3:23:00 PM	B99784
Toluene	ND	0.037		mg/Kg	1	9/18/2023 3:23:00 PM	B99784
Ethylbenzene	ND	0.037		mg/Kg	1	9/18/2023 3:23:00 PM	B99784
Xylenes, Total	ND	0.073		mg/Kg	1	9/18/2023 3:23:00 PM	B99784
Surr: 4-Bromofluorobenzene	88.9	39.1-146		%Rec	1	9/18/2023 3:23:00 PM	B99784

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309917**
Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-62B
Project: Delek Matador Produced Water **Collection Date:** 9/14/2023 12:32:00 PM
Lab ID: 2309917-002 **Matrix:** SOIL **Received Date:** 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	410	60		mg/Kg	20	9/18/2023 8:51:21 PM	77578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	9/18/2023 5:14:13 PM	77562
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/18/2023 5:14:13 PM	77562
Surr: DNOP	99.7	69-147		%Rec	1	9/18/2023 5:14:13 PM	77562
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**	
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	9/18/2023 3:45:00 PM	R99784
Surr: BFB	101	15-244		%Rec	1	9/18/2023 3:45:00 PM	R99784
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	0.018		mg/Kg	1	9/18/2023 3:45:00 PM	B99784
Toluene	ND	0.036		mg/Kg	1	9/18/2023 3:45:00 PM	B99784
Ethylbenzene	ND	0.036		mg/Kg	1	9/18/2023 3:45:00 PM	B99784
Xylenes, Total	ND	0.071		mg/Kg	1	9/18/2023 3:45:00 PM	B99784
Surr: 4-Bromofluorobenzene	88.0	39.1-146		%Rec	1	9/18/2023 3:45:00 PM	B99784

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309917**
Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: BH-61B
Project: Delek Matador Produced Water
Collection Date: 9/14/2023 12:34:00 PM
Lab ID: 2309917-003 **Matrix:** SOIL
Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	600	60		mg/Kg	20	9/18/2023 9:28:35 PM	77578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	36	9.5		mg/Kg	1	9/18/2023 5:24:47 PM	77562
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/18/2023 5:24:47 PM	77562
Surr: DNOP	99.4	69-147		%Rec	1	9/18/2023 5:24:47 PM	77562
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**	
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	9/18/2023 4:07:00 PM	R99784
Surr: BFB	97.3	15-244		%Rec	1	9/18/2023 4:07:00 PM	R99784
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	0.020		mg/Kg	1	9/18/2023 4:07:00 PM	B99784
Toluene	ND	0.039		mg/Kg	1	9/18/2023 4:07:00 PM	B99784
Ethylbenzene	ND	0.039		mg/Kg	1	9/18/2023 4:07:00 PM	B99784
Xylenes, Total	ND	0.079		mg/Kg	1	9/18/2023 4:07:00 PM	B99784
Surr: 4-Bromofluorobenzene	88.1	39.1-146		%Rec	1	9/18/2023 4:07:00 PM	B99784

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309917**
Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: BH-133B
Project: Delek Matador Produced Water
Collection Date: 9/14/2023 12:36:00 PM
Lab ID: 2309917-004 **Matrix:** SOIL
Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	530	60		mg/Kg	20	9/18/2023 9:41:00 PM	77578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/18/2023 5:35:21 PM	77562
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/18/2023 5:35:21 PM	77562
Surr: DNOP	105	69-147		%Rec	1	9/18/2023 5:35:21 PM	77562
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**	
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	9/18/2023 4:28:00 PM	R99784
Surr: BFB	97.8	15-244		%Rec	1	9/18/2023 4:28:00 PM	R99784
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	0.021		mg/Kg	1	9/18/2023 4:28:00 PM	B99784
Toluene	ND	0.041		mg/Kg	1	9/18/2023 4:28:00 PM	B99784
Ethylbenzene	ND	0.041		mg/Kg	1	9/18/2023 4:28:00 PM	B99784
Xylenes, Total	ND	0.083		mg/Kg	1	9/18/2023 4:28:00 PM	B99784
Surr: 4-Bromofluorobenzene	88.1	39.1-146		%Rec	1	9/18/2023 4:28:00 PM	B99784

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309917**
Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: BH-129B
Project: Delek Matador Produced Water
Collection Date: 9/14/2023 12:38:00 PM
Lab ID: 2309917-005 **Matrix:** SOIL
Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	500	60		mg/Kg	20	9/18/2023 10:18:13 PM	77578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/18/2023 5:46:02 PM	77562
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/18/2023 5:46:02 PM	77562
Surr: DNOP	105	69-147		%Rec	1	9/18/2023 5:46:02 PM	77562
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**	
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	9/18/2023 4:50:00 PM	R99784
Surr: BFB	98.5	15-244		%Rec	1	9/18/2023 4:50:00 PM	R99784
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	0.021		mg/Kg	1	9/18/2023 4:50:00 PM	B99784
Toluene	ND	0.042		mg/Kg	1	9/18/2023 4:50:00 PM	B99784
Ethylbenzene	ND	0.042		mg/Kg	1	9/18/2023 4:50:00 PM	B99784
Xylenes, Total	ND	0.083		mg/Kg	1	9/18/2023 4:50:00 PM	B99784
Surr: 4-Bromofluorobenzene	88.7	39.1-146		%Rec	1	9/18/2023 4:50:00 PM	B99784

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309917**
Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: BH-103B
Project: Delek Matador Produced Water
Collection Date: 9/14/2023 12:40:00 PM
Lab ID: 2309917-006 **Matrix:** SOIL
Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	360	60		mg/Kg	20	9/18/2023 10:30:37 PM	77578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/18/2023 5:56:46 PM	77562
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/18/2023 5:56:46 PM	77562
Surr: DNOP	108	69-147		%Rec	1	9/18/2023 5:56:46 PM	77562
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**	
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	9/18/2023 5:12:00 PM	R99784
Surr: BFB	96.8	15-244		%Rec	1	9/18/2023 5:12:00 PM	R99784
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	0.019		mg/Kg	1	9/18/2023 5:12:00 PM	B99784
Toluene	ND	0.039		mg/Kg	1	9/18/2023 5:12:00 PM	B99784
Ethylbenzene	ND	0.039		mg/Kg	1	9/18/2023 5:12:00 PM	B99784
Xylenes, Total	ND	0.077		mg/Kg	1	9/18/2023 5:12:00 PM	B99784
Surr: 4-Bromofluorobenzene	88.8	39.1-146		%Rec	1	9/18/2023 5:12:00 PM	B99784

