

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, 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  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised October 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

### Release Notification and Corrective Action

#### OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Yates Petroleum Corp.	Contact Dan Dolan
Address 105 S 4 <sup>th</sup> St., Artesia NM 88210	Telephone No. 748-4181
Facility Name Hunt APO State #1	Facility Type Oil Battery

Surface Owner State	Mineral Owner State	API 30-025-27135
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#### LOCATION OF RELEASE

Unit Letter	Section 4	Township 21S	Range 34E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
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Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

#### NATURE OF RELEASE

Type of Release Oil and Water	Volume of Release 15BO,10BW	Volume Recovered 10BO
Source of Release Heater Treater valve malfunction	Date and Hour of Occurrence 0900 02-03-05	Date and Hour of Discovery 1500hrs 02-03-05
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

**RECEIVED**

By Olivia Yu at 10:09 am, Dec 11, 2017

Describe Cause of Problem and Remedial Action Taken.\*

A malfunction of a valve on the heater treater caused oil and water to run in the ditch along SR 176, for 300', in a path 12" wide.

Describe Area Affected and Cleanup Action Taken.\*


The valve was repaired, and a vacuum truck picked up the free fluid, the area will be treated with Micro-Blaze till it meets OCD standards. Ranking of the area is- Depth to water, -0, Wellhead protection area-0, distance to surface water-0.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOC 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 NMOC marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOC 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.

#### OIL CONSERVATION DIVISION

Signature:

Printed Name: Daniel W. Dolan CWC

Approved by: 

Title: Environmental Regulatory Agent

Approval Date: 12/11/2017

Expiration Date:

E-mail Address: ddolan@ypcnm.com

Conditions of Approval:

Attached ☒

Date: 02-04-05

Phone: 748-4181

see attached directive

\* Attach Additional Sheets If Necessary

1RP-4891

nOY1734537054

pOY1734537399

Operator/Responsible Party,

The OCD has received the form C-141 you provided on \_12/11/2017\_ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number \_1RP-4891\_\_ has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

*The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]*

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District \_1\_ office in \_\_Hobbs\_\_ on or before \_1/11/2018\_. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

- Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

- If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

- Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

**Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.**

**Jim Griswold**

OCD Environmental Bureau Chief  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505  
505-476-3465  
jim.griswold@state.nm.us

Incident ID	
District RP	1RP-4891
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?	<u>&gt;100</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

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

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

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



Incident ID	
District RP	1RP-4891
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: James Kennedy Title: Environmental Specialist  
Signature: James F Kennedy Date: 04/05/2023  
email: james\_kennedy@eogresources.com Telephone: 432-848-9146

**OCD Only**

Received by: Jocelyn Harimon Date: 06/30/2023

Incident ID	NOY1734537054
District RP	1RP-4891
Facility ID	
Application ID	

## Remediation Plan

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

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

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

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

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Printed Name: James Kennedy Title: Environmental Specialist  
Signature: James F Kennedy Date: 04/05/2023  
email: james\_kennedy@eogresources.com Telephone: 432-848-9146

**OCD Only**

Received by: Jocelyn Harimon Date: 06/30/2023

☒ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	NOY1734537054
District RP	1RP-4891
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: James Kennedy

Title: Environmental Specialist

Signature: James F Kennedy

Date: 04/05/2023

email: james\_kennedy@eogresources.com

Telephone: 432-848-9146

**OCD Only**

Received by: Jocelyn Harimon

Date: 06/30/2023

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

Closure Approved by: Jocelyn Harimon

Date: 06/30/2023

Printed Name: Jocelyn Harimon

Title: Environmental Specialist

~~District I~~  
1625 N. Branch Dr., Hobbs, NM 88240  
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State of New Mexico  
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1220 South St. Francis Dr.  
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Form C-141  
Revised October 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

## Release Notification and Corrective Action

Accepted as initial only

## OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Yates Petroleum Corporation	OGRID Number 25575	Contact Robert Asher
Address 104 S. 4 <sup>TH</sup> Street	Telephone No. 575-748-1471	
Facility Name Hunt APO State #1	API Number 30-025-27135	Facility Type Battery

Surface Owner State	Mineral Owner State	Lease No. L-5012
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## LOCATION OF RELEASE

Unit Letter L	Section 4	Township 21S	Range 34E	Feet from the 2310	North/South Line South	Feet from the 660	East/West Line West	County Lea
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Latitude 32.50675 Longitude 103.48073

## NATURE OF RELEASE

Type of Release Produced water	Volume of Release 20 B/PW	Volume Recovered 0 B/PW
Source of Release Water Leg	Date and Hour of Occurrence 6/17/2013; AM	Date and Hour of Discovery 6/17/2013; AM
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? N/A	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>RECEIVED</b>        By Olivia Yu at 10:49 am, Dec 11, 2017     </div>
By Whom? N/A	Date and Hour N/A	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	
If a Watercourse was Impacted, Describe Fully.* N/A		

Describe Cause of Problem and Remedial Action Taken.\*


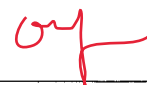
Water leg on gun barrel broke causing release. Well/valves shut in. Crew called to make repairs on water leg.

Describe Area Affected and Cleanup Action Taken.\*

An approximate area of 40' X 5', all inside bermed battery. Vertical and horizontal delineation samples will be taken and analysis ran for TPH & BTEX (Chlorides in soils for documentation). If initial analytical results for TPH & BTEX are under RRAL's a Final Report, C-141 will be submitted to the OCD requesting closure. If the analytical results are above the RRAL a work plan will be submitted to the OCD. **Depth to Ground Water: 50-99' (approx. 95', Section 4, T21S-R34E per NMOSE), Wellhead Protection Area: No, Distance to Surface Water Body: >1000', SITE RANKING IS 10. Based on enclosed analytical results, Yates Petroleum Corporation requests closure.**

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

## OIL CONSERVATION DIVISION

Signature: 	Approved by 	
Printed Name: Robert Asher	Approval Date: 12/11/2017	Expiration Date:
Title: NM Environmental Regulatory Supervisor	Conditions of Approval: see attached directive	
E-mail Address: boba@yatespetroleum.com	Attached <input checked="" type="checkbox"/>	
Date: Thursday, September 05, 2013 Phone: 575-748-4217		

1RP-4892

nOY1734539130

Operator/Responsible Party,

The OCD has received the form C-141 you provided on \_12/11/2017\_ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number \_1RP-4892\_\_ has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

*The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]*

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District \_1\_ office in \_\_Hobbs\_\_ on or before \_1/11/2018\_. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
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- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

- Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

- If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

- Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

**Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.**

**Jim Griswold**

OCD Environmental Bureau Chief  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505  
505-476-3465  
jim.griswold@state.nm.us



Incident ID	
District RP	1RP-4892
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?	>100 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

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

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

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

State of New Mexico  
Oil Conservation Division

Page 4

Incident ID	
District RP	1RP-4892
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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: James Kennedy Title: Environmental Specialist  
Signature: James F Kennedy Date: 04/05/2023  
email: james\_kennedy@eogresources.com Telephone: 432-848-9146

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	
District RP	1RP-4892
Facility ID	
Application ID	

## Remediation Plan

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

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

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

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

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: James Kennedy Title: Environmental Specialist  
Signature: James F Kennedy Date: 04/05/2023  
email: james\_kennedy@eogresources.com Telephone: 432-848-9146

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	
District RP	1RP-4892
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: James Kennedy

Title: Environmental Specialist

Signature: James F Kennedy

Date: 04/05/2023

email: james\_kennedy@eogresources.com

Telephone: 432-848-9146

**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 W,  
Midland, Texas 79703  
United States  
www.ghd.com

Our ref: 11224665

April 05, 2023

New Mexico Oil Conservation Division  
District 1  
1625 N. French Drive  
Hobbs, New Mexico 88240

Re: **Site Closure Report**  
**Hunt APO State #1 Release Site**  
**EOG Resources Inc.**  
**Incident ID: 1RP-4891/4892**  
**L-4-21S-34E, Lea County, New Mexico**

To Whom It May Concern:

## 1. Introduction

GHD Services, Inc. (GHD), on behalf of EOG Resources (EOG), submits this Site Closure Report to the New Mexico Oil Conservation Division (NMOCD) District 1 Office. This Report provides documentation of assessment and remedial activities conducted at the Hunt APO State #1 Release Site (Site). The Site is located in Unit Letter L Section 4 of Township 21 South and Range 34 East in Lea County, New Mexico. The GPS coordinates for the release site are 32.50675 N latitude and 103.48073 W longitude. The release occurred on public land owned by the U.S. Bureau of Land Management (BLM). Figure 1 depicts the Site location; Site details are depicted on Figure 2 and Figure 3.

## 2. Background Information

### 2.1 1RP-4891

On February 3, 2005, a valve on the heater treater malfunctioned causing the release of approximately twenty-five (25) barrels (bbls) of oil and ten (10) bbls of produced water. Approximately ten (ten) bbls of oil was recovered via vacuum truck. The release impacted the New Mexico State Highway 176 right-of-way. A C-141 Form was submitted to the NMOCD on February 4, 2005. An Assessment Summary Report dated November 13, 2017, was submitted to the NMOCD summarizing the results of the 2005 release at the Site. After submission of the GHD Assessment report, the NMOCD assigned RP number 4891 to this portion of the release at the Site.

The Release Notification, Site Assessment/Characterization, Remediation, and Closure portions of Form C-141 are attached to the front of this report.

## 2.2 1RP-4892

A second release of approximately twenty (20) bbls of produced water were released within the west end of the bermed battery area at the Site due to a water leg break on the gun barrel. None of the released fluids were recovered. The release was discovered on June 17, 2013, and a C-141 was submitted to the NMOCD on June 27, 2013. After submission of the GHD Assessment report, the NMOCD assigned RP number 4892 to this portion of the release at the site.

The Release Notification, Site Assessment/Characterization, Remediation, and Closure portions of Form C-141 are attached to the front of this report.

## 3. Groundwater and Site Characterization

Initial characterization for the Site was conducted using the NMOCD Guidelines for Remediation of Leaks, Spills, and Releases, August 13, 1993. The Site was preliminarily ranked with a total score of 10 (see table below).

Table 3.1 NMOCD Guidelines for Remediation of Leaks, Spills, and Releases (August 13, 1993)

New Mexico Oil Conservation Division Site Assessment	
Ranking Criteria	Score
Depth to Ground Water (50-99 feet bgs)	10
Wellhead protection Area (>1,000 feet from water source, >200 feet from domestic source)	0
Distance to Surface Body Water (200-1,000 feet)	0
Ranking Criteria Total Score	10*
*Because the ranking criteria total score is 10, NMOCD established RRALs are 10 mg/kg for benzene, 50 mg/kg for total BTEX, 1,000 mg/kg for TPH <sup>1</sup> , and 600 mg/kg for chlorides.	

GHD recharacterized the Site according to Table I, Closure Criteria for Soils Impacted by a Release, from New Mexico Administrative Code (NMAC) Title 19, Chapter 15, Part 29, Section 12 (NMAC 19.15.29.12).

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 receptors (water wells, playas, wetlands, waterways, lakebeds or ordinance boundaries) were located within each specific boundaries or distance from the Site. The Site characterization documentation (Karst Potential, Point of Diversion, Well Log, USGS Gauging Site, Significant Watercourse, Wetlands, and FEMA maps) are provided in Attachment A.

To determine depth to water (DTW) at the Site, GHD and Harrison and Cooper, Inc. (HCI) installed a DTW boring on May 17, 2022; SB-1. The boring was installed to a total depth of approximately 105 feet bgs. The boring was left open for seventy-two (72) hours and gauged with a DTW meter on May 25, 2022, no water was detected in the boring. The boring log is included as Attachment B. The soil and closure criteria are listed below:

### General Site Characterization and Groundwater:

Site Characterization	Average Groundwater Depth (feet)
No Receptors Found	>100



Table 3.2 Closure Criteria for Soils Impacted by a Release (NMAC 19.15.29.12)

Regulatory Standard	Chloride (mg/kg)	TPH (GRO+DRO+MRO) (mg/kg)	TPH (GRO+MRO) (mg/kg)	BTEX (mg/kg)	Benzene (mg/kg)
19.15.29.13 Restoration, Reclamation and Re-Vegetation (Impacted Area 0-4 Feet)	600	100	---	50	10
19.15.29.12 NMAC Table I Closure Criteria for Soils Impacted by a Release	20,000	2,500	1,000	50	10
Notes: --- = not defined					

## 4. Initial Assessment Summary

### 4.1 1RP-4891

After the initial three test pits in the RP-4891 release area were dug in October 2017, GHD returned to the Site and excavated additional test pits in December 2017 and again in February 2018. Fifteen (15) test pits were excavated ranging from two (2) to three (3) feet below ground surface (bgs) with one location, TP-11, extending to a total depth of twenty (20) feet bgs. The excavations generally encountered a very hard caliche at two (2) feet bgs. Soils were field screened for chlorides using a HACH test kit. Selected confirmation samples were submitted to Hall Environmental Analysis Laboratory (HEAL) for analysis of benzene, toluene, xylenes and ethylbenzene (BTEX) by EPA Method 8021, for total petroleum hydrocarbons (TPH) by EPA Method 8015 and for chloride by EPA Method 300. Sample results are summarized on Table 1. Sample Locations are depicted on Figure 2.

On January 9, 2018, GHD submitted to the Ms. Olivia Yu, NMOCD District 1, results of the delineation of the release area along with a remediation plan to excavate the area to a depth of four (4) feet bgs and line the excavation with a 20-milliliter (mil) plastic liner. On January 29 and 30, 2018, respectively, Mark Naranjo, NMSLO, and Olivia Yu, NMOCD, declared delineation of the RP-4891 area complete and approved the proposed plan for remediation; NMOCD correspondence is included as Attachment D.