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309917**
Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: BH-136A
Project: Delek Matador Produced Water
Collection Date: 9/14/2023 12:42:00 PM
Lab ID: 2309917-007 **Matrix:** SOIL
Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	830	60		mg/Kg	20	9/18/2023 10:43:02 PM	77578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	9/18/2023 6:07:31 PM	77562
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/18/2023 6:07:31 PM	77562
Surr: DNOP	97.4	69-147		%Rec	1	9/18/2023 6:07:31 PM	77562
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**	
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	9/18/2023 5:55:00 PM	R99784
Surr: BFB	98.9	15-244		%Rec	1	9/18/2023 5:55:00 PM	R99784
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	0.021		mg/Kg	1	9/18/2023 5:55:00 PM	B99784
Toluene	ND	0.043		mg/Kg	1	9/18/2023 5:55:00 PM	B99784
Ethylbenzene	ND	0.043		mg/Kg	1	9/18/2023 5:55:00 PM	B99784
Xylenes, Total	ND	0.086		mg/Kg	1	9/18/2023 5:55:00 PM	B99784
Surr: 4-Bromofluorobenzene	89.2	39.1-146		%Rec	1	9/18/2023 5:55:00 PM	B99784

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309917**
Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: BH-158A
Project: Delek Matador Produced Water
Collection Date: 9/14/2023 12:44:00 PM
Lab ID: 2309917-008 **Matrix:** SOIL
Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	490	60		mg/Kg	20	9/18/2023 10:55:26 PM	77578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	9/18/2023 6:29:03 PM	77562
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/18/2023 6:29:03 PM	77562
Surr: DNOP	95.7	69-147		%Rec	1	9/18/2023 6:29:03 PM	77562
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**	
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	9/18/2023 6:17:00 PM	R99784
Surr: BFB	95.8	15-244		%Rec	1	9/18/2023 6:17:00 PM	R99784
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	0.020		mg/Kg	1	9/18/2023 6:17:00 PM	B99784
Toluene	ND	0.041		mg/Kg	1	9/18/2023 6:17:00 PM	B99784
Ethylbenzene	ND	0.041		mg/Kg	1	9/18/2023 6:17:00 PM	B99784
Xylenes, Total	ND	0.082		mg/Kg	1	9/18/2023 6:17:00 PM	B99784
Surr: 4-Bromofluorobenzene	86.5	39.1-146		%Rec	1	9/18/2023 6:17:00 PM	B99784

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309917**
Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: BH-204A
Project: Delek Matador Produced Water
Collection Date: 9/14/2023 12:46:00 PM
Lab ID: 2309917-009 **Matrix:** SOIL
Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	600	60		mg/Kg	20	9/18/2023 11:07:51 PM	77578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/18/2023 6:39:50 PM	77562
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/18/2023 6:39:50 PM	77562
Surr: DNOP	94.8	69-147		%Rec	1	9/18/2023 6:39:50 PM	77562
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**	
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	9/18/2023 6:39:00 PM	R99784
Surr: BFB	98.9	15-244		%Rec	1	9/18/2023 6:39:00 PM	R99784
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	0.020		mg/Kg	1	9/18/2023 6:39:00 PM	B99784
Toluene	ND	0.040		mg/Kg	1	9/18/2023 6:39:00 PM	B99784
Ethylbenzene	ND	0.040		mg/Kg	1	9/18/2023 6:39:00 PM	B99784
Xylenes, Total	ND	0.080		mg/Kg	1	9/18/2023 6:39:00 PM	B99784
Surr: 4-Bromofluorobenzene	86.8	39.1-146		%Rec	1	9/18/2023 6:39:00 PM	B99784

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309917**
Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: BH-164A
Project: Delek Matador Produced Water
Collection Date: 9/14/2023 2:20:00 PM
Lab ID: 2309917-010 **Matrix:** SOIL
Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	860	60		mg/Kg	20	9/18/2023 11:20:16 PM	77578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	9/18/2023 6:50:38 PM	77562
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/18/2023 6:50:38 PM	77562
Surr: DNOP	91.3	69-147		%Rec	1	9/18/2023 6:50:38 PM	77562
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**	
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	9/18/2023 7:00:00 PM	R99784
Surr: BFB	96.8	15-244		%Rec	1	9/18/2023 7:00:00 PM	R99784
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	0.021		mg/Kg	1	9/18/2023 7:00:00 PM	B99784
Toluene	ND	0.042		mg/Kg	1	9/18/2023 7:00:00 PM	B99784
Ethylbenzene	ND	0.042		mg/Kg	1	9/18/2023 7:00:00 PM	B99784
Xylenes, Total	ND	0.084		mg/Kg	1	9/18/2023 7:00:00 PM	B99784
Surr: 4-Bromofluorobenzene	87.0	39.1-146		%Rec	1	9/18/2023 7:00:00 PM	B99784

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309917**
Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-163A
Project: Delek Matador Produced Water **Collection Date:** 9/14/2023 2:22:00 PM
Lab ID: 2309917-011 **Matrix:** SOIL **Received Date:** 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	590	60		mg/Kg	20	9/18/2023 11:32:41 PM	77578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	9/18/2023 7:01:28 PM	77562
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/18/2023 7:01:28 PM	77562
Surr: DNOP	90.2	69-147		%Rec	1	9/18/2023 7:01:28 PM	77562
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**	
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	9/18/2023 7:22:00 PM	R99784
Surr: BFB	102	15-244		%Rec	1	9/18/2023 7:22:00 PM	R99784
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	0.021		mg/Kg	1	9/18/2023 7:22:00 PM	B99784
Toluene	ND	0.041		mg/Kg	1	9/18/2023 7:22:00 PM	B99784
Ethylbenzene	ND	0.041		mg/Kg	1	9/18/2023 7:22:00 PM	B99784
Xylenes, Total	ND	0.082		mg/Kg	1	9/18/2023 7:22:00 PM	B99784
Surr: 4-Bromofluorobenzene	87.0	39.1-146		%Rec	1	9/18/2023 7:22:00 PM	B99784

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309917**
Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: BH-90A
Project: Delek Matador Produced Water
Collection Date: 9/14/2023 2:40:00 PM
Lab ID: 2309917-012 **Matrix:** SOIL
Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	560	60		mg/Kg	20	9/18/2023 11:45:05 PM	77578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	9/18/2023 7:12:17 PM	77562
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/18/2023 7:12:17 PM	77562
Surr: DNOP	88.7	69-147		%Rec	1	9/18/2023 7:12:17 PM	77562
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**	
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	9/18/2023 7:44:00 PM	R99784
Surr: BFB	97.2	15-244		%Rec	1	9/18/2023 7:44:00 PM	R99784
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	0.019		mg/Kg	1	9/18/2023 7:44:00 PM	B99784
Toluene	ND	0.039		mg/Kg	1	9/18/2023 7:44:00 PM	B99784
Ethylbenzene	ND	0.039		mg/Kg	1	9/18/2023 7:44:00 PM	B99784
Xylenes, Total	ND	0.077		mg/Kg	1	9/18/2023 7:44:00 PM	B99784
Surr: 4-Bromofluorobenzene	87.9	39.1-146		%Rec	1	9/18/2023 7:44:00 PM	B99784

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309917**
Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-93A
Project: Delek Matador Produced Water **Collection Date:** 9/14/2023 2:42:00 PM
Lab ID: 2309917-013 **Matrix:** SOIL **Received Date:** 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	640	60		mg/Kg	20	9/18/2023 11:57:30 PM	77578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	9/18/2023 7:23:08 PM	77562
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/18/2023 7:23:08 PM	77562
Surr: DNOP	86.0	69-147		%Rec	1	9/18/2023 7:23:08 PM	77562
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**	
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	9/18/2023 8:05:00 PM	R99784
Surr: BFB	96.5	15-244		%Rec	1	9/18/2023 8:05:00 PM	R99784
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	0.020		mg/Kg	1	9/18/2023 8:05:00 PM	B99784
Toluene	ND	0.041		mg/Kg	1	9/18/2023 8:05:00 PM	B99784
Ethylbenzene	ND	0.041		mg/Kg	1	9/18/2023 8:05:00 PM	B99784
Xylenes, Total	ND	0.082		mg/Kg	1	9/18/2023 8:05:00 PM	B99784
Surr: 4-Bromofluorobenzene	87.5	39.1-146		%Rec	1	9/18/2023 8:05:00 PM	B99784

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309917**
Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: BH-145A
Project: Delek Matador Produced Water
Collection Date: 9/14/2023 2:44:00 PM
Lab ID: 2309917-014 **Matrix:** SOIL
Received Date: 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	310	60		mg/Kg	20	9/19/2023 12:09:55 AM	77578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	9/18/2023 7:34:01 PM	77562
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/18/2023 7:34:01 PM	77562
Surr: DNOP	91.6	69-147		%Rec	1	9/18/2023 7:34:01 PM	77562
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**	
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	9/18/2023 8:27:00 PM	R99784
Surr: BFB	102	15-244		%Rec	1	9/18/2023 8:27:00 PM	R99784
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	0.022		mg/Kg	1	9/18/2023 8:27:00 PM	B99784
Toluene	ND	0.043		mg/Kg	1	9/18/2023 8:27:00 PM	B99784
Ethylbenzene	ND	0.043		mg/Kg	1	9/18/2023 8:27:00 PM	B99784
Xylenes, Total	ND	0.087		mg/Kg	1	9/18/2023 8:27:00 PM	B99784
Surr: 4-Bromofluorobenzene	89.1	39.1-146		%Rec	1	9/18/2023 8:27:00 PM	B99784

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309917**
Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-151A
Project: Delek Matador Produced Water **Collection Date:** 9/14/2023 2:46:00 PM
Lab ID: 2309917-015 **Matrix:** SOIL **Received Date:** 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	490	60		mg/Kg	20	9/19/2023 12:47:09 AM	77578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/18/2023 7:44:56 PM	77562
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/18/2023 7:44:56 PM	77562
Surr: DNOP	89.0	69-147		%Rec	1	9/18/2023 7:44:56 PM	77562
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**	
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	9/18/2023 8:49:00 PM	R99784
Surr: BFB	98.3	15-244		%Rec	1	9/18/2023 8:49:00 PM	R99784
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	0.022		mg/Kg	1	9/18/2023 8:49:00 PM	B99784
Toluene	ND	0.044		mg/Kg	1	9/18/2023 8:49:00 PM	B99784
Ethylbenzene	ND	0.044		mg/Kg	1	9/18/2023 8:49:00 PM	B99784
Xylenes, Total	ND	0.088		mg/Kg	1	9/18/2023 8:49:00 PM	B99784
Surr: 4-Bromofluorobenzene	88.6	39.1-146		%Rec	1	9/18/2023 8:49:00 PM	B99784

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309917**
Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-152A
Project: Delek Matador Produced Water **Collection Date:** 9/14/2023 2:48:00 PM
Lab ID: 2309917-016 **Matrix:** SOIL **Received Date:** 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	640	60		mg/Kg	20	9/19/2023 12:59:33 AM	77578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/18/2023 7:55:52 PM	77562
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/18/2023 7:55:52 PM	77562
Surr: DNOP	90.0	69-147		%Rec	1	9/18/2023 7:55:52 PM	77562
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**	
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	9/18/2023 9:11:00 PM	R99784
Surr: BFB	99.5	15-244		%Rec	1	9/18/2023 9:11:00 PM	R99784
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	0.020		mg/Kg	1	9/18/2023 9:11:00 PM	B99784
Toluene	ND	0.039		mg/Kg	1	9/18/2023 9:11:00 PM	B99784
Ethylbenzene	ND	0.039		mg/Kg	1	9/18/2023 9:11:00 PM	B99784
Xylenes, Total	ND	0.079		mg/Kg	1	9/18/2023 9:11:00 PM	B99784
Surr: 4-Bromofluorobenzene	90.9	39.1-146		%Rec	1	9/18/2023 9:11:00 PM	B99784

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309917**
Date Reported: **9/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** BH-154A
Project: Delek Matador Produced Water **Collection Date:** 9/14/2023 2:50:00 PM
Lab ID: 2309917-017 **Matrix:** SOIL **Received Date:** 9/16/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	660	60		mg/Kg	20	9/18/2023 8:22:59 PM	77593
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	9/18/2023 8:06:49 PM	77562
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/18/2023 8:06:49 PM	77562
Surr: DNOP	88.5	69-147		%Rec	1	9/18/2023 8:06:49 PM	77562
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**	
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	9/18/2023 11:21:00 PM	G99784
Surr: BFB	99.9	15-244		%Rec	1	9/18/2023 11:21:00 PM	G99784
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	0.018		mg/Kg	1	9/18/2023 11:21:00 PM	BS99784
Toluene	ND	0.037		mg/Kg	1	9/18/2023 11:21:00 PM	BS99784
Ethylbenzene	ND	0.037		mg/Kg	1	9/18/2023 11:21:00 PM	BS99784
Xylenes, Total	ND	0.073		mg/Kg	1	9/18/2023 11:21:00 PM	BS99784
Surr: 4-Bromofluorobenzene	88.6	39.1-146		%Rec	1	9/18/2023 11:21:00 PM	BS99784

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309917**

26-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **MB-77578**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **77578**	RunNo: **99788**
Prep Date: **9/18/2023**	Analysis Date: **9/18/2023**	SeqNo: **3647812** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77578**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **77578**	RunNo: **99788**
Prep Date: **9/18/2023**	Analysis Date: **9/18/2023**	SeqNo: **3647813** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.6	90	110			

Sample ID: **MB-77593**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **77593**	RunNo: **99800**
Prep Date: **9/18/2023**	Analysis Date: **9/18/2023**	SeqNo: **3648430** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77593**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **77593**	RunNo: **99800**
Prep Date: **9/18/2023**	Analysis Date: **9/18/2023**	SeqNo: **3648431** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309917**

26-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **2309917-017AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH-154A**	Batch ID: **77562**	RunNo: **99781**
Prep Date: **9/18/2023**	Analysis Date: **9/18/2023**	SeqNo: **3647265** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	9.9	49.46	0	93.5	54.2	135			
Surr: DNOP	3.9		4.946		78.4	69	147			

Sample ID: **2309917-017AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH-154A**	Batch ID: **77562**	RunNo: **99781**
Prep Date: **9/18/2023**	Analysis Date: **9/18/2023**	SeqNo: **3647266** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	9.5	47.44	0	99.2	54.2	135	1.73	29.2	
Surr: DNOP	4.0		4.744		84.0	69	147	0	0	