With the submission of additional sidewall samples collected during the excavation and liner placement process, based on on-Site observations witnessed by Olivia Yu with the NMOCD, permission to backfill the approximately 120 x 40 square feet excavation was granted by NMOCD on February 28, 2018; NMOCD correspondence is included as Attachment D. Because of the extreme difficulty excavating the hard caliche in the eastern portion of the RP-4891 release area, NMOCD allowed a two (2) feet bgs excavation in this area, depicted on Figure 2, so long as the liner was placed before backfilling. Photographs of the liner placement and backfilling are included in the photographic log included as Attachment E. The RP-4891 release area of the Site is therefore considered closed as per NMOCD communications. A Form C-141 Final along with required submission fee will be submitted for RP-4891 with this assessment/closure request report.

### 4.2 1RP-4892

Initial hand auger borings and test pits inside the tank battery were dug in October and December 2017. TP-8, TP-9 and TP-10 were excavated to 4 ft. bgs and sampled for BTEX, TPH and chloride. TP-8 and TP-10

encountered TPH concentrations in excess of initial clean-up standards. The chloride concentration in TP-10 at 2 ft. bgs was also above the 600 mg/kg chloride clean-up level initially established for the Site.

In May 2018, GHD and the EOG contractor continued assessment activities on the 2013 release inside the tank battery berm. Steel lines and old equipment were removed from the area prior to excavation. The excavation was dug to a depth of 4ft below the Site pad height or approximately 2 ft. below surrounding undisturbed elevation. Excavation at this western extent of the battery was halted when overhead power lines and a buried 6-inch water line were encountered. In addition, access to lands outside of the battery needed to be secured.

Activity outside of the battery to the west of the initial 1RP-4892 excavation resumed in April 2019. The west wall of the tank battery berm was removed to enable the continuation of assessment of impacts in this direction. Attempt was made to excavate horizontally until sidewall concentrations were below 600 mg/kg. This was accomplished on the western sidewall, SW-1 (403 mg/kg) and the standard substantially met on the southern sidewall, SW-2 (607 mg/kg). Further delineation to the north was not possible due to a live waterline that serves the battery. The north sidewall sample SW-3, obtained at the termination of delineation in this direction, had a chloride concentration of 5760 mg/kg. The resulting excavation included an area with approximate dimensions of 50 ft. x 25 ft. x 4 ft. bgs. This portion of the 1RP-4892 release was deemed as delineated as possible and further exploration past the northern boundary would need to be deferred.

Because the western portion of the excavation was on private land, and to minimize potential liabilities of an incomplete tank battery berm and an open excavation next to the highway, the excavation was backfilled in May 2019. Prior to backfilling, a 20-mil plastic liner was placed in the entire excavation reaching from the portion inside the tank battery to the western edge on private land. The excavation was then backfilled with clean fill with topsoil added on the private portion. The tank battery berm was reconstructed, and fence lines rebuilt.

## 5. Further Soil Delineation Assessment Summary and Findings

To further delineate areas within (previously deferred) and to the north and east of the bermed area, GHD and EOG's contractor SDR Enterprises, LLC (SDR), returned to the Site. On November 12, 2021, fourteen (14) test pits were installed (TP19 through TP32), ranging in depth from two (2) to three (3) feet bgs. GHD collected nineteen (19) soil samples from various depths from the test pits. GHD also installed three (3) hand auger borings within the bermed area to a depth of one (1) foot bgs and collected samples (HA-1 through HA-3). All samples were submitted to Eurofins Environment Testing America (Eurofins) in Carlsbad, New Mexico for analysis of BTEX by EPA Method 8021B, TPH by EPA Method 8015B Modified, and chloride by EPA Method 300.

Analytical results indicated eleven (11) of the samples exhibited chloride concentrations above the Table I Restoration, Reclamation, and Re-Vegetation Closure Criteria of 600 mg/kg in the top four (4) feet: HA-1, HA-2, TP19-3, TP22-2, TP23-S, TP24-2, TP25-2, TP26-2, TP27-S, TP28-2, and TP30-S. None of the other hand auger or test pit samples exhibited benzene, BTEX, TPH, or chloride concentrations above Table I Closure Criteria. Analytical results are summarized in Table 1 and in the laboratory analytical reports included in Attachment C. Sample locations are shown on Figure 2.

## 6. Remedial Excavation, Waste Management, and Confirmation Soil Sampling

### Within Berm Excavation:

Remedial excavation activities were conducted by SDR with oversight being provided by GHD from April 7 through April 12, 2022. Excavation depths ranged from three (3) to four (4) feet bgs.

On April 7, 2022, SDR advanced a test pit in the area where the previous TP-8 was installed in 2017 to assess TPH impacts previously left in place during 2019 excavation activities. The liner placed at four (4) feet bgs during the previous excavation was peeled back and a sample was collected below the liner at approximately 4.3 feet bgs, a two (2) feet bgs sample was also collected. Test pit soil samples were submitted to Eurofins in Carlsbad, New Mexico, for analysis of BTEX by EPA Method 8021B, TPH by Method 8015B Modified, and chloride by EPA Method 300. The test pit sample results were not reported until the end of excavation activities at the Site; therefore, to ensure all affected soils were removed, the area around TP-8 was excavated down to the liner and composite confirmation samples collected (sample IDs with an "8" prefix were collected from this smaller excavation).

From April 7 to April 12, 2022, GHD collected 18 (eighteen) bottom hole (BH-1 through BH-17 and 8 BH-1) and five (5) sidewall (SW-1 through SW-3, 8 SW-1, and 8 SW-2) composite confirmation samples. Also, as previously mentioned, two test pit samples were collected (TP-8-2 and TP8-4). Composite confirmation samples collected represented areas no greater than 200 square feet. All soil samples were submitted to Eurofins in Carlsbad, New Mexico, for analysis of BTEX by EPA Method 8021B, TPH by EPA Method 8015B Modified, and chloride by EPA Method 300.

Analytical results indicated one (1) of the confirmation samples contained chloride concentrations that were above Table I Restoration, Reclamation, and Re-Vegetation Closure Criteria of 600 mg/kg in the top four (4) feet: BH-4. None of the other confirmation or test pit samples exhibited benzene, BTEX, TPH, or chloride concentrations above Table I Closure Criteria.

Due to the bottom hole sample exhibiting chloride concentrations above Table I Closure Criteria, GHD and SDR returned to the site on April 14, 2022, to further excavate the affected area and resample. The area around BH-4 was deepened from three (3) to four (4) feet bgs and resampled (BH-4A). The soil sample was submitted to Eurofins in Carlsbad, New Mexico, for analysis of BTEX by EPA Method 8021B, TPH by EPA Method 8015B Modified, and chloride by EPA Method 300.

Analytical results indicated the sample did not exhibit benzene, BTEX, TPH, or chloride concentrations above Table I Closure Criteria. Figure 3 depicts the locations of the composite confirmation samples. Analytical results are provided in Table 2 and in the Laboratory Analytical Reports provided in Attachment C.

### Outside of Berm Excavation:

GHD and SDR returned to the Site in October 2022, to address affected soils outside of the berm. Remedial excavation activities were conducted from October 25, 2022 through January 10, 2023. Excavation depths ranged from two (2) to four (4) feet bgs.

On October 25, 2022, GHD collected 25 (twenty-five) bottom hole (BH-1 through BH-25) and eight (8) sidewall (SW-2A, SW-3A, and SW-4 through SW-9) composite confirmation samples. Sidewall samples SW-2A and SW-3A were taken from previous sidewall locations SW-2 and SW-3, collected during 2019 excavation

activities to address chloride exceedances. Composite confirmation samples collected represented areas no greater than 200 square feet. All samples were submitted to HEAL in Albuquerque, New Mexico, for analysis of BTEX by EPA Method 8021B, TPH by EPA Method 8015B Modified, and chloride by EPA Method 300.

Analytical results indicated seventeen (17) of the confirmation samples exhibited chloride concentrations above Table I Restoration, Reclamation, and Re-Vegetation Closure Criteria of 600 mg/kg in the top four (4) feet: BH-2, BH-3, BH-4, BH-5, BH-7, BH-8, BH-9, BH-10, BH-11, BH-12, BH-15, BH-16, BH-24, SW-5, SW-7, SW-8, and SW-9. Confirmation samples BH-9 and BH-10 also exhibited TPH concentrations above Table I Closure Criteria.

Due to samples exhibiting chloride and/or TPH concentrations over Table I Closure Criteria, GHD and SDR returned to the Site on November 11, 2022, to further excavate the affected areas and resample. The areas around BH-2, BH-7 through BH-12, and BH-24 were deepened from two (2) to three (3) feet bgs and resampled (BH-2A, BH-7A through BH-12A, and BH-24A). The areas around BH-3 through BH-5, BH-15, and BH-16 were deepened from three (3) to four (4) feet bgs and resampled (BH-3A through BH-5A, BH-15A, and BH-16A). The sidewalls where samples SW-5 and SW-7 through SW-9 were collected were further excavated and resampled (SW-5A and SW-7A through SW-9A). The soil samples were submitted to HEAL in Albuquerque, New Mexico, for analysis of BTEX by EPA Method 8021B, TPH by EPA Method 8015B Modified, and chloride by EPA Method 300.

Analytical results indicated eight (8) of the confirmation samples exhibited chloride concentrations above Table I Closure Criteria: BH-2A, BH-7A through BH-12A, and BH-24A.

Due to samples exhibiting chloride and/or TPH concentrations over Table I Closure Criteria, GHD and SDR returned to the Site on December 15, 2022, and January 10, 2023, to further excavate the affected areas, resample, and collect additional samples as needed. The areas around BH-2A, BH-7A through BH-12A, and BH-24A were deepened from three (3) to four (4) feet bgs and resampled (BH-3B through BH-5B, BH-15B, and BH-16B). Due to further excavating sidewalls, three (3) additional bottom hole composite confirmation samples were collected (BH-26 through BH-28). The soil samples were submitted to HEAL in Albuquerque, New Mexico, for analysis of BTEX by EPA Method 8021B, TPH by EPA Method 8015B Modified, and chloride by EPA Method 300.

Analytical results indicated none of the samples exhibited benzene, BTEX, TPH, or chloride concentrations above Table I Closure Criteria. Figure 3 depicts the locations of the composite confirmation samples. Analytical results are provided in Table 3 and in the Laboratory Analytical Reports provided in Attachment C.

#### **Waste Management Activities:**

Waste management activities were performed in coordination with EOG directives. GHD 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 (WM-1-035), Lea Land, LLC facility located at MM64, Highway 62/180 East, Carlsbad, NM, 88220. Approximately 1,735.37 tons 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 4. A photographic log is included as Attachment E. Sampling notifications are included in Attachment D.

## 7. 1RP-4891/4892 Closure Request

The excavation was backfilled with non-impacted soil, with the upper four (4) feet consisting entirely of soils imported to the Site from a locally sourced topsoil pit. Site characterization, soil delineation, and remediation activities for Incidents 1RP-4891/4892 have been performed in accordance with applicable NMOCD guidance and regulations. Based upon supporting documentation provided in this report, GHD, on behalf of EOG, respectfully requests closure of 1RP-4891/4892.

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

Sincerely,

GHD



Nate Reece  
Environmental Scientist



JT Murrey  
Senior Project Manager

NR/jt/1

Encl.    Figure 1 – Site Location Map  
          Figure 2 – Assessment Sampling Locations Map  
          Figure 3 – Confirmation Sampling Locations Map  
          Table 1 – Summary of Soil Analytical Data – 2017 through 2021  
          Table 2 – Summary of Soil Analytical Data – Within Berm Excavation  
          Table 3 – Summary of Soil Analytical Data – Outside of Berm Excavation  
          Table 4 – Soil Disposal Summary  
          Attachment A – Site Characterization Documentation  
          Attachment B – Soil Boring Log  
          Attachment C – Laboratory Analytical Reports and Chain-of-Custody Documentation  
          Attachment D – NMOCD Correspondence  
          Attachment E – Photographic Log

cc:        James Kennedy, EOG Resources

Tables



**Table 1**  
**Summary of Soil Analytical Data - 2017 through 2021**  
**Hunt APO State #1**  
**EOG Resources**  
**Lea County, New Mexico**