Sample ID: **LCS-77562**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **77562**	RunNo: **99781**
Prep Date: **9/18/2023**	Analysis Date: **9/18/2023**	SeqNo: **3647269** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.00	0	84.9	61.9	130			
Surr: DNOP	4.7		5.000		93.1	69	147			

Sample ID: **MB-77562**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **77562**	RunNo: **99781**
Prep Date: **9/18/2023**	Analysis Date: **9/18/2023**	SeqNo: **3647273** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.9		10.00		98.5	69	147			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309917**

26-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R99784**	RunNo: **99784**
Prep Date:	Analysis Date: **9/18/2023**	SeqNo: **3647475** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.8	70	130			
Surr: BFB	2100		1000		214	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **R99784**	RunNo: **99784**
Prep Date:	Analysis Date: **9/18/2023**	SeqNo: **3647476** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		101	15	244			

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **G99784**	RunNo: **99784**
Prep Date:	Analysis Date: **9/18/2023**	SeqNo: **3647499** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.8	70	130			
Surr: BFB	2100		1000		210	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **G99784**	RunNo: **99784**
Prep Date:	Analysis Date: **9/18/2023**	SeqNo: **3647500** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		100	15	244			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309917**

26-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **B99784**	RunNo: **99784**
Prep Date:	Analysis Date: **9/18/2023**	SeqNo: **3647439** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.025	1.000	0	86.4	70	130			
Toluene	0.88	0.050	1.000	0	87.9	70	130			
Ethylbenzene	0.91	0.050	1.000	0	90.6	70	130			
Xylenes, Total	2.7	0.10	3.000	0	90.8	70	130			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.1	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **B99784**	RunNo: **99784**
Prep Date:	Analysis Date: **9/18/2023**	SeqNo: **3647440** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.91		1.000		91.1	39.1	146			

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **BS99784**	RunNo: **99784**
Prep Date:	Analysis Date: **9/18/2023**	SeqNo: **3647463** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.77	0.025	1.000	0	77.2	70	130			
Toluene	0.79	0.050	1.000	0	78.7	70	130			
Ethylbenzene	0.81	0.050	1.000	0	80.9	70	130			
Xylenes, Total	2.4	0.10	3.000	0	81.0	70	130			
Surr: 4-Bromofluorobenzene	0.90		1.000		90.2	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **BS99784**	RunNo: **99784**
Prep Date:	Analysis Date: **9/18/2023**	SeqNo: **3647464** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.90		1.000		89.9	39.1	146			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309917**

26-Sep-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **2309917-017ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-154A**	Batch ID: **BS99784**	RunNo: **99784**
Prep Date:	Analysis Date: **9/18/2023**	SeqNo: **3647466** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.5	0.018	1.836	0	84.1	70	130			
Toluene	1.6	0.037	1.836	0	84.9	70	130			
Ethylbenzene	1.6	0.037	1.836	0	86.7	70	130			
Xylenes, Total	4.8	0.073	5.506	0	87.2	70	130			
Surr: 4-Bromofluorobenzene	0.65		0.7342		89.0	39.1	146			

Sample ID: **2309917-017amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-154A**	Batch ID: **BS99784**	RunNo: **99784**
Prep Date:	Analysis Date: **9/19/2023**	SeqNo: **3647467** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.5	0.018	1.836	0	83.3	70	130	1.04	20	
Toluene	1.5	0.037	1.836	0	83.9	70	130	1.24	20	
Ethylbenzene	1.6	0.037	1.836	0	85.4	70	130	1.51	20	
Xylenes, Total	4.7	0.073	5.506	0	86.0	70	130	1.41	20	
Surr: 4-Bromofluorobenzene	0.65		0.7342		88.9	39.1	146	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: GHD | Work Order Number: 2309917 | RcptNo: 1

Received By: Juan Rojas 9/16/2023 7:30:00 AM

Completed By: Juan Rojas 9/16/2023 8:18:02 AM

Reviewed By: 9/18/23

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐ 9/18/23
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: 9/16/23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks: Samples ~~-00~~ -0142-017: Sample IDs and collection times on COC do not match bottle labels. 9/18/23

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.1	Good	No	Yogi		

Received by OCD: 12/4/2024 10:43:20 AM

Released to Imaging: 3/12/2025 11:29:45 AM

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy #400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: nate.Reece@ghd.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☐ Standard ☒ Rush 24hr

Project Name: DeleK Matador Produced water

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna Crapo

On Ice: ☐ Yes ☐ No

# of Coolers: 1 400

Cooler Temp (Including CF): 0.2-0.1=0.1 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

needs to be tested for Chloride

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 23091917	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
9-14-23	1230	S	BH-58B	1 glass	N/A	-001	X	X					X			
	1232		BH-62B			-002										
	1234		BH-61B			-003										
	1236		BH-133B			-004										
	1238		BH-129B			-005										
	1240		BH-103B			-006										
	1242		BH-136A			-007										
	1244		BH-158A			-008										
	1246		BH-204A			-009										
	1420		BH-164A			-010										
	1422		BH-163A			-011										
↓	1440	↓	BH-90A	↓	↓	-012	↓	↓					↓			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
9/14	17:10					
9/15/23	1900				9/15/23	805
			Courier		9/16/23	7:39

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy #400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: nate.Reece@ghd.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☐ Standard ☒ Rush 24hr

Project Name: DeleK Matador Produced water

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna Crapo

On Ice: ☐ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 0.2-0.1=0.1 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

needs to be tested for chloride

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2309917	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
9-14-23	1442	S	BH-93A	1/glass	N/A	-013	X	X					X			
	1444		BH-145A			-014										
	1446		BH-151A			-015										
	1448		BH-152A			-016										
	1450		BH-154A			-017										

Remarks:

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
9/14	17:10					
9/15/23	900				9/15/23	805
				Courier	9/16/23	7:30

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 03, 2023

Nate Reece
GHD
6320 Rothway Ste 100
Houston, TX 77040
TEL: (713) 275-3838
FAX:

RE: Delek Matador Produced Water OrderNo.: 2309C99

Dear Nate Reece:

Hall Environmental Analysis Laboratory received 5 sample(s) on 9/23/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2309C99**
Date Reported: **10/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: BH-152B
Project: Delek Matador Produced Water
Collection Date: 9/20/2023 11:40:00 AM
Lab ID: 2309C99-001 **Matrix:** SOIL
Received Date: 9/23/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/25/2023 12:30:57 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/25/2023 12:30:57 PM
Surr: DNOP	99.8	69-147		%Rec	1	9/25/2023 12:30:57 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	9/25/2023 11:12:00 AM
Surr: BFB	104	15-244		%Rec	1	9/25/2023 11:12:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.020		mg/Kg	1	9/25/2023 11:12:00 AM
Toluene	ND	0.041		mg/Kg	1	9/25/2023 11:12:00 AM
Ethylbenzene	ND	0.041		mg/Kg	1	9/25/2023 11:12:00 AM
Xylenes, Total	ND	0.082		mg/Kg	1	9/25/2023 11:12:00 AM
Surr: 4-Bromofluorobenzene	89.6	39.1-146		%Rec	1	9/25/2023 11:12:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	710	60		mg/Kg	20	9/25/2023 7:09:08 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309C99**
Date Reported: **10/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: BH-154B
Project: Delek Matador Produced Water
Collection Date: 9/20/2023 11:42:00 AM
Lab ID: 2309C99-002 **Matrix:** SOIL
Received Date: 9/23/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	9/25/2023 12:41:55 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/25/2023 12:41:55 PM
Surr: DNOP	99.2	69-147		%Rec	1	9/25/2023 12:41:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	9/25/2023 11:33:00 AM
Surr: BFB	104	15-244		%Rec	1	9/25/2023 11:33:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.020		mg/Kg	1	9/25/2023 11:33:00 AM
Toluene	ND	0.039		mg/Kg	1	9/25/2023 11:33:00 AM
Ethylbenzene	ND	0.039		mg/Kg	1	9/25/2023 11:33:00 AM
Xylenes, Total	ND	0.079		mg/Kg	1	9/25/2023 11:33:00 AM
Surr: 4-Bromofluorobenzene	90.0	39.1-146		%Rec	1	9/25/2023 11:33:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	590	60		mg/Kg	20	9/25/2023 7:21:33 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2309C99**
Date Reported: **10/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: BH-93B
Project: Delek Matador Produced Water
Collection Date: 9/20/2023 10:30:00 AM
Lab ID: 2309C99-003 **Matrix:** SOIL
Received Date: 9/23/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	9/25/2023 12:52:52 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/25/2023 12:52:52 PM
Surr: DNOP	101	69-147		%Rec	1	9/25/2023 12:52:52 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	9/25/2023 11:55:00 AM
Surr: BFB	102	15-244		%Rec	1	9/25/2023 11:55:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.020		mg/Kg	1	9/25/2023 11:55:00 AM
Toluene	ND	0.040		mg/Kg	1	9/25/2023 11:55:00 AM
Ethylbenzene	ND	0.040		mg/Kg	1	9/25/2023 11:55:00 AM
Xylenes, Total	ND	0.080		mg/Kg	1	9/25/2023 11:55:00 AM
Surr: 4-Bromofluorobenzene	91.6	39.1-146		%Rec	1	9/25/2023 11:55:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	400	60		mg/Kg	20	9/25/2023 7:58:47 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309C99**
Date Reported: **10/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: BH-164B
Project: Delek Matador Produced Water
Collection Date: 9/20/2023 10:20:00 AM
Lab ID: 2309C99-004 **Matrix:** SOIL
Received Date: 9/23/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/25/2023 1:03:49 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/25/2023 1:03:49 PM
Surr: DNOP	76.2	69-147		%Rec	1	9/25/2023 1:03:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	9/25/2023 12:17:00 PM
Surr: BFB	98.4	15-244		%Rec	1	9/25/2023 12:17:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.018		mg/Kg	1	9/25/2023 12:17:00 PM
Toluene	ND	0.036		mg/Kg	1	9/25/2023 12:17:00 PM
Ethylbenzene	ND	0.036		mg/Kg	1	9/25/2023 12:17:00 PM
Xylenes, Total	ND	0.072		mg/Kg	1	9/25/2023 12:17:00 PM
Surr: 4-Bromofluorobenzene	91.0	39.1-146		%Rec	1	9/25/2023 12:17:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	230	60		mg/Kg	20	9/25/2023 8:11:12 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309C99**
Date Reported: **10/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: BH-136B
Project: Delek Matador Produced Water
Collection Date: 9/20/2023 10:22:00 AM
Lab ID: 2309C99-005 **Matrix:** SOIL
Received Date: 9/23/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	9/25/2023 1:14:44 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/25/2023 1:14:44 PM
Surr: DNOP	96.2	69-147		%Rec	1	9/25/2023 1:14:44 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	9/25/2023 12:39:00 PM
Surr: BFB	95.5	15-244		%Rec	1	9/25/2023 12:39:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.019		mg/Kg	1	9/25/2023 12:39:00 PM
Toluene	ND	0.038		mg/Kg	1	9/25/2023 12:39:00 PM
Ethylbenzene	ND	0.038		mg/Kg	1	9/25/2023 12:39:00 PM
Xylenes, Total	ND	0.077		mg/Kg	1	9/25/2023 12:39:00 PM
Surr: 4-Bromofluorobenzene	87.1	39.1-146		%Rec	1	9/25/2023 12:39:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	330	59		mg/Kg	20	9/25/2023 8:23:37 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309C99**

03-Oct-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **MB-77744**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **77744**	RunNo: **99976**
Prep Date: **9/25/2023**	Analysis Date: **9/25/2023**	SeqNo: **3657145** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77744**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **77744**	RunNo: **99976**
Prep Date: **9/25/2023**	Analysis Date: **9/25/2023**	SeqNo: **3657146** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.0	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309C99**

03-Oct-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **MB-77734**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **77734**	RunNo: **99951**
Prep Date: **9/25/2023**	Analysis Date: **9/25/2023**	SeqNo: **3656255** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.3		10.00		92.9	69	147			

Sample ID: **LCS-77734**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **77734**	RunNo: **99951**
Prep Date: **9/25/2023**	Analysis Date: **9/25/2023**	SeqNo: **3656260** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.8	61.9	130			
Surr: DNOP	4.9		5.000		98.6	69	147			

Sample ID: **2309C99-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH-152B**	Batch ID: **77734**	RunNo: **99951**
Prep Date: **9/25/2023**	Analysis Date: **9/25/2023**	SeqNo: **3656327** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.6	48.22	0	103	54.2	135			
Surr: DNOP	5.3		4.822		111	69	147			

Sample ID: **2309C99-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH-152B**	Batch ID: **77734**	RunNo: **99951**
Prep Date: **9/25/2023**	Analysis Date: **9/25/2023**	SeqNo: **3656330** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	9.6	47.98	0	95.1	54.2	135	8.76	29.2	
Surr: DNOP	4.5		4.798		94.1	69	147	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309C99**

03-Oct-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **G99959**	RunNo: **99959**
Prep Date:	Analysis Date: **9/25/2023**	SeqNo: **3656331** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	93.6	70	130			
Surr: BFB	2200		1000		218	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **G99959**	RunNo: **99959**
Prep Date:	Analysis Date: **9/25/2023**	SeqNo: **3656332** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		104	15	244			

Sample ID: **2309c99-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH-152B**	Batch ID: **G99959**	RunNo: **99959**
Prep Date:	Analysis Date: **9/25/2023**	SeqNo: **3656338** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.1	20.38	0	96.2	70	130			
Surr: BFB	1700		815.0		214	15	244			

Sample ID: **2309c99-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH-152B**	Batch ID: **G99959**	RunNo: **99959**
Prep Date:	Analysis Date: **9/25/2023**	SeqNo: **3656339** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	17	4.1	20.38	0	85.2	70	130	12.2	20	
Surr: BFB	1700		815.0		204	15	244	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309C99**