Location ID			Sample ID		Sample Date	Depth (feet bgs)	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	TPH				Chloride
												GRO (C6-C10)	DRO (>C10-C28)	MRO (>C28-C35)	Total GRO/DRO/M RO	
							19.15.29 NMAC - Table I Closure Criteria for Soils<50 feet Depth to Groundwater									
							10	---	---	---	50	---	---	100	600	
Test Pit Samples																
RP-4891	TP-1	S-088210-53-100217-MG-TP-1-2	10/2/2017	2	<0.025	<0.050	<0.050	<0.099	<0.224	<5.0	230	500	730	3,500		
	TP-2	S-088210-53-100217-MG-TP-2-2	10/2/2017	2	<0.023	<0.047	<0.047	<0.094	<0.211	<4.7	180	450	630	3,700		
	TP-3	S-088210-53-100217-MG-TP-3-2	10/2/2017	2	<0.024	<0.047	<0.047	<0.095	<0.213	<4.7	110	230	340	2,000		
	TP-4	S-088210-53-121817-SP-TP-4-2	12/18/2017	2	<0.021	<0.042	<0.042	<0.085	<0.172	<4.2	<9.7	<48	<61.9	220		
	TP-5	S-088210-53-121817-SP-TP-5-2	12/18/2017	2	<0.020	<0.041	<0.041	<0.082	<0.184	<4.1	130	160	290	730		
	TP-6	S-088210-53-121817-SP-TP-6-2	12/18/2017	2	<0.020	<0.039	<0.039	<0.079	<0.177	<3.9	220	630	850	520		
	TP-7	S-088210-53-121817-SP-TP-7-2	12/18/2017	2	<0.021	<0.043	<0.043	<0.085	<0.192	<4.3	<9.4	<47	<60.7	800		
	TP-11	S-088210-53-121817-SP-TP-11-14	12/19/2017	14	<0.020	<0.041	<0.041	<0.081	<0.183	<4.1	<9.6	<48	<61.7	1,200		
		S-088210-53-121817-SP-TP-11-16	12/19/2017	16	<0.019	<0.038	<0.038	<0.076	<0.171	<3.8	<9.5	<47	<60.3	840		
	TP-12	S-088210-53-122017-SP-TP-12-2	12/20/2017	2	NA	NA	NA	NA	NA	<5.0	<10	<50	<65	1,200		
	TP-13	S-088210-53-122017-SP-TP-13-2	12/20/2017	2	NA	NA	NA	NA	NA	<4.9	<9.5	<48	<62.4	350		
	TP-14	S-088210-53-022118-MG-TP-14	2/21/2018	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	840		
	TP-15	S-088210-53-022118-MG-TP-15	2/21/2018	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,700		
	TP-16	S-088210-53-022118-MG-TP-16	2/21/2018	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	500		
TP-17	S-088210-53-022118-MG-TP-17	2/21/2018	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,500			
TP-18	S-088210-53-022318-MG-TP-18-2	2/23/2018	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,400			
RP-4892	TP-1	S-088210-53-050918-MG-TP-1-2	5/9/2018	2	<0.024	<0.049	<0.049	<0.098	<0.22	<10	<50	<4.9	<64.9	89		
		S-088210-53-050918-MG-TP-1-4	5/9/2018	4	<0.024	<0.049	<0.049	<0.098	<0.22	<10	18	<4.9	18	130		
	TP-2	S-088210-53-050918-MG-TP-2-2	5/10/2018	2	<0.025	<0.049	<0.049	<0.098	<0.23	<9.9	<50	<4.9	<63.8	94		
	TP-3	S-088210-53-050918-MG-TP-3-2	5/10/2018	2	<0.024	<0.049	<0.049	<0.096	<0.20	<10	<50	<4.8	<64.8	400		
	TP-4	S-088210-53-050918-MG-TP-4-2	5/10/2018	2	<0.024	<0.049	<0.049	<0.096	<0.20	<10	<50	<4.8	<64.8	790		
	TP-5	S-088210-53-050918-MG-TP-5-2	5/25/2018	2	<0.025	<0.049	<0.049	<0.099	<0.22	<9.9	<50	<4.9	<63.8	2,700		
	TP-6	S-088210-53-050918-MG-TP-6-2	5/25/2018	2	<0.025	<0.049	<0.049	<0.098	<0.23	<10	<50	<4.9	<64.9	2,000		
TP-7	S-088210-53-050918-MG-TP-7-1	5/25/2018	1	<0.024	<0.048	<0.048	<0.097	<0.21	<9.8	<49	<4.8	<63.6	3,300			

**Table 1**  
**Summary of Soil Analytical Data - 2017 through 2021**  
**Hunt APO State #1**  
**EOG Resources**  
**Lea County, New Mexico**

Location ID		Sample ID	Sample Date	Depth (feet bgs)	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	TPH				Chloride
										GRO (C6-C10)	DRO (>C10-C28)	MRO (>C28-C35)	Total GRO/DRO/M RO	
19.15.29 NMAC - Table I Closure Criteria for Soils<50 feet Depth to Groundwater														
					10	---	---	---	50	---		---	100	600
RP-4892	TP-8	S-088210-53-050918-MG-TP-8-1	5/25/2018	1	<0.024	<0.048	<0.048	<0.097	<0.21	<10	<50	<4.8	<64.8	5,700
		S-088210-53-121817-SP-TP-8-2	12/18/2017	2	<0.020	<0.039	<0.039	<0.079	<0.177	5.6	3400	3100	6,506	120
		S-088210-53-121817-SP-TP-8-4	12/18/2017	4	<0.017	<0.033	<0.033	<0.067	<0.150	200	3100	2300	5,600	120
	TP-9	S-088210-53-121817-SP-TP-9-2	12/18/2017	2	<0.018	<0.036	<0.036	<0.073	<0.163	<3.6	<9.3	<46	<58.9	65
		S-088210-53-121817-SP-TP-9-4	12/18/2017	4	<0.018	<0.036	<0.036	<0.072	<0.162	<3.6	<9.3	<46	<58.9	370
	TP-10	S-088210-53-121817-SP-TP-10-2	12/18/2017	2	<0.016	<0.032	<0.032	<0.064	<0.144	24	380	190	594	460
		S-088210-53-121817-SP-TP-10-4	12/18/2017	4	<0.072	0.81	2.5	5.3	8.6	380	1900	840	3,120	1,000
Excavation Soil Samples														
RP-4892	B-1	S-088210-53-041519-MM-B-1-4	4/15/2019	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,340
	SW-1	S-088210-53-041619-MM-SW-1-2	4/16/2019	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	403
	SW-2	S-088210-53-041819-MM-SW-2-2	4/18/2019	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	607
	SW-3	S-088210-53-041819-MM-SW-3-2	4/18/2019	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	5,760
	SW-4	S-088210-53-041819-MM-SW-4-2	4/18/2019	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,250
	B-2	S-088210-53-041819-MM-B-2-4	4/18/2019	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,440
Additional Assessment Samples														
HA-1		HA-1	11/12/2021	1	0.000419 J	<0.00199	<0.00199	<0.00398	<0.00398	<49.9	134 B	51.1	185	11.3
HA-2		HA-2	11/12/2021	1	0.000895 JB	0.000566 J	<0.00198	0.00252	0.00398	<49.9	52.4 B	<49.9	52.4	1,580
HA-3		HA-3	11/12/2021	1	<0.00199	0.00150 J	<0.00199	0.00211 J	0.00361 J	<49.8	58.7 B	<49.8	58.7	211
TP19-3		TP19-3	11/12/2021	3	0.000610 J	0.000657 J	<0.00201	<0.00402	0.00179 J	<49.9	22.0 J	<49.9	22.0 J	1,280
TP20-2		TP20-2	11/12/2021	2	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	25.3 J	16.0 J	18.1 J	59.4	336
TP21-2		TP21-2	11/12/2021	2	<0.00200	<0.00200	0.000953 J	<0.00401	0.00153 J	16.2 J	21.1 J	15.6 J	52.9	299
TP22-2		TP22-2	11/12/2021	2	<0.00202	<0.00202	<0.00202	<0.00403	<0.00403	<50	17.8 J	15.9 J	33.7 J	1,170
TP23	TP23-S	11/12/2021	0-0.5	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	<49.9	<49.9	15.7 J	15.7 J	794	
	TP23-2	11/12/2021	2	<0.00200	0.00101 J	0.00645	0.00166 J	0.00912	<49.8 *1	21.7 JB	<49.8	21.7 J	513	
TP24-2		TP24-2	11/12/2021	2	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	24.1 J*1	23.1 JB	<49.9	47.2 J	1,310
TP25-2		TP25-2	11/12/2021	2	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<49.8 *1	18.9 JB	<49.8	18.9 J	1,240

**Table 1**  
**Summary of Soil Analytical Data - 2017 through 2021**  
**Hunt APO State #1**  
**EOG Resources**  
**Lea County, New Mexico**

Location ID	Sample ID	Sample Date	Depth (feet bgs)	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	TPH				Chloride
									GRO (C6-C10)	DRO (>C10-C28)	MRO (>C28-C35)	Total GRO/DRO/M RO	
				19.15.29 NMAC - Table I Closure Criteria for Soils<50 feet Depth to Groundwater									
10	---	---	---	50	---	---	100	600					
TP26-2	TP26-2	11/12/2021	2	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	<49.9 *1	22.3 JB	<49.9	22.3 J	1,230
TP27	TP27-S	11/12/2021	0-0.5	<0.00198	0.000453 J	<0.00198	<0.00397	<0.00397	16.5 J*1	21.5 JB	<50	38.0 J	725
	TP27-2	11/12/2021	2	0.00115 J	0.00234	0.000637 J	0.00301 J	0.00714	17.1 J*1	20.1 JB	<49.9	37.2 J	541
TP28-2	TP28-2	11/12/2021	2	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<50 *1	22.8 JB	<50	22.8 J	862
TP29-S	TP29-S	11/12/2021	0-0.5	0.000799 J	<0.00199	<0.00199	<0.00398	<0.00398	<49.9 *1	23.1 JB	<49.9	23.1 J	65.1
	TP29-2	11/12/2021	2	<0.00199	0.000723 J	<0.00199	<0.00398	<0.00398	<50.0 *1	24.2 JB	<50.0	24.2 J	52.4
TP30-S	TP30-S	11/12/2021	0-0.5	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<49.8 *1	30.4 JB	<49.8	30.4 J	761
	TP30-2	11/12/2021	2	<0.00201	<0.00201	0.000607 J	<0.00402	<0.00402	<49.9 *1	113 B	<49.9	113	441
TP31-S	TP31-S	11/12/2021	0-0.5	<0.00200	<0.00200	<0.00200	<0.00401	<0.00401	<49.9 *1	27.5 JB	<49.9	27.5 J	347
	TP31-2	11/12/2021	2	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	<49.9 *1	27.6 JB	<49.9	27.6 J	255
TP32-2	TP32-2	11/12/2021	2	<0.00198	<0.00198	<0.00198	<0.00397	<0.00397	<49.8 *1	27.2 JB	<49.8	27.2 J	31.7

## Notes:

- Concentrations and Closure Criteria reported in mg/kg
- < Value Less than Reporting Limit (RL)
- Bold Indicates Analyte Detected
- BTEX analyses by EPA Method SW-846 8021B
- TPH analyses by EPA SW-846 Method 8015 Modified
- GRO/DRO/MRO = Gasoline/Diesel/Motor Oil
- Yellow shaded cells indicate analytical samples that exceed the NMAC 19.15.29.12 - Table I Closure Criteria for Soils Impacted by a Release.
- J - Result is less than the Reporting Limit (RL) but greater than or equal to the Method Detection Limit (MDL) and the concentration is an approximate value.
- \*1 - LCS/LCSD RPD exceeds control limits
- B - Compound was found in the blank and sample
- feet bgs - feet below ground surface
- No closure criteria listed in NMAC 19.15.29.12 - Table I Closure Criteria for Soils Impacted by a Release
- Samples collected prior to November 2021 were evaluated to NMOC Recommended Remediation Action Levels of 10 mg/kg for Benzene, 50 mg/kg for BTEX, 1,000 mg/kg for Total TPH, and 600 mg/kg for Chloride.

**Table 2**  
**Summary of Soil Analytical Data - Within Berm Excavation**  
**Hunt APO State #1**  
**EOG Resources**  
**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)	MRO (C28-C35)	Total GRO/DRO/MRO	
			Table I Closure Criteria for Soils <50 feet Depth to Groundwater 19.15.29 NMAC									
			10	---	---	---	50	---			100	600
Test Pit Assessment Samples												
TP8-2*	4/7/22	2	0.000829	0.00261	<0.000564	<0.00101	0.00344	<14.9	<14.9	<14.9	<14.9	48.4
TP8-4*	4/7/22	4.3	0.000975	0.00466	<0.000563	<0.00101	0.00564	<14.9	<14.9	<14.9	<14.9	33.9
Bottom Hole Confirmation Samples												
8 BH-1	4/12/22	4	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	<15.0	36.0	<15.0	36.0	487
BH-1	4/7/22	3	<0.000383	<0.000453	<0.000562	<0.00100	<0.00100	<15.0	<15.0	<15.0	<15.0	486
BH-2	4/7/22	3	0.000466	0.00126	<0.000567	<0.00101	0.00173	<15.0	<15.0	<15.0	<15.0	198
BH-3	4/8/22	3	<0.000386	<0.000457	<0.000566	<0.00101	<0.00101	<15.0	<15.0	<15.0	<15.0	514
BH-4	4/8/22	3	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	<15.0	21.1	<15.0	21.1	664
BH4A	4/14/22	4	<0.000387	<0.000458	<0.000567	<0.00101	<0.00101	23.5	20.4	<15	43.9	499
BH-5	4/11/22	3.5	<0.000383	<0.000454	<0.000563	<0.00101	<0.00101	<15.0	19.8	<15.0	19.8	345
BH-6	4/11/22	3.5	<0.000383	<0.000453	<0.000562	<0.00100	<0.00100	<15.0	25.6	<15.0	25.6	498
BH-7	4/11/22	3.5	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	<15.0	21.7	<15.0	21.7	41.9
BH-8	4/11/22	3.5	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	<15.0	21.3	<15.0	21.3	191
BH-9	4/11/22	3.5	<0.000383	<0.000454	<0.000563	<0.00101	<0.00101	<15.0	20.9	<15.0	20.9	282
BH-10	4/11/22	4	<0.000383	<0.000453	<0.000562	<0.00100	<0.00100	<15.0	20.6	<15.0	20.6	112
BH-11	4/11/22	4	<0.000387	<0.000458	<0.000567	<0.00101	<0.00101	<15.0	21.0	<15.0	21.0	352
BH-12	4/11/22	3.5	<0.000386	<0.000457	<0.000566	<0.00101	<0.00101	20.0	20.2	<15.0	40.2	301
BH-13	4/12/22	3.5	<0.000388	<0.000460	<0.000570	<0.00102	<0.00102	<15.0	20.7	<15.0	20.7	459
BH-14	4/12/22	3.5	<0.000387	<0.000459	<0.000568	<0.00102	<0.00102	<15.0	20.3	<15.0	20.3	337
BH-15	4/12/22	3.5	<0.000389	<0.000461	<0.000571	<0.00102	<0.00102	<15.0	20.7	<15.0	20.7	385
BH-16	4/12/22	3.5	<0.000388	<0.000460	<0.000570	<0.00102	<0.00102	<15.0	20.4	<15.0	20.4	397
BH-17	4/12/22	3.5	<0.000386	<0.000457	<0.000566	<0.00101	<0.00101	<15.0	21.1	<15.0	21.1	409
Sidewall Confirmation Samples												
8 SW-1	4/12/22	Sidewall	<0.000383	<0.000454	<0.000563	<0.00101	<0.00101	<15.0	21.4	<15.0	21.4	70.6
8 SW-2	4/12/22	Sidewall	<0.000388	<0.000460	<0.000570	<0.00102	<0.00102	<15.0	26.3	<15.0	26.3	242
SW-1	4/7/22	Sidewall	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	<15.0	<15.0	<15.0	<15.0	433
SW-2	4/8/22	Sidewall	<0.000383	<0.000454	<0.000563	<0.00101	<0.00101	<14.9	19.6	<14.9	19.6	129
SW-3	4/8/22	Sidewall	<0.000383	<0.000453	<0.000562	<0.00100	<0.00100	<15.0	24.2	<15.0	24.2	31.0

**Notes:**

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 1 Closure Criteria for the site.

8. Peach shaded cells indicate analytical samples that exceed the NMAC 19.15.29.13 Table 1 Closure Criteria for the site (Surface to 4 Feet Below Grade).

9. --- = not defined

B-BH-2 Sample Point Excavated

**Table 3**  
**Summary of Soil Analytical Data - Outside of Berm Excavation**  
**Hunt APO State #1**  
**EOG Resources**  
**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)	MRO (C28-C35)	Total GRO/DRO/MRO	
			Table I Closure Criteria for Soils >100 feet Depth to Groundwater 19.15.29 NMAC									
10	---	---	---	50	1,000	---	2,500	20,000				
19.15.29.13 NMAC - Restoration and Reclamation Criteria (0 to 4 feet)												
10	---				50	---		100	600			
Bottom Hole Confirmation Samples												
BH-1	10/25/22	2	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<15	<49	<49	410
BH-2	10/25/22	2	<0.023	<0.047	<0.047	<0.094	<0.094	<4.7	<15	<49	<49	640
BH-2A	11/14/22	3	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<13	<45	<45	740
BH-2B	12/15/22	4	<0.013	<0.027	<0.027	<0.054	<0.054	<2.7	<15	<48	<48	290
BH-3	10/25/22	3	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	<15	<49	<49	1,100
BH-3A	11/11/22	4	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	20	50	70	2,300
BH-4	10/25/22	3	<0.024	<0.047	<0.047	<0.095	<0.095	<4.7	<14	<47	<47	1,300
BH-4A	11/11/22	4	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<12	<39	<39	2,000
BH-5	10/25/22	3	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<14	<47	<47	820
BH-5A	11/11/22	4	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<14	<48	<48	870
BH-6	10/25/22	2	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<14	<47	<47	440
BH-7	10/25/22	2	<0.023	<0.046	<0.046	<0.092	<0.092	<4.6	<15	<49	<49	1,300
BH-7A	11/14/22	3	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<14	<48	<48	1,600
BH-7B	1/10/23	4	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	<8.9	<45	<45	610
BH-8	10/25/22	2	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<14	<48	<48	940
BH-8A	11/14/22	3	<0.023	<0.046	<0.046	<0.093	<0.093	<4.6	<13	<42	<42	1,000
BH-8B	1/10/23	4	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	<8.5	<42	<42	1,300
BH-9	10/25/22	2	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	70	140	210	1,900
BH-9A	11/14/22	3	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<13	<43	<43	1,600
BH-9B	1/10/23	4	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<8.7	<43	<43	310
BH-10	10/25/22	2	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	110	170	280	1,200
BH-10A	11/14/22	3	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<14	<46	<46	1,500
BH-10B	1/10/23	4	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<9.2	<46	<46	960
BH-11	10/25/22	2	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<14	<46	<46	840
BH-11A	11/14/22	3	<0.024	<0.048	<0.048	<0.095	<0.095	<4.8	<15	<50	<50	1,600
BH-11B	1/10/23	4	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<8.5	<43	<43	1,000
BH-12	10/25/22	2	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	<15	<49	<49	2,400
BH-12A	11/14/22	3	<0.023	<0.047	<0.047	<0.093	<0.093	<4.7	<14	<46	<46	2,200
BH-12B	1/10/23	4	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<8.7	<44	<44	590
BH-13	10/25/22	3	<0.023	<0.046	<0.046	<0.091	<0.091	<4.6	<14	<47	<47	520
BH-14	10/25/22	3	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	<14	<47	<47	500
BH-15	10/25/22	3	<0.023	<0.047	<0.047	<0.093	<0.093	<4.7	<14	<46	<46	670
BH-15A	11/11/22	4	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	<14	<47	<47	910
BH-16	10/25/22	3	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<15	<50	<50	680
BH-16A	11/11/22	4	<0.023	<0.046	<0.046	<0.093	<0.093	<4.6	<15	<50	<50	900
BH-17	10/25/22	3	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<14	<47	<47	190

**Table 3**  
**Summary of Soil Analytical Data - Outside of Berm Excavation**  
**Hunt APO State #1**  
**EOG Resources**  
**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)	MRO (C28-C35)	Total GRO/DRO/MRO	
			Table I Closure Criteria for Soils >100 feet Depth to Groundwater 19.15.29 NMAC									
			10	---	---	---	50	1,000	---	2,500	20,000	
			19.15.29.13 NMAC - Restoration and Reclamation Criteria (0 to 4 feet)									
10	---			50	---			100	600			
BH-18	10/25/22	3	<0.024	<0.047	<0.047	<0.095	<0.095	<4.7	<15	<49	<49	120
BH-19	10/25/22	3	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<14	<46	<46	60
BH-20	10/25/22	3	<0.023	<0.046	<0.046	<0.091	<0.091	<4.6	<14	<47	<47	480
BH-21	10/25/22	3	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<15	<48	<48	180
BH-22	10/25/22	3	<0.023	<0.047	<0.047	<0.093	<0.093	<4.7	<14	<47	<47	72
BH-23	10/25/22	3	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<15	<50	<50	120
<del>BH-24</del>	<del>10/25/22</del>	<del>2</del>	<del>&lt;0.025</del>	<del>&lt;0.049</del>	<del>&lt;0.049</del>	<del>&lt;0.098</del>	<del>&lt;0.098</del>	<del>&lt;4.9</del>	<del>&lt;15</del>	<del>&lt;49</del>	<del>&lt;49</del>	<del>690</del>
<del>BH-24A</del>	<del>11/11/22</del>	<del>3</del>	<del>&lt;0.024</del>	<del>&lt;0.049</del>	<del>&lt;0.049</del>	<del>&lt;0.098</del>	<del>&lt;0.098</del>	<del>&lt;4.9</del>	<del>&lt;15</del>	<del>&lt;50</del>	<del>&lt;50</del>	<del>870</del>
BH-24B	1/10/23	4	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<8.2	<41	<41	490
BH-25	10/25/22	2	<0.023	<0.047	<0.047	<0.093	<0.093	<4.7	<14	<47	<47	530
BH-26	12/15/22	4	<0.019	<0.037	<0.037	<0.075	<0.075	<3.7	<14	<48	<48	160
BH-27	1/10/23	4	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.0	<45	<45	580
BH-28	1/10/23	4	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<8.4	<42	<42	760
Sidewall Confirmation Samples												
SW-2A	10/25/22	0-2	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<15	<49	<49	<60
SW-3A	10/25/22	0-2	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<14	<46	<46	<60
SW-4	10/25/22	0-2/0-3	<0.024	<0.047	<0.047	<0.094	<0.094	<4.7	<15	<49	<49	190
<del>SW-5</del>	<del>10/25/22</del>	<del>0-2/0-3</del>	<del>&lt;0.023</del>	<del>&lt;0.046</del>	<del>&lt;0.046</del>	<del>&lt;0.091</del>	<del>&lt;0.091</del>	<del>&lt;4.6</del>	<del>&lt;14</del>	<del>&lt;47</del>	<del>&lt;47</del>	<del>4,600</del>
<del>SW-5A</del>	<del>11/11/22</del>	<del>0-2/0-3/0-4</del>	<del>&lt;0.024</del>	<del>&lt;0.047</del>	<del>&lt;0.047</del>	<del>&lt;0.095</del>	<del>&lt;0.095</del>	<del>&lt;4.7</del>	<del>&lt;14</del>	<del>&lt;47</del>	<del>&lt;47</del>	<del>1,700</del>
SW-6	10/25/22	0-2/0-3	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<14	<46	<46	360
<del>SW-7</del>	<del>10/25/22</del>	<del>0-2/0-3</del>	<del>&lt;0.025</del>	<del>&lt;0.049</del>	<del>&lt;0.049</del>	<del>&lt;0.099</del>	<del>&lt;0.099</del>	<del>&lt;4.9</del>	<del>&lt;14</del>	<del>&lt;48</del>	<del>&lt;48</del>	<del>840</del>
SW-7A	11/11/22	0-2/0-3	<0.023	<0.047	<0.047	<0.093	<0.093	<4.7	<15	<48	<48	430
<del>SW-8</del>	<del>10/25/22</del>	<del>0-2/0-3</del>	<del>&lt;0.023</del>	<del>&lt;0.046</del>	<del>&lt;0.046</del>	<del>&lt;0.092</del>	<del>&lt;0.092</del>	<del>&lt;4.6</del>	<del>&lt;14</del>	<del>&lt;46</del>	<del>&lt;46</del>	<del>1,700</del>
SW-8A	11/11/22	0-3/0-4	<0.024	<0.047	<0.047	<0.094	<0.094	<4.7	<14	<47	<47	450
<del>SW-9</del>	<del>10/25/22</del>	<del>0-2/0-3</del>	<del>&lt;0.025</del>	<del>&lt;0.050</del>	<del>&lt;0.050</del>	<del>&lt;0.099</del>	<del>&lt;0.099</del>	<del>&lt;5.0</del>	<del>&lt;15</del>	<del>&lt;50</del>	<del>&lt;50</del>	<del>690</del>
SW-9A	11/11/22	0-3/0-4	<0.023	<0.046	<0.046	<0.093	<0.093	<4.6	<14	<48	<48	500
SW-10	12/15/22	0-4	<0.016	<0.033	<0.033	<0.065	<0.065	<3.3	<15	<50	<50	470
SW-11	12/15/22	0-4	<0.014	<0.027	<0.027	<0.054	<0.054	<2.7	<15	<50	<50	530

## Notes:

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.

**B-BH-2** Sample Point Excavated

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 1 Closure Criteria for the site.**

**8. Peach shaded cells indicate analytical samples that exceed the NMAC 19.15.29.13 Table 1 Closure Criteria for the site (Surface to 4 Feet Below Grade).**

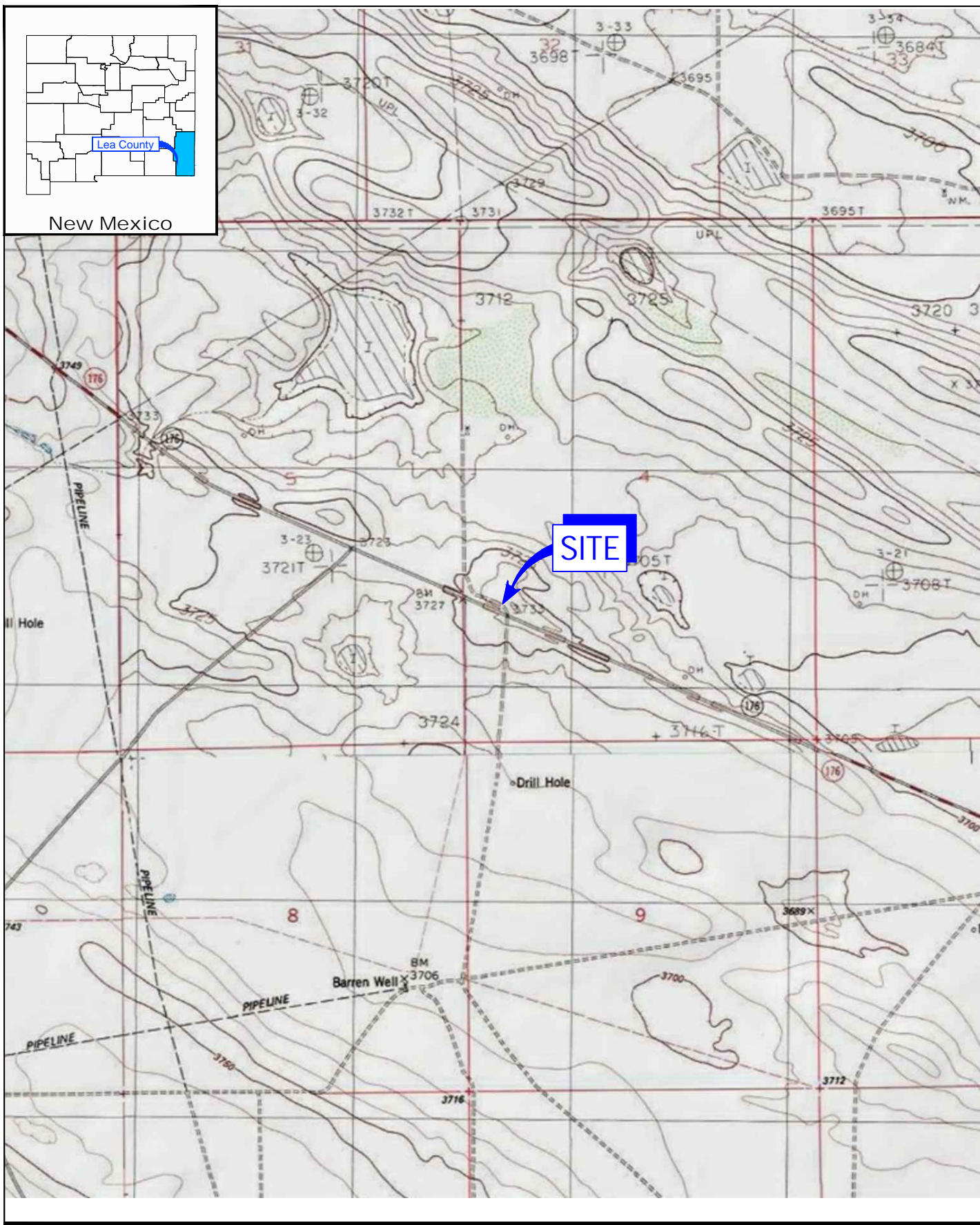
9. --- = not defined

**Table 4**  
**Daily Disposal Summary**  
**Hunt APO State #1**  
**EOG Resources**  
**Lea County, New Mexico**

<b>Date of Disposal</b>	<b>Total Pounds Disposed</b>	<b>Total Tons Disposed</b>
4/18/2022	596,420	298.21
4/19/2022	723,760	361.88
4/21/2022	94,420	47.21
4/22/2022	180,740	90.37
10/31/2022	317,020	158.51
11/1/2022	226,140	113.07
11/2/2022	196,720	98.36
11/15/2022	449,460	224.73
1/9/2023	336,660	168.33
1/18/2023	248,940	124.47
1/19/2023	100,460	50.23
<b>Project Total</b>	<b>3,470,740</b>	<b>1735.37</b>