03-Oct-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **R99959**	RunNo: **99959**
Prep Date:	Analysis Date: **9/25/2023**	SeqNo: **3656364** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.2	70	130			
Toluene	0.94	0.050	1.000	0	94.1	70	130			
Ethylbenzene	0.97	0.050	1.000	0	96.6	70	130			
Xylenes, Total	2.9	0.10	3.000	0	97.2	70	130			
Surr: 4-Bromofluorobenzene	0.96		1.000		95.7	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **R99959**	RunNo: **99959**
Prep Date:	Analysis Date: **9/25/2023**	SeqNo: **3656365** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.92		1.000		91.8	39.1	146			

Sample ID: **2309c99-002ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-154B**	Batch ID: **R99959**	RunNo: **99959**
Prep Date:	Analysis Date: **9/25/2023**	SeqNo: **3656371** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.68	0.020	0.7893	0	85.6	70	130			
Toluene	0.68	0.039	0.7893	0	85.6	70	130			
Ethylbenzene	0.69	0.039	0.7893	0	87.5	70	130			
Xylenes, Total	2.1	0.079	2.368	0	87.8	70	130			
Surr: 4-Bromofluorobenzene	0.70		0.7893		88.6	39.1	146			

Sample ID: **2309c99-002amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH-154B**	Batch ID: **R99959**	RunNo: **99959**
Prep Date:	Analysis Date: **9/25/2023**	SeqNo: **3656372** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.68	0.020	0.7893	0	85.9	70	130	0.427	20	
Toluene	0.68	0.039	0.7893	0	86.6	70	130	1.26	20	
Ethylbenzene	0.69	0.039	0.7893	0	87.7	70	130	0.179	20	
Xylenes, Total	2.1	0.079	2.368	0	87.7	70	130	0.177	20	
Surr: 4-Bromofluorobenzene	0.70		0.7893		88.9	39.1	146	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: GHD | Work Order Number: 2309C99 | RcptNo: 1

Received By: Juan Rojas 9/23/2023 7:20:00 AM

Completed By: Juan Rojas 9/23/2023 7:25:04 AM

Reviewed By: 9/23/23

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: 9/23/23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	No	Yogi		

Received by OCD: 12/4/2024 10:43:20 AM

Released to Imaging: 3/12/2025 11:29:45 AM

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy
#400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: nate.Reece@ghd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 24hr

Project Name: DelcK Matador Produced water

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna CraPO

On Ice: ☐ Yes ☐ No

# of Coolers: 1 Yogi

Cooler Temp (including CF): 1.1-0.2=1 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

needs tested to be for chloride

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2309099	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
9-20-23	1140	S	BH-152B	1 glass	N/A	-001	X	X					X			
	1142		BH-154B			-002										
	1030		BH-93B			-003										
	1020		BH-164B			-004										
↓	1022	↓	BH-136B	↓	↓	-005										

Remarks:

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
9/20	1707				9/22/23	815
9/22/23	1900			courier	9/23/23	7:20

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 06, 2023

Nate Reece
GHD
6121 Indian School Road, NE #200
Albuquerque, NM 87110
TEL: (505) 884-0672
FAX:

RE: Delek Matador Produced Water OrderNo.: 2309G80

Dear Nate Reece:

Hall Environmental Analysis Laboratory received 1 sample(s) on 9/29/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2309G80**
Date Reported: **10/6/2023**

CLIENT: GHD **Client Sample ID:** BH-152C
Project: Delek Matador Produced Water **Collection Date:** 9/27/2023 10:10:00 AM
Lab ID: 2309G80-001 **Matrix:** MEOH (SOIL) **Received Date:** 9/29/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **RBC**	
Chloride	370	60		mg/Kg	20	9/30/2023 5:47:38 PM	77859
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/29/2023 6:37:25 PM	77845
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/29/2023 6:37:25 PM	77845
Surr: DNOP	100	69-147		%Rec	1	9/29/2023 6:37:25 PM	77845
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**	
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	9/29/2023 6:11:00 PM	R100117
Surr: BFB	102	15-244		%Rec	1	9/29/2023 6:11:00 PM	R100117
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	0.019		mg/Kg	1	9/29/2023 6:11:00 PM	B100117
Toluene	ND	0.039		mg/Kg	1	9/29/2023 6:11:00 PM	B100117
Ethylbenzene	ND	0.039		mg/Kg	1	9/29/2023 6:11:00 PM	B100117
Xylenes, Total	ND	0.078		mg/Kg	1	9/29/2023 6:11:00 PM	B100117
Surr: 4-Bromofluorobenzene	90.2	39.1-146		%Rec	1	9/29/2023 6:11:00 PM	B100117

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309G80**

06-Oct-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **MB-77859**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **77859**	RunNo: **100130**
Prep Date: **9/29/2023**	Analysis Date: **9/30/2023**	SeqNo: **3664468** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77859**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **77859**	RunNo: **100130**
Prep Date: **9/29/2023**	Analysis Date: **9/30/2023**	SeqNo: **3664469** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.8	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309G80**

06-Oct-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **MB-77845**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **77845**	RunNo: **100098**
Prep Date: **9/29/2023**	Analysis Date: **9/29/2023**	SeqNo: **3663152** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		101	69	147			

Sample ID: **LCS-77845**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **77845**	RunNo: **100098**
Prep Date: **9/29/2023**	Analysis Date: **9/29/2023**	SeqNo: **3663153** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	102	61.9	130			
Surr: DNOP	4.9		5.000		97.6	69	147			

Sample ID: **LCS-77867**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **77867**	RunNo: **100132**
Prep Date: **9/29/2023**	Analysis Date: **10/2/2023**	SeqNo: **3665778** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.1		5.000		102	69	147			

Sample ID: **MB-77867**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **77867**	RunNo: **100132**
Prep Date: **9/29/2023**	Analysis Date: **10/2/2023**	SeqNo: **3665781** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		101	69	147			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309G80**

06-Oct-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R100117**	RunNo: **100117**
Prep Date:	Analysis Date: **9/29/2023**	SeqNo: **3663853** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	105	70	130			
Surr: BFB	2300		1000		227	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **R100117**	RunNo: **100117**
Prep Date:	Analysis Date: **9/29/2023**	SeqNo: **3663854** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		103	15	244			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309G80**

06-Oct-23

Client: GHD

Project: Delek Matador Produced Water

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **B100117**	RunNo: **100117**
Prep Date:	Analysis Date: **9/29/2023**	SeqNo: **3663818** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	90.2	70	130			
Toluene	0.91	0.050	1.000	0	91.2	70	130			
Ethylbenzene	0.94	0.050	1.000	0	93.6	70	130			
Xylenes, Total	2.8	0.10	3.000	0	93.9	70	130			
Surr: 4-Bromofluorobenzene	0.94		1.000		93.8	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **B100117**	RunNo: **100117**
Prep Date:	Analysis Date: **9/29/2023**	SeqNo: **3663819** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.92		1.000		91.6	39.1	146			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: GHD | Work Order Number: 2309G80 | RcptNo: 1