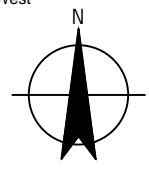
## Figures



Lat/Long: 32.506315° North, 103.481783° West



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



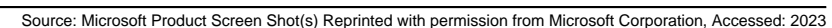
EOG RESOURCES  
HUNT APO STATE No. 1  
LEA COUNTY, NEW MEXICO

Project No. 11224665  
Date February 2023

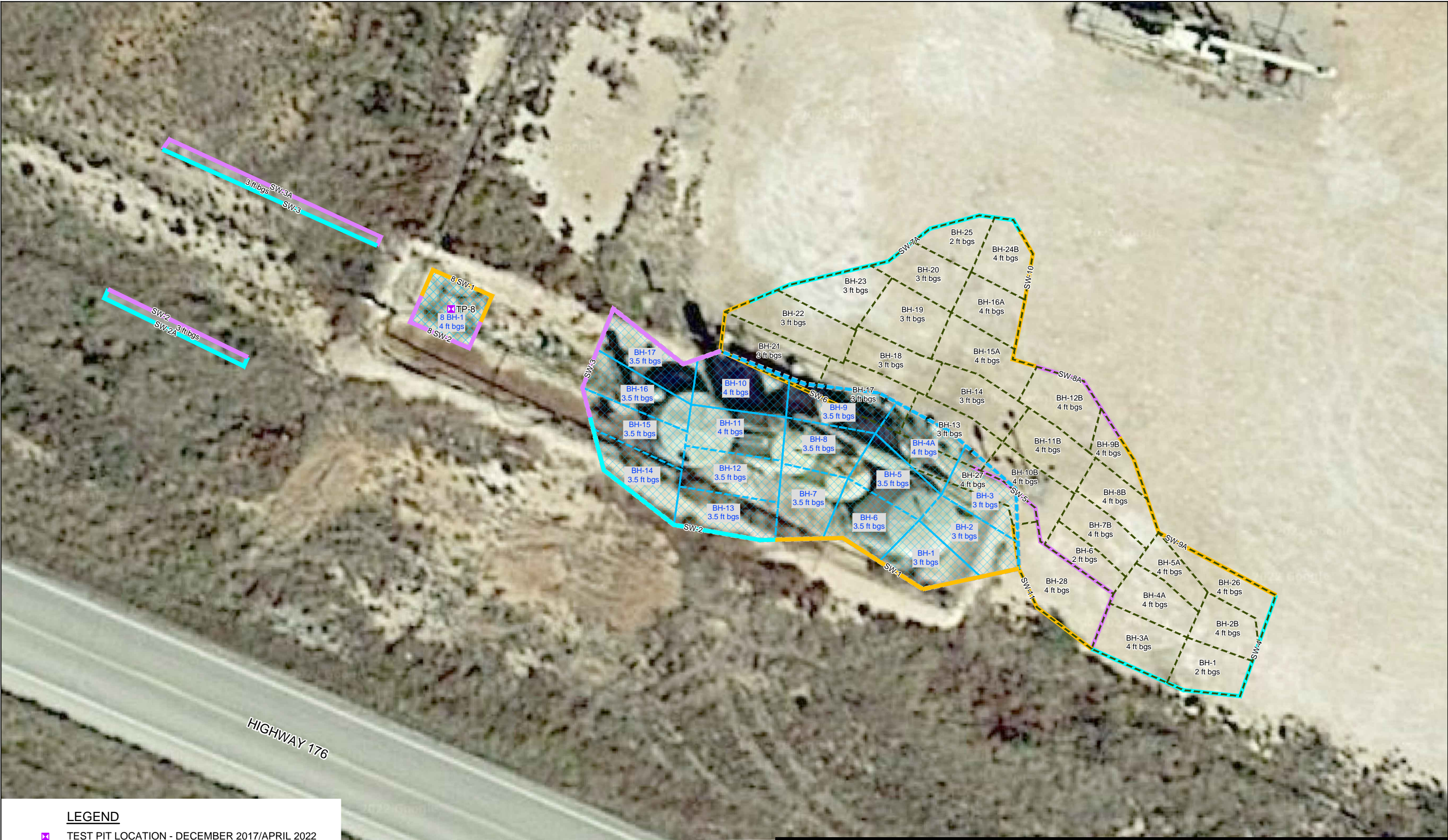
SITE LOCATION MAP

FIGURE 1















# **Attachment A**

## **Site Characterization Documentation**

# EOG Hunt APO State #1

Karst Potential Map

## Legend

-  High
-  Hunt APO State #1
-  Low
-  Medium

Hunt APO State #1

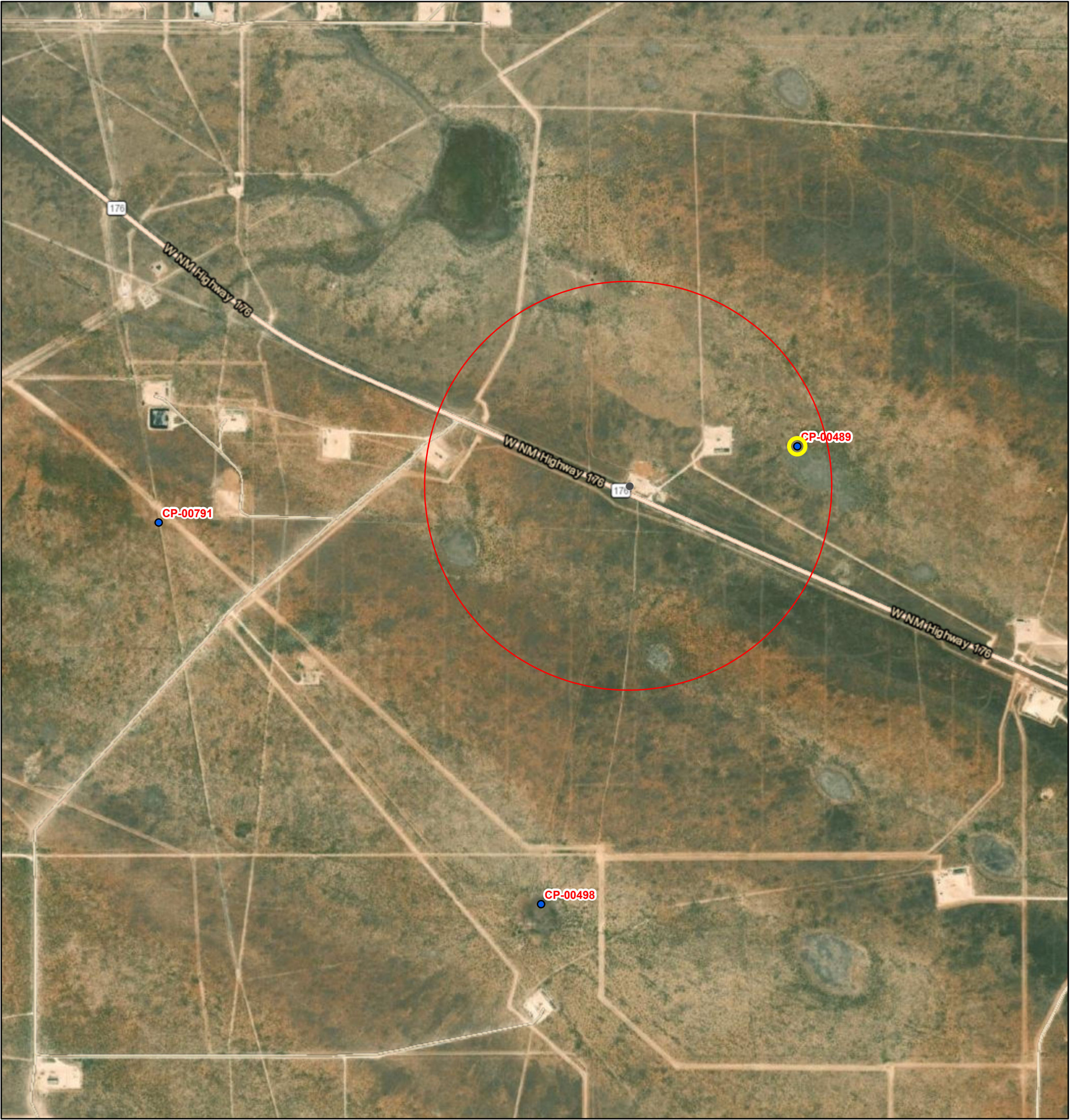
176



3000 ft



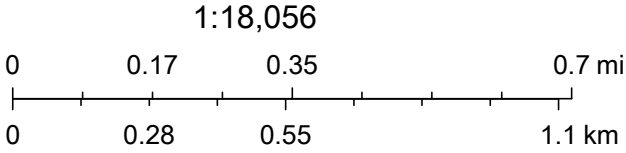
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GIS WATERS PODs

- Active
- OSE District Boundary
- SiteBoundaries




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





# New Mexico Office of the State Engineer Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)  
(quarters are smallest to largest) (NAD83 UTM in meters)

<b>Well Tag</b>	<b>POD Number</b>	<b>Q64 Q16 Q4</b>	<b>Sec</b>	<b>Tws</b>	<b>Rng</b>	<b>X</b>	<b>Y</b>
	CP 00498	2	4	08	21S 34E	642287	3595932* 

**Driller License:** 208      **Driller Company:** VAN NOY, W.L.  
**Driller Name:** VAN NOY, W.L.  
**Drill Start Date:** 09/28/1971      **Drill Finish Date:** 09/30/1971      **Plug Date:**  
**Log File Date:** 10/04/1971      **PCW Rcv Date:**      **Source:** Shallow  
**Pump Type:**      **Pipe Discharge Size:**      **Estimated Yield:**  
**Casing Size:** 7.00      **Depth Well:** 145 feet      **Depth Water:** 120 feet

**Water Bearing Stratifications:**

Top	Bottom	Description
135	140	Sandstone/Gravel/Conglomerate

**Casing Perforations:**

Top	Bottom
125	145

\*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.

5/14/21 12:41 PM

POINT OF DIVERSION SUMMARY



# New Mexico Office of the State Engineer

## Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)					
		(quarters are smallest to largest)		(NAD83 UTM in meters)			
<b>Well Tag</b>	<b>POD Number</b>	<b>Q64</b>	<b>Q16</b>	<b>Q4</b>	<b>Sec Tws Rng</b>	<b>X</b>	<b>Y</b>
	CP 00791	4	2	4	06 21S 34E	640754	3597413*
<hr/>							
<b>Driller License:</b> 1044		<b>Driller Company:</b> EADES WELL DRILLING & PUMP SERVICE					
<b>Driller Name:</b> EADES, ALAN							
<b>Drill Start Date:</b> 06/16/1993		<b>Drill Finish Date:</b> 06/16/1993		<b>Plug Date:</b>			
<b>Log File Date:</b> 07/01/1993		<b>PCW Rcv Date:</b>		<b>Source:</b> Shallow			
<b>Pump Type:</b>		<b>Pipe Discharge Size:</b>		<b>Estimated Yield:</b> 35 GPM			
<b>Casing Size:</b> 2.00		<b>Depth Well:</b> 85 feet		<b>Depth Water:</b> 55 feet			
<hr/>							
<b>Water Bearing Stratifications:</b>		<b>Top Bottom Description</b>					
		55		85		Sandstone/Gravel/Conglomerate	

\*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.

5/14/21 12:34 PM

POINT OF DIVERSION SUMMARY



# New Mexico Office of the State Engineer

## Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)			
		(quarters are smallest to largest)		(NAD83 UTM in meters)	
<b>Well Tag</b>	<b>POD Number</b>	<b>Q64 Q16 Q4</b>	<b>Sec Tws Rng</b>	<b>X</b>	<b>Y</b>
	CP 00489		04 21S 34E	643274	3597749*
<hr/>					
<b>Driller License:</b> 208		<b>Driller Company:</b> VAN NOY, W.L.			
<b>Driller Name:</b> VAN NOY, W.L.					
<b>Drill Start Date:</b> 06/21/1971		<b>Drill Finish Date:</b> 06/22/1971		<b>Plug Date:</b>	
<b>Log File Date:</b> 07/01/1971		<b>PCW Rcv Date:</b>		<b>Source:</b> Shallow	
<b>Pump Type:</b>		<b>Pipe Discharge Size:</b>		<b>Estimated Yield:</b>	
<b>Casing Size:</b> 6.63		<b>Depth Well:</b> 125 feet		<b>Depth Water:</b> 95 feet	
<hr/>					
<b>Water Bearing Stratifications:</b>		<b>Top</b>	<b>Bottom</b>	<b>Description</b>	
		110	120	Sandstone/Gravel/Conglomerate	
<hr/>					
<b>Casing Perforations:</b>		<b>Top</b>	<b>Bottom</b>		
		100	120		

\*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.

5/14/21 12:28 PM

POINT OF DIVERSION SUMMARY



USGS Home  
Contact USGS  
Search USGS

National Water Information System: Web Interface


USGS Water Resources

Data Category:  
Groundwater

Geographic Area:  
United States

GO

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- Explore the **NEW** [USGS National Water Dashboard](#) to access real-time data from over 13,500 stations nationwide.
- [Full News](#) 

Groundwater levels for the Nation

\* IMPORTANT: [Next Generation Station Page](#)

Search Results -- 1 sites found

Agency code = usgs  
site\_no list =

- 323022103285301

Minimum number of levels = 1  
[Save file of selected sites](#) to local disk for future upload

USGS 323022103285301 21S.34E.04.311331

Lea County, New Mexico  
Latitude 32°30'50.1", Longitude 103°28'59.8" NAD83  
Land-surface elevation 3,713 feet above NAVD88  
The depth of the well is 125 feet below land surface.  
This well is completed in the Other aquifers (N9999OTHER) national aquifer.  
This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>
<a href="#">Graph of data</a>
<a href="#">Reselect period</a>

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 measu
1981-03-11			D 62610		3625.09	NGVD29	1	Z		
1981-03-11			D 62611		3626.65	NAVD88	1	Z		
1981-03-11			D 72019	86.35			1	Z		
1986-03-21			D 62610		3622.97	NGVD29	1	Z		
1986-03-21			D 62611		3624.53	NAVD88	1	Z		
1986-03-21			D 72019	88.47			1	Z		
1991-05-01			D 62610		3621.34	NGVD29	1	Z		
1991-05-01			D 62611		3622.90	NAVD88	1	Z		
1991-05-01			D 72019	90.10			1	Z		
1996-03-13			D 62610		3620.30	NGVD29	1	S		
1996-03-13			D 62611		3621.86	NAVD88	1	S		
1996-03-13			D 72019	91.14			1	S		
2015-12-17	23:00 UTC		m 62610		3618.77	NGVD29	1	S	USGS	
2015-12-17	23:00 UTC		m 62611		3620.33	NAVD88	1	S	USGS	
2015-12-17	23:00 UTC		m 72019	92.67			1	S	USGS	

Explanation		
Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
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	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement		Not determined
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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**Title: Groundwater for USA: Water Levels**  
**URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>**

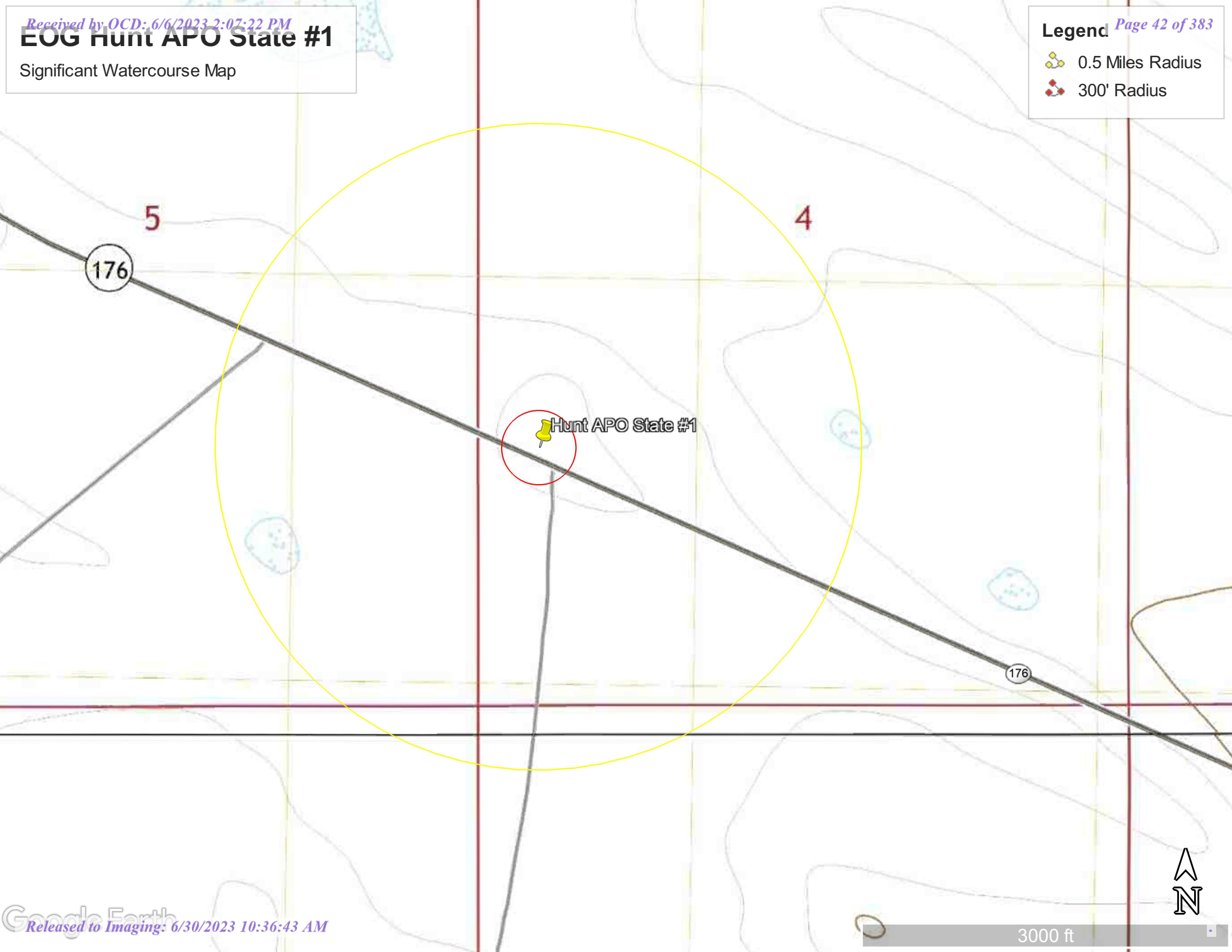


Page Contact Information: [USGS Water Data Support Team](#)  
Page Last Modified: 2021-05-14 14:54:12 EDT  
0.33 0.28 nadww01

# EOG Hunt APO State #1

Significant Watercourse Map

- 0.5 Miles Radius
- 300' Radius







## EOG Hunt APO State #1



May 14, 2021

**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 Flood Hazard Layer FIRMMette



103°29'13"W 32°30'38"N



## 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 Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



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 5/14/2021 at 2:51 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.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

## **Attachment B**

## **Soil Boring Log**



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 2

PROJECT NAME: Hunt APO State #1

HOLE DESIGNATION: SB-1

PROJECT NUMBER: 11224665

DATE COMPLETED: 17 May 2022

CLIENT: EOG Resources

DRILLING METHOD: Air Rotary/Split Spoons and Cuttings

LOCATION: Lea County, New Mexico

FIELD PERSONNEL: L. Mullins

DRILLING CONTRACTOR: HCI Drilling

DRILLER: K. Cooper

File: \\GHDNET\GHD\USMIDLAND\PROJECTS\56211224665\TECH\GINT\LOGS\11224665 LOGS.GPJ Library File: GHD\_ENV\RO\_V06.GLB Report: OVERBURDEN LOG Date: 22/6/22

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	CHLORIDE (mg/kg)	TOTAL TPH (mg/kg)
5	SP-SAND, fine to medium grained sand, with common backfill, caliche gravel interbedded throughout, dry  - light brown at 5.00ft BGS						292	0.1
10							ND	0.4
15							ND	0.1
20								
25								
30								
35								
40								
45								
50								
55								
60								
65								

Grout

**NOTES:** MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 2 of 2

PROJECT NAME: Hunt APO State #1

HOLE DESIGNATION: SB-1

PROJECT NUMBER: 11224665

DATE COMPLETED: 17 May 2022

CLIENT: EOG Resources

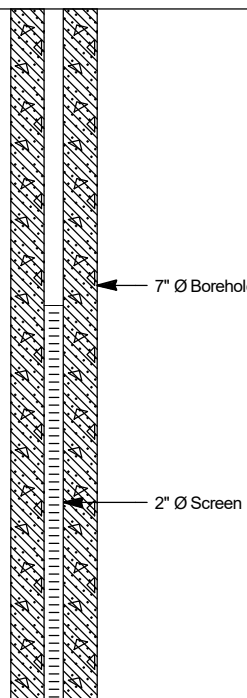
DRILLING METHOD: Air Rotary/Split Spoons and Cuttings

LOCATION: Lea County, New Mexico

FIELD PERSONNEL: L. Mullins

DRILLING CONTRACTOR: HCI Drilling

DRILLER: K. Cooper

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	CHLORIDE (mg/kg)	TOTAL TPH (mg/kg)
75								
80								
85								
90								
95								
100								
105	END OF BOREHOLE @ 105.00ft BGS	105.00	 <p>7" Ø Borehole</p> <p>2" Ø Screen</p>					
110								
115								
120								
125								
130								
135								

WELL DETAILS

Screened interval:

85.00 to 105.00ft BGS

Length: 20ft

Diameter: 2in

NOTE:

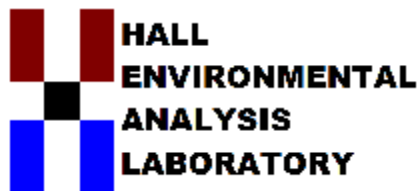
This well was plugged and abandoned at a later date.

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

File: \\GHDNET\GHD\USMIDLAND\PROJECTS\11224665\LOGS\GPJ Library File: GHD\_ENV\RO\_V06.GLB Report: OVERBURDEN LOG Date: 22/6/22

# **Attachment C**

## **Laboratory Analytical Reports and Chain-of-Custody Documentation**



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

May 23, 2018

Bernie Bockisch

GHD

6121 Indian School Road, NE #200

Albuquerque, NM 87110

TEL: (505) 884-0672

FAX

RE: Hunt

OrderNo.: 1805659

Dear Bernie Bockisch:

Hall Environmental Analysis Laboratory received 5 sample(s) on 5/11/2018 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](http://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 #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

## Analytical Report

Lab Order: 1805659

Date Reported: 5/23/2018

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Lab Order: 1805659

Project: Hunt

Lab ID: 1805659-001

Collection Date: 5/9/2018

Client Sample ID: S-088210-53-050918-MG-TP-1-2'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	89	30		mg/Kg	20	5/17/2018 3:06:15 PM	38174
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/17/2018 3:37:16 PM	38089
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/17/2018 3:37:16 PM	38089
Surr: DNOP	116	70-130		%Rec	1	5/17/2018 3:37:16 PM	38089
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/14/2018 10:50:09 PM	38083
Surr: BFB	86.1	15-316		%Rec	1	5/14/2018 10:50:09 PM	38083
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	5/14/2018 10:50:09 PM	38083
Toluene	ND	0.049		mg/Kg	1	5/14/2018 10:50:09 PM	38083
Ethylbenzene	ND	0.049		mg/Kg	1	5/14/2018 10:50:09 PM	38083
Xylenes, Total	ND	0.098		mg/Kg	1	5/14/2018 10:50:09 PM	38083
Surr: 4-Bromofluorobenzene	96.1	80-120		%Rec	1	5/14/2018 10:50:09 PM	38083

Lab ID: 1805659-002

Collection Date: 5/9/2018

Client Sample ID: S-088210-53-050918-MG-TP-1-4'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	130	30		mg/Kg	20	5/17/2018 3:43:28 PM	38174
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	18	10		mg/Kg	1	5/17/2018 4:01:14 PM	38089
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/17/2018 4:01:14 PM	38089
Surr: DNOP	106	70-130		%Rec	1	5/17/2018 4:01:14 PM	38089
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/15/2018 12:23:03 AM	38083
Surr: BFB	84.0	15-316		%Rec	1	5/15/2018 12:23:03 AM	38083
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	5/15/2018 12:23:03 AM	38083
Toluene	ND	0.049		mg/Kg	1	5/15/2018 12:23:03 AM	38083
Ethylbenzene	ND	0.049		mg/Kg	1	5/15/2018 12:23:03 AM	38083
Xylenes, Total	ND	0.098		mg/Kg	1	5/15/2018 12:23:03 AM	38083
Surr: 4-Bromofluorobenzene	96.2	80-120		%Rec	1	5/15/2018 12:23:03 AM	38083

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 Quantitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

Page 1 of 8



## Analytical Report

Lab Order: 1805659

Date Reported: 5/23/2018

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Lab Order: 1805659

Project: Hunt

Lab ID: 1805659-003

Collection Date: 5/10/2018

Client Sample ID: S-088210-53-051018-MG-TP-2-2'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: MRA
Chloride	94	30		mg/Kg	20	5/17/2018 4:20:42 PM	38174
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	5/17/2018 4:25:23 PM	38089
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/17/2018 4:25:23 PM	38089
Surr: DNOP	108	70-130		%Rec	1	5/17/2018 4:25:23 PM	38089
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/15/2018 12:46:13 AM	38083
Surr: BFB	86.9	15-316		%Rec	1	5/15/2018 12:46:13 AM	38083
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/15/2018 12:46:13 AM	38083
Toluene	ND	0.049		mg/Kg	1	5/15/2018 12:46:13 AM	38083
Ethylbenzene	ND	0.049		mg/Kg	1	5/15/2018 12:46:13 AM	38083
Xylenes, Total	ND	0.098		mg/Kg	1	5/15/2018 12:46:13 AM	38083
Surr: 4-Bromofluorobenzene	99.6	80-120		%Rec	1	5/15/2018 12:46:13 AM	38083

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	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Page 2 of 8

## Analytical Report

Lab Order: 1805659

Date Reported: 5/23/2018

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Lab Order: 1805659

Project: Hunt

Lab ID: 1805659-004

Collection Date: 5/10/2018

Client Sample ID: S-088210-53-051018-MG-TP-3-2'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	400	30		mg/Kg	20	5/17/2018 4:33:07 PM	38174
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	67	10		mg/Kg	1	5/18/2018 9:41:16 AM	38089
Motor Oil Range Organics (MRO)	160	50		mg/Kg	1	5/18/2018 9:41:16 AM	38089
Surr: DNOP	114	70-130		%Rec	1	5/18/2018 9:41:16 AM	38089
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/15/2018 1:09:23 AM	38083
Surr: BFB	84.6	15-316		%Rec	1	5/15/2018 1:09:23 AM	38083
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	5/15/2018 1:09:23 AM	38083
Toluene	ND	0.048		mg/Kg	1	5/15/2018 1:09:23 AM	38083
Ethylbenzene	ND	0.048		mg/Kg	1	5/15/2018 1:09:23 AM	38083
Xylenes, Total	ND	0.096		mg/Kg	1	5/15/2018 1:09:23 AM	38083
Surr: 4-Bromofluorobenzene	96.0	80-120		%Rec	1	5/15/2018 1:09:23 AM	38083

Lab ID: 1805659-005

Collection Date: 5/10/2018

Client Sample ID: S-088210-53-051018-MG-TP-4-2'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	790	30		mg/Kg	20	5/17/2018 4:45:32 PM	38174
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/17/2018 5:13:28 PM	38089
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/17/2018 5:13:28 PM	38089
Surr: DNOP	106	70-130		%Rec	1	5/17/2018 5:13:28 PM	38089
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/15/2018 1:32:39 AM	38083
Surr: BFB	89.5	15-316		%Rec	1	5/15/2018 1:32:39 AM	38083
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	5/15/2018 1:32:39 AM	38083
Toluene	ND	0.048		mg/Kg	1	5/15/2018 1:32:39 AM	38083
Ethylbenzene	ND	0.048		mg/Kg	1	5/15/2018 1:32:39 AM	38083
Xylenes, Total	ND	0.096		mg/Kg	1	5/15/2018 1:32:39 AM	38083
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	5/15/2018 1:32:39 AM	38083

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 Quantitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

Page 3 of 8

Analytical Report

Lab Order: 1805659

Date Reported: 5/23/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD  
Project: Hunt

Lab Order: 1805659

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	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

QC SUMMARY REPORT  
Hall Environmental Analysis Laboratory, Inc.