Received By: Tracy Casarrubias 9/29/2023 7:40:00 AM

Completed By: Tracy Casarrubias 9/29/2023 8:35:29 AM

Reviewed By: 9/29/23

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: 9/29/23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

Liquid paper used by client

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.1	Good	Yes	Yogi		

Received by OCD: 12/4/2024 10:43:20 AM

Released to Imaging: 3/12/2025 11:29:45 AM

Chain-of-Custody Record

Client: GHD

Mailing Address: 11451 Katy Fwy #400, Houston, TX 77079

Phone #: 281-386-7158

email or Fax#: nate.Reece@ghd.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☐ Standard ☒ Rush 24hr

Project Name: DeleK Matador Produced water

Project #: 12618492

Project Manager: Nate Reece

Sampler: Tristanna Crapo

On Ice: ☒ Yes ☐ No 4oz

# of Coolers: 1

Cooler Temp (including CF): 5.1-0=5.1 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

needs tested to be For Chloride

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2309G80	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
9-27-23	1010	S	BH-152C	1 glass	N/A	001	X	X					X			

Remarks:

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
9/27	1630				9/28/23	900
9/28/23	1900				9/29/23	7:40

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Attachment C
Photographic Log



View of excavation facing south.



View of excavation facing west.

Site Photograph

Matador Pony Express East Release Site.



Aerial view of excavation facing northwest.



Aerial view of excavation facing north.

Site Photograph

Matador Pony Express East Release Site.



View of southern portion of excavation facing northwest.



View of southern portion of excavation facing west.

Site Photograph

Matador Pony Express East Release Site.

Appendix D
Sampling Notifications

Nate Reece

From: Cassie Whitefield <Cassie.Whitefield@deleklogistics.com>
Sent: Tuesday, July 25, 2023 10:15 AM
To: Nate Reece
Subject: Fwd: [External Sender] - The Oil Conservation Division (OCD) has accepted the application, Application ID: 243583

Get Outlook for iOS

From: OCDOnline@state.nm.us <OCDOnline@state.nm.us>
Sent: Monday, July 24, 2023 11:03:42 AM
To: Cassie Whitefield <Cassie.Whitefield@deleklogistics.com>
Subject: [External Sender] - The Oil Conservation Division (OCD) has accepted the application, Application ID: 243583

CAUTION: This message is NOT from a Delek email address. Please use caution when clicking links, opening attachments or responding to this email. If you suspect this email is a Phish attempt, please click the 'Report Phish' button now. Thank you!

To whom it may concern (c/o Cassie Whitefield for DKL Energy - Cottonwood, LLC),

The OCD has accepted the submitted *Notification of a release* (NOR), for incident ID (n#) nAPP2320536236, with the following conditions:

- **When submitting future reports regarding this release, please submit the calculations used or specific justification for the volumes reported on the initial C-141.**

Please reference nAPP2320536236, on all subsequent C-141 submissions and communications regarding the remediation of this release.
NOTE: As of December 2019, NMOCD has discontinued the use of the "RP" number.
If you have any questions regarding this application, or don't know why you have received this email, please contact us.

ocd.enviro@state.nm.us

New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

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IMPORTANT: In this email, the terms "Delek," "Delek Logistics," "Alon," "the Company," "the Group" OR OTHER SIMILAR USAGES may be used for convenience and refer to Delek US Holdings, Inc. and its direct and indirect subsidiaries and

affiliates, each of which are separate and distinct legal entities. Further, the words "we," "us," "our," and "ourselves" are used to refer generally to the companies of Delek.

Nate Reece

From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Sent: Tuesday, July 25, 2023 11:08 AM
To: Nate Reece
Cc: Bratcher, Michael, EMNRD; Velez, Nelson, EMNRD
Subject: RE: [EXTERNAL] Sampling Notification

You don't often get email from shelly.wells@emnrd.nm.gov. Learn why this is important

Hi Nate,

The OCD has received your notification. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thank you,

Shelly

Shelly Wells * Environmental Specialist-Advanced
Administrative Permitting Program
EMNRD-Oil Conservation Division
1220 S. St. Francis Drive|Santa Fe, NM 87505
(505)469-7520|Shelly.Wells@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/

From: Nate Reece <Nate.Reece@ghd.com>
Sent: Tuesday, July 25, 2023 8:20 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Summer Cameron <Summer.Cameron@deleklogistics.com>; Cassie Whitefield <cassie.whitefield@deleklogistics.com>; J.T. Murrey <JT.Murrey@ghd.com>
Subject: [EXTERNAL] Sampling Notification

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

To Whom it May Concern,

GHD on behalf of Delek Logistics Partners, L.P., respectfully submits notification of sampling to be conducted at the below location:

Delek Matador Pony Express East
nAPP2320536236
B-16-20S-33E
Lea County, NM

Sampling will begin at 10:00 a.m. on Thursday, July 27, 2023, and be continuous for three weeks.

Thank You,

Nate Reece
Environmental Scientist

GHD
Proudly employee-owned | ghd.com
11451 Katy Fwy #400, Houston, TX 77079 United States
M +1 281 386 7158 | **E** nate.reece@ghd.com

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Nate Reece

From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Sent: Wednesday, August 16, 2023 11:58 AM
To: Nate Reece
Cc: Bratcher, Michael, EMNRD; Velez, Nelson, EMNRD
Subject: RE: [EXTERNAL] Sampling Notification

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Good morning Nate,

The OCD has received your notification. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thank you,

Shelly

Shelly Wells * Environmental Specialist-Advanced
Environmental Bureau
EMNRD-Oil Conservation Division
1220 S. St. Francis Drive|Santa Fe, NM 87505
(505)469-7520|Shelly.Wells@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/

From: Nate Reece <Nate.Reece@ghd.com>
Sent: Wednesday, August 16, 2023 8:52 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Summer Cameron <Summer.Cameron@deleklogistics.com>; Cassie Whitefield <cassie.whitefield@deleklogistics.com>; Tristanna Crapo <Tristanna.Crapo@ghd.com>
Subject: [EXTERNAL] Sampling Notification

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

To Whom it May Concern,

GHD on behalf of Delek Logistics Partners, L.P., respectfully submits notification of sampling to be conducted at the below location:

Delek Matador Pony Express East
nAPP2320536236
B-16-20S-33E
Lea County, NM

Sampling will begin at 9:00 a.m. on Friday, August 18, 2023, and be continuous for three weeks.