WO#: 1805659  
23-May-18

Client: GHD  
Project: Hunt

Sample ID	MB-38174			SampType:	mblk			TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS			Batch ID:	38174			RunNo:	51341					
Prep Date:	5/17/2018			Analysis Date:	5/17/2018			SeqNo:	1671534			Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Chloride	ND	1.5												

Sample ID	LCS-38174		SampType: lcs		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 38174		RunNo: 51341					
Prep Date:	5/17/2018		Analysis Date: 5/17/2018		SeqNo: 1671535		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 Quantitative Limit

S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1805659  
23-May-18

Client: GHD  
Project: Hunt

Sample ID	LCS-38089	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	38089	RunNo:	51331					
Prep Date:	5/14/2018	Analysis Date:	5/17/2018	SeqNo:	1669950	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	97.5	70	130			
Surr: DNOP	5.1		5.000		102	70	130			

Sample ID	MB-38089	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	38089	RunNo:	51331					
Prep Date:	5/14/2018	Analysis Date:	5/17/2018	SeqNo:	1669951	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		100	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Page 6 of 8

QC SUMMARY REPORT  
Hall Environmental Analysis Laboratory, Inc.

WO#: 1805659  
23-May-18

Client: GHD  
Project: Hunt

Sample ID	MB-38083		SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS		Batch ID:	38083		RunNo:	51246				
Prep Date:	5/12/2018		Analysis Date:	5/14/2018		SeqNo:	1666100		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	890		1000		89.4	15	316				

Sample ID	LCS-38083		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 38083		RunNo: 51246					
Prep Date:	5/12/2018		Analysis Date: 5/14/2018		SeqNo: 1666101		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	97.4	75.9	131			
Surr: BFB	970		1000		97.2	15	316			

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 Quantitative Limit

S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 1805659

23-May-18

Client: GHD

Project: Hunt

Sample ID	MB-38083		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 38083		RunNo: 51246					
Prep Date:	5/12/2018		Analysis Date: 5/14/2018		SeqNo: 1666147		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	1.0		1.000		101	80	120			

Sample ID	LCS-38083		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 38083		RunNo: 51246					
Prep Date:	5/12/2018		Analysis Date: 5/14/2018		SeqNo: 1666148		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	96.5	77.3	128			
Toluene	0.99	0.050	1.000	0	98.7	79.2	125			
Ethylbenzene	0.99	0.050	1.000	0	98.7	80.7	127			
Xylenes, Total	3.0	0.10	3.000	0	101	81.6	129			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

**Qualifiers:**

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified





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: 1805659

RcptNo: 1

Received By: Isaiah Ortiz 5/11/2018 9:50:00 AM

Completed By: Ashley Gallegos 5/11/2018 11:34:43 AM

Reviewed By: *[Signature]* 05/12/18 Labeled by: *[Signature]* MW 5/12/18Chain 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒  
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: 5/12/18  
Adjusted? yes  
Checked by: [Signature]

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:	<u>[Signature]</u>	Date:	<u>5/12/18</u>
By Whom:	<u>[Signature]</u>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<u>[Signature]</u>		
Client Instructions:	<u>[Signature]</u>		

16. Additional remarks:

## 17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.8	Good	Yes			





Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

June 15, 2018

Alan Brandon

GHD

6121 Indian School Road, NE #200

Albuquerque, NM 87110

TEL: (505) 884-0672

FAX

RE: Hunt

OrderNo.: 1805G09

Dear Alan Brandon:

Hall Environmental Analysis Laboratory received 4 sample(s) on 5/31/2018 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](http://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,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

## Analytical Report

Lab Order: 1805G09

Date Reported: 6/15/2018

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Lab Order: 1805G09

Project: Hunt

Lab ID: 1805G09-001

Collection Date: 5/25/2018 10:00:00 AM

Client Sample ID: S-088210-53-052518-MG-TP-5-2

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: MRA
Chloride	2700	150		mg/Kg	100	6/12/2018 2:46:36 PM	38484
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/1/2018 5:54:29 PM	38417
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/1/2018 5:54:29 PM	38417
Surr: DNOP	100	70-130		%Rec	1	6/1/2018 5:54:29 PM	38417
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/1/2018 11:11:54 PM	38424
Surr: BFB	84.4	15-316		%Rec	1	6/1/2018 11:11:54 PM	38424
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	6/1/2018 11:11:54 PM	38424
Toluene	ND	0.049		mg/Kg	1	6/1/2018 11:11:54 PM	38424
Ethylbenzene	ND	0.049		mg/Kg	1	6/1/2018 11:11:54 PM	38424
Xylenes, Total	ND	0.099		mg/Kg	1	6/1/2018 11:11:54 PM	38424
Surr: 4-Bromofluorobenzene	95.5	80-120		%Rec	1	6/1/2018 11:11:54 PM	38424

Lab ID: 1805G09-002

Collection Date: 5/25/2018 10:50:00 AM

Client Sample ID: S-088210-53-052518-MG-TP-6-2

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: MRA
Chloride	2000	75		mg/Kg	50	6/12/2018 1:07:22 PM	38484
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/1/2018 6:16:56 PM	38417
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/1/2018 6:16:56 PM	38417
Surr: DNOP	86.0	70-130		%Rec	1	6/1/2018 6:16:56 PM	38417
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/2/2018 12:21:34 AM	38424
Surr: BFB	94.1	15-316		%Rec	1	6/2/2018 12:21:34 AM	38424
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	6/2/2018 12:21:34 AM	38424
Toluene	ND	0.049		mg/Kg	1	6/2/2018 12:21:34 AM	38424
Ethylbenzene	ND	0.049		mg/Kg	1	6/2/2018 12:21:34 AM	38424
Xylenes, Total	ND	0.098		mg/Kg	1	6/2/2018 12:21:34 AM	38424
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	6/2/2018 12:21:34 AM	38424

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	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

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## Analytical Report

Lab Order: 1805G09

Date Reported: 6/15/2018

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Lab Order: 1805G09

Project: Hunt

Lab ID: 1805G09-003

Collection Date: 5/25/2018 10:52:00 AM

Client Sample ID: S-088210-53-052518-MG-TP-7-1

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: MRA
Chloride	3300	150		mg/Kg	100	6/12/2018 1:19:46 PM	38484
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/1/2018 6:39:22 PM	38417
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/1/2018 6:39:22 PM	38417
Surr: DNOP	90.3	70-130		%Rec	1	6/1/2018 6:39:22 PM	38417
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/2/2018 1:31:13 AM	38424
Surr: BFB	92.6	15-316		%Rec	1	6/2/2018 1:31:13 AM	38424
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	6/2/2018 1:31:13 AM	38424
Toluene	ND	0.048		mg/Kg	1	6/2/2018 1:31:13 AM	38424
Ethylbenzene	ND	0.048		mg/Kg	1	6/2/2018 1:31:13 AM	38424
Xylenes, Total	ND	0.097		mg/Kg	1	6/2/2018 1:31:13 AM	38424
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	6/2/2018 1:31:13 AM	38424

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	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

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## Analytical Report

Lab Order: 1805G09

Date Reported: 6/15/2018

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Lab Order: 1805G09

Project: Hunt

Lab ID: 1805G09-004

Collection Date: 5/25/2018 10:55:00 AM

Client Sample ID: S-088210-53-052518-MG-TP-8-1

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	5700	300		mg/Kg	200	6/12/2018 1:32:11 PM	38484
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/1/2018 7:01:35 PM	38417
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/1/2018 7:01:35 PM	38417
Surr: DNOP	89.4	70-130		%Rec	1	6/1/2018 7:01:35 PM	38417
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/2/2018 3:50:25 AM	38424
Surr: BFB	88.6	15-316		%Rec	1	6/2/2018 3:50:25 AM	38424
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	6/2/2018 3:50:25 AM	38424
Toluene	ND	0.048		mg/Kg	1	6/2/2018 3:50:25 AM	38424
Ethylbenzene	ND	0.048		mg/Kg	1	6/2/2018 3:50:25 AM	38424
Xylenes, Total	ND	0.097		mg/Kg	1	6/2/2018 3:50:25 AM	38424
Surr: 4-Bromofluorobenzene	99.2	80-120		%Rec	1	6/2/2018 3:50:25 AM	38424

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	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1805G09

15-Jun-18

Client: GHD

Project: Hunt

Sample ID	MB-38484	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	38484	RunNo:	51782					
Prep Date:	6/5/2018	Analysis Date:	6/5/2018	SeqNo:	1690475	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-38484	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	38484	RunNo:	51782					
Prep Date:	6/5/2018	Analysis Date:	6/5/2018	SeqNo:	1690476	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 Quantitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

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QC SUMMARY REPORT  
Hall Environmental Analysis Laboratory, Inc.

WO#: 1805G09  
15-Jun-18

Client: GHD  
Project: Hunt

Sample ID	LCS-38417		SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS		Batch ID:	38417		RunNo:	51656				
Prep Date:	5/31/2018		Analysis Date:	6/1/2018		SeqNo:	1687282		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	103	70	130				
Surr: DNOP	4.9		5.000		98.8	70	130				

Sample ID	MB-38417		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	38417		RunNo:	51656				
Prep Date:	5/31/2018		Analysis Date:	6/1/2018		SeqNo:	1687283		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		108	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 Quantitative Limit

S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**WO#: **1805G09****15-Jun-18****Client:** GHD**Project:** Hunt

Sample ID <b>MB-38424</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>38424</b>		RunNo: <b>51667</b>							
Prep Date: <b>5/31/2018</b>	Analysis Date: <b>6/1/2018</b>		SeqNo: <b>1685722</b>		Units: <b>mg/Kg</b>					
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		99.0	15	316			

Sample ID <b>LCS-38424</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>38424</b>		RunNo: <b>51667</b>							
Prep Date: <b>5/31/2018</b>	Analysis Date: <b>6/1/2018</b>		SeqNo: <b>1685723</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	110	75.9	131			
Surr: BFB	1100		1000		110	15	316			

Sample ID <b>1805G09-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>S-088210-53-052518</b>	Batch ID: <b>38424</b>		RunNo: <b>51667</b>							
Prep Date: <b>5/31/2018</b>	Analysis Date: <b>6/1/2018</b>		SeqNo: <b>1685725</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.9	24.41	0	106	77.8	128			
Surr: BFB	1000		976.6		106	15	316			

Sample ID <b>1805G09-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>S-088210-53-052518</b>	Batch ID: <b>38424</b>		RunNo: <b>51667</b>							
Prep Date: <b>5/31/2018</b>	Analysis Date: <b>6/1/2018</b>		SeqNo: <b>1685726</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	4.9	24.56	0	111	77.8	128	5.93	20	
Surr: BFB	1000		982.3		107	15	316	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 Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Detection Limit  
W Sample container temperature is out of limit as specified

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**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**WO#: **1805G09****15-Jun-18****Client:** GHD**Project:** Hunt

Sample ID <b>MB-38424</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>38424</b>		RunNo: <b>51667</b>							
Prep Date: <b>5/31/2018</b>	Analysis Date: <b>6/1/2018</b>		SeqNo: <b>1685758</b>		Units: <b>mg/Kg</b>					
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	80	120			

Sample ID <b>LCS-38424</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>38424</b>		RunNo: <b>51667</b>							
Prep Date: <b>5/31/2018</b>	Analysis Date: <b>6/1/2018</b>		SeqNo: <b>1685759</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	91.8	77.3	128			
Toluene	0.94	0.050	1.000	0	94.5	79.2	125			
Ethylbenzene	0.94	0.050	1.000	0	94.3	80.7	127			
Xylenes, Total	2.9	0.10	3.000	0	96.3	81.6	129			
Surr: 4-Bromofluorobenzene	1.1		1.000		105	80	120			

Sample ID <b>1805G09-002AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>S-088210-53-052518</b>	Batch ID: <b>38424</b>		RunNo: <b>51667</b>							
Prep Date: <b>5/31/2018</b>	Analysis Date: <b>6/2/2018</b>		SeqNo: <b>1685762</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	0.9960	0	97.5	68.5	133			
Toluene	1.0	0.050	0.9960	0.008734	101	75	130			
Ethylbenzene	1.0	0.050	0.9960	0	103	79.4	128			
Xylenes, Total	3.2	0.10	2.988	0	106	77.3	131			
Surr: 4-Bromofluorobenzene	1.1		0.9960		106	80	120			