Thank You,

Nate Reece
Environmental Scientist

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11451 Katy Fwy #400, Houston, TX 77079 United States
M +1 281 386 7158 | **E** nate.reece@ghd.com

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Nate Reece

From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Sent: Friday, September 8, 2023 1:50 PM
To: Nate Reece
Cc: Bratcher, Michael, EMNRD; Velez, Nelson, EMNRD
Subject: RE: [EXTERNAL] Sampling Notification

You don't often get email from shelly.wells@emnrd.nm.gov. Learn why this is important

Hi Nate,

The OCD has received your notification. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thank you,

Shelly

Shelly Wells * Environmental Specialist-Advanced
Environmental Bureau
EMNRD-Oil Conservation Division
1220 S. St. Francis Drive|Santa Fe, NM 87505
(505)469-7520|Shelly.Wells@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/

From: Nate Reece <Nate.Reece@ghd.com>
Sent: Friday, September 8, 2023 11:15 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Cassie Whitefield <cassie.whitefield@deleklogistics.com>; Tristanna Crapo <Tristanna.Crapo@ghd.com>
Subject: [EXTERNAL] Sampling Notification

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

To Whom it May Concern,

GHD on behalf of Delek Logistics Partners, L.P., respectfully submits notification of sampling to be conducted at the below location:

Delek Matador Pony Express East
nAPP2320536236
B-16-20S-33E
Lea County, NM

Sampling will begin at 11:15 a.m. on Tuesday, September 12, 2023, and be continuous for three weeks.

Thank You,

Nate Reece
Environmental Scientist

GHD
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11451 Katy Fwy #400, Houston, TX 77079 United States
M +1 281 386 7158 | **E** nate.reece@ghd.com

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Nate Reece

From: Rodgers, Scott, EMNRD <Scott.Rodgers@emnrd.nm.gov>
Sent: Friday, September 29, 2023 1:52 PM
To: Nate Reece; Velez, Nelson, EMNRD; Bratcher, Michael, EMNRD
Cc: Tristanna Crapo
Subject: RE: [EXTERNAL] Sampling Notification

You don't often get email from scott.rodgers@emnrd.nm.gov. Learn why this is important

The OCD has received your notification. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Scott Rodgers ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
8801 Horizon Blvd. NE, Suite 260 | Albuquerque, NM 87113
505.469.1830 | scott.rodgers@emnrd.nm.gov
http://www.emnrd.nm.gov/ocd

From: Nate Reece <Nate.Reece@ghd.com>
Sent: Friday, September 29, 2023 11:48 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Tristanna Crapo <Tristanna.Crapo@ghd.com>
Subject: [EXTERNAL] Sampling Notification

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To Whom it May Concern,

GHD on behalf of Delek Logistics Partners, L.P., respectfully submits notification of sampling to be conducted at the below location:

Delek Matador Pony Express East
nAPP2320536236
B-16-20S-33E
Lea County, NM

Sampling will begin at 7:00 a.m. on Wednesday, October 3, 2023, and be continuous for three weeks.

Thank You,

Nate Reece
Project Manager - Environmental Scientist

GHD
Proudly employee-owned | ghd.com
11451 Katy Fwy #400, Houston, TX 77079 United States
M +1 281 386 7158 | **E** nate.reece@ghd.com

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Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS

Action 408468

QUESTIONS

Operator: DKL Energy - Cottonwood, LLC 5850 Granite Parkway #450 Plano, TX 75024	OGRID: 330291
	Action Number: 408468
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2320536236**
Incident Name	**NAPP2320536236 MATADOR PONY EXPRESS EAST @ 0**
Incident Type	**Produced Water Release**
Incident Status	**Deferral Request Received**
Incident Facility	**[fAPP2309460533] Pony Express East Facility Flare Stack**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	MATADOR PONY EXPRESS EAST
Date Release Discovered	07/16/2023
Surface Owner	State

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	*Not answered.*
Produced Water Released (bbls) Details	Cause: Equipment Failure | Other (Specify) | Produced Water | Released: 60 BBL | Recovered: 4 BBL | Lost: 56 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Release from a riser

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QUESTIONS (continued)

Operator: DKL Energy - Cottonwood, LLC 5850 Granite Parkway #450 Plano, TX 75024	OGRID: 330291
	Action Number: 408468
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**Yes**
Reasons why this would be considered a submission for a notification of a major release	**From paragraph A. "Major release" determine using:** **(1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.**
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

I hereby agree and sign off to the above statement	Name: Cassie Whitefield Email: cassie.whitefield@deleklogistics.com Date: 12/04/2024

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QUESTIONS (continued)

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QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 26 and 50 (ft.)
What method was used to determine the depth to ground water	U.S. Geological Survey
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Between 1 and 5 (mi.)
An (non-karst) unstable area	Between 1 and 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	4170
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	968
GRO+DRO (EPA SW-846 Method 8015M)	968
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	07/28/2023
On what date will (or did) the final sampling or liner inspection occur	07/28/2023
On what date will (or was) the remediation complete(d)	09/27/2023
What is the estimated surface area (in square feet) that will be reclaimed	0
What is the estimated volume (in cubic yards) that will be reclaimed	0
What is the estimated surface area (in square feet) that will be remediated	40000
What is the estimated volume (in cubic yards) that will be remediated	5389
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: DKL Energy - Cottonwood, LLC 5850 Granite Parkway #450 Plano, TX 75024	OGRID: 330291
	Action Number: 408468
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	R360 ARTESIA LLC LANDFARM [fEEM0112340644]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Cassie Whitefield Email: cassie.whitefield@deleklogistics.com Date: 12/04/2024
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

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	Action Number: 408468
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Is the remaining contamination in areas immediately under or around production equipment where remediation could cause a major facility deconstruction	Yes
Please list or describe the production equipment and how (re)moving the equipment would cause major facility deconstruction	"Requests deferral of the remediation of TPH and chloride impacted soils immediately surrounding equipment and lines represented by soil samples BH-167, BH-169, BH-170, BH-185, and SW-28 due to equipment structural stability concerns. These areas will be remediated when the oil and gas production equipment is removed from the Site during Site decommissioning."
What is the remaining surface area (in square feet) that will still need to be remediated if a deferral is granted	250
What is the remaining volume (in cubic yards) that will still need to be remediated if a deferral is granted	150
Per Paragraph (2) of Subsection C of 19.15.29.12 NMAC if contamination is located in areas immediately under or around production equipment such as production tanks, wellheads and pipelines where remediation could cause a major facility deconstruction, the remediation, restoration and reclamation may be deferred with division written approval until the equipment is removed during other operations, or when the well or facility is plugged or abandoned, whichever comes first.	
Enter the facility ID (f#) on which this deferral should be granted	Pony Express East Facility Tank Battery [fAPP2309460447]
Enter the well API (30-) on which this deferral should be granted	*Not answered.*
Contamination does not cause an imminent risk to human health, the environment, or groundwater	True
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Cassie Whitefield Email: cassie.whitefield@deleklogistics.com Date: 12/04/2024

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QUESTIONS (continued)

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QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	***{Unavailable.}***

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	No

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CONDITIONS

Operator: DKL Energy - Cottonwood, LLC 5850 Granite Parkway #450 Plano, TX 75024	OGRID: 330291
	Action Number: 408468
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Deferral Request is approved.	3/12/2025
michael.buchanan	Deferral of TPH and chloride impacted soils immediately surrounding equipment and lines represented by soil samples BH-167, BH-169, BH-170, BH-185, and SW-28 is approved until plugging and abandonment or a major facility deconstruction, whichever comes first. A complete and accurate remediation report and/or reclamation report will need to be submitted at that time	3/12/2025