Sample ID <b>1805G09-002AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>S-088210-53-052518</b>	Batch ID: <b>38424</b>		RunNo: <b>51667</b>							
Prep Date: <b>5/31/2018</b>	Analysis Date: <b>6/2/2018</b>		SeqNo: <b>1685763</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.024	0.9718	0	93.2	68.5	133	7.01	20	
Toluene	0.94	0.049	0.9718	0.008734	95.8	75	130	7.18	20	
Ethylbenzene	0.95	0.049	0.9718	0	98.0	79.4	128	7.74	20	
Xylenes, Total	2.9	0.097	2.915	0	100	77.3	131	7.52	20	
Surr: 4-Bromofluorobenzene	1.0		0.9718		103	80	120	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 Quantitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

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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: 1805G09

RcptNo: 1

Received By: Jazzmine Burkhead 5/31/2018 9:50:00 AM

Completed By: Erin Melendrez 5/31/2018 11:58:49 AM

Reviewed By: Leah

LB. 20

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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒  
10. Were any sample containers received broken? Yes ☐ No ☒  
11. Does paperwork match bottle labels? Yes ☒ No ☐  
(Note discrepancies on chain of custody)  
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? Yes ☒ No ☐  
(If no, notify customer for authorization.)
- # of preserved bottles checked for pH: 10  
( $<2$  or  $>12$  unless noted)  
Adjusted? 5/31  
Checked by: \_\_\_\_\_

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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.8	Good	Yes			





# Certificate of Analysis Summary 621828

GHD-Albuquerque, NM, Albuquerque, NM

Project Name: Hunt APO State #1



**Project Id:** 088210/53  
**Contact:** Jeff Walker  
**Project Location:** Lea County, NM

**Date Received in Lab:** Mon Apr-22-19 09:30 am  
**Report Date:** 01-MAY-19  
**Project Manager:** Debbie Simmons

<i>Analysis Requested</i>	<i>Lab Id:</i>	621828-001	621828-002	621828-003	621828-004	621828-005	621828-006
	<i>Field Id:</i>	S-088210-53 041519-MM-B	-088210-53 041619-MM-SV	-088210-53 041819-MM-SV	-088210-53 041819-MM-SV	-088210-53 041819-MM-SV	-088210-53 041819-MM-B
	<i>Depth:</i>	4- ft	2- ft	2- ft	2- ft	2- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Apr-15-19 13:51	Apr-16-19 12:23	Apr-18-19 09:35	Apr-18-19 09:52	Apr-18-19 10:38	Apr-18-19 10:20
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Apr-25-19 17:00	Apr-25-19 17:00	Apr-25-19 17:00	Apr-25-19 17:00	Apr-25-19 17:00	Apr-25-19 17:00
	<i>Analyzed:</i>	Apr-26-19 08:42	Apr-26-19 08:47	Apr-26-19 09:03	Apr-26-19 08:53	Apr-26-19 08:58	Apr-26-19 09:20
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1340 26.7	403 5.09	607 5.26	5760 58.1	1250 55.2	1440 27.5
Percent Moisture	<i>Extracted:</i>						
	<i>Analyzed:</i>	Apr-23-19 12:10	Apr-23-19 12:10	Apr-23-19 12:10	Apr-23-19 12:10	Apr-23-19 12:10	Apr-23-19 12:10
	<i>Units/RL:</i>	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		7.16	2.83	4.96	13.4	9.30	9.49

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Debbie Simmons  
Project Manager



# Analytical Report 621828

for  
**GHD-Albuquerque, NM**

**Project Manager: Jeff Walker**

**Hunt APO State #1**

**088210/53**

**01-MAY-19**

Collected By: Client



**1211 W. Florida Ave  
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):  
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):  
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)  
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)  
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)  
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)  
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)  
Xenco-Atlanta (LELAP Lab ID #04176)  
Xenco-Tampa: Florida (E87429), North Carolina (483)  
Xenco-Lakeland: Florida (E84098)





01-MAY-19

Project Manager: **Jeff Walker**  
**GHD-Albuquerque, NM**  
6121 Indian School Rd. NE Suite 200

Albuquerque, NM 87110

Reference: XENCO Report No(s): **621828**  
**Hunt APO State #1**  
Project Address: Lea County, NM

**Jeff Walker:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 621828. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 621828 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads 'Debbie Simmons'.

---

**Debbie Simmons**

Project Manager

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

**Sample Cross Reference 621828****GHD-Albuquerque, NM, Albuquerque, NM**

Hunt APO State #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
S-088210-53 041519-MM-B-1-4'	S	04-15-19 13:51	4 ft	621828-001
S-088210-53 041619-MM-SW-1-2'	S	04-16-19 12:23	2 ft	621828-002
S-088210-53 041819-MM-SW-2-2'	S	04-18-19 09:35	2 ft	621828-003
S-088210-53 041819-MM-SW-3-2'	S	04-18-19 09:52	2 ft	621828-004
S-088210-53 041819-MM-SW-4-2'	S	04-18-19 10:38	2 ft	621828-005
S-088210-53 041819-MM-B-2-4'	S	04-18-19 10:20	4 ft	621828-006



## CASE NARRATIVE

**Client Name:** *GHD-Albuquerque, NM*

**Project Name:** *Hunt APO State #1*

Project ID: 088210/53  
Work Order Number(s): 621828

Report Date: 01-MAY-19  
Date Received: 04/22/2019

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**Sample receipt non conformances and comments:**

None

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**Sample receipt non conformances and comments per sample:**

None



## Certificate of Analytical Results 621828



## GHD-Albuquerque, NM, Albuquerque, NM

Hunt APO State #1

Sample Id: S-088210-53 041519-MM-B-1-4'

Matrix: Soil

Date Received: 04.22.19 09.30

Lab Sample Id: 621828-001

Date Collected: 04.15.19 13.51

Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: CHE

% Moisture: 7.16

Analyst: CHE

Date Prep: 04.25.19 17.00

Basis: Dry Weight

Seq Number: 3086982

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1340	26.7	mg/kg	04.26.19 08.42		5



## Certificate of Analytical Results 621828

## GHD-Albuquerque, NM, Albuquerque, NM

Hunt APO State #1

Sample Id: **S-088210-53 041619-MM-SW-1-2'** Matrix: Soil Date Received: 04.22.19 09.30  
Lab Sample Id: 621828-002 Date Collected: 04.16.19 12.23 Sample Depth: 2 ft  
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P  
Tech: CHE % Moisture: 2.83  
Analyst: CHE Date Prep: 04.25.19 17.00 Basis: Dry Weight  
Seq Number: 3086982

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	403	5.09	mg/kg	04.26.19 08.47		1



## Certificate of Analytical Results 621828

## GHD-Albuquerque, NM, Albuquerque, NM

Hunt APO State #1

Sample Id: **S-088210-53 041819-MM-SW-2-2'** Matrix: Soil Date Received: 04.22.19 09.30  
Lab Sample Id: 621828-003 Date Collected: 04.18.19 09.35 Sample Depth: 2 ft  
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P  
Tech: CHE % Moisture: 4.96  
Analyst: CHE Date Prep: 04.25.19 17.00 Basis: Dry Weight  
Seq Number: 3086982

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	607	5.26	mg/kg	04.26.19 09.03		1



## Certificate of Analytical Results 621828

## GHD-Albuquerque, NM, Albuquerque, NM

Hunt APO State #1

Sample Id: **S-088210-53 041819-MM-SW-3-2'** Matrix: Soil Date Received: 04.22.19 09.30  
Lab Sample Id: 621828-004 Date Collected: 04.18.19 09.52 Sample Depth: 2 ft  
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P  
Tech: CHE % Moisture: 13.37  
Analyst: CHE Date Prep: 04.25.19 17.00 Basis: Dry Weight  
Seq Number: 3086982

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5760	58.1	mg/kg	04.26.19 08.53		10





## Certificate of Analytical Results 621828



## GHD-Albuquerque, NM, Albuquerque, NM

Hunt APO State #1

Sample Id: **S-088210-53 041819-MM-SW-4-2'** Matrix: Soil Date Received: 04.22.19 09.30  
Lab Sample Id: 621828-005 Date Collected: 04.18.19 10.38 Sample Depth: 2 ft  
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P  
Tech: CHE % Moisture: 9.3  
Analyst: CHE Date Prep: 04.25.19 17.00 Basis: Dry Weight  
Seq Number: 3086982

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1250	55.2	mg/kg	04.26.19 08.58		10



## Certificate of Analytical Results 621828



## GHD-Albuquerque, NM, Albuquerque, NM

Hunt APO State #1

Sample Id: S-088210-53 041819-MM-B-2-4'

Matrix: Soil

Date Received: 04.22.19 09.30

Lab Sample Id: 621828-006

Date Collected: 04.18.19 10.20

Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: CHE

% Moisture: 9.49

Analyst: CHE

Date Prep: 04.25.19 17.00

Basis: Dry Weight

Seq Number: 3086982

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1440	27.5	mg/kg	04.26.19 09.20		5



## Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

**MDL** Method Detection Limit      **SDL** Sample Detection Limit      **LOD** Limit of Detection

**PQL** Practical Quantitation Limit      **MQL** Method Quantitation Limit      **LOQ** Limit of Quantitation

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK** Method Blank

**BKS/LCS** Blank Spike/Laboratory Control Sample      **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

**MD/SD** Method Duplicate/Sample Duplicate      **MS** Matrix Spike      **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

\* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



## GHD-Albuquerque, NM

Hunt APO State #1

## Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3086982

Matrix: Solid

Prep Method: E300P

Date Prep: 04.25.19

MB Sample Id: 7676568-1-BLK

LCS Sample Id: 7676568-1-BKS

LCSD Sample Id: 7676568-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	248	99	251	100	90-110	1	20	mg/kg	04.25.19 19:16	

## Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3086982

Matrix: Soil

Prep Method: E300P

Date Prep: 04.25.19

Parent Sample Id: 621825-016

MS Sample Id: 621825-016 S

MSD Sample Id: 621825-016 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	13.2	252	282	107	283	107	90-110	0	20	mg/kg	04.25.19 19:32	

## Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3086982

Matrix: Soil

Prep Method: E300P

Date Prep: 04.25.19

Parent Sample Id: 621828-003

MS Sample Id: 621828-003 S

MSD Sample Id: 621828-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	607	263	847	91	853	94	90-110	1	20	mg/kg	04.26.19 09:09	

## Analytical Method: Percent Moisture

Seq Number: 3086591

Matrix: Solid

MB Sample Id: 3086591-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Percent Moisture	0.110	%	04.23.19 12:10	B

## Analytical Method: Percent Moisture

Seq Number: 3086591

Matrix: Soil

Parent Sample Id: 621828-001

MD Sample Id: 621828-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Percent Moisture	7.16	7.31	2	20	%	04.23.19 12:10	

MS/MSD Percent Recovery  
Relative Percent Difference  
LCS/LCSD Recovery  
Log Difference

$[D] = 100 * (C - A) / B$   
 $RPD = 200 * |(C - E) / (C + E)|$   
 $[D] = 100 * (C) / [B]$   
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample  
 A = Parent Result  
 C = MS/LCS Result  
 E = MSD/LCSD Result

MS = Matrix Spike  
 B = Spike Added  
 D = MSD/LCSD % Rec



## Chain of Custody

**Work Order No.:**

021828

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334  
Midland, TX (432-704-5440) El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296  
Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813)  
Hobbs, NM (575-392-7550)

www.xenco.com Page 1 of 1

Project Manager:	Jeff Walker	Bill to: (if different)	EOG Midland
Company Name:	CHD Services Road	Company Name:	
Address:	612 Jackson School NE STE 200	Address:	
City, State ZIP:	Altamonte, NM, 87110	City, State ZIP:	
Phone:	505 884 0672	Email:	

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

Project Name:						Hot APC State #3						Turn Around	
Project Number:						088210-53						Routine <input checked="" type="checkbox"/>	
P.O. Number:						088210-53						Rush:	
Sampler's Name:						Michael MofFatt						Due Date:	
SAMPLE RECEIPT				Temp Blank:		Yes <input checked="" type="radio"/> No		Wet Ice:		Yes <input checked="" type="radio"/> No			
Temperature (°C):				2.12.0				Thermometer ID					
Received Intact:				Yes <input checked="" type="radio"/> No				Correction Factor:		-0.1			
Cooler Custody Seals:				Yes No		N/A		Total Containers:					
Sample Custody Seals:				Yes No		N/A							
Number of Containers													
al Chlorides													
ANALYSIS REQUEST													
Work Order Notes													
TAT starts the day received by the lab, if received by 4:30pm													

[illegible]

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

of service. Xencio 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 Xencio. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xencio, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 <i>Michael P. Abbott</i>			2		04/18/19 9:40
3 <i>Connor</i>	<i>So Ford Ex</i>	4/19/19 14:00	4	<i>Michelle</i>	04/22/19 09:38
5			6		

ORIGIN: CAOA (281) 240-4200 SAMPLE CUSTODY SAMPLE CUSTODY 1089 N CANAL ST CARLSBAD, NM 88220 UNITED STATES US		SHIP DATE: 19APR19 ACTWGT: 36.00 LB CAD: 114488676/NET4100 DIMS: 21x14x13 IN BILL SENDER
TO SAMPLE RECEIVING MIDLAND FEDEX OFFICE PRINT & SHIP CENTER FEDEX OFFICE PRINT & SHIP CENTER 200 W INTERSTATE 20 MIDLAND TX 79701 (432) 704-5440 REF: PO: DEPT:		
		
		
565J1/D7E5/23AD		

TRK# 0201 7750 1839 2318 SATURDAY HOLD PRIORITY OVERNIGHT HLD MAFKI TX-US LBB	
---	---

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3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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**XENCO Laboratories****Prelogin/Nonconformance Report- Sample Log-In****Client:** GHD-Albuquerque, NM**Date/ Time Received:** 04.22.2019 09.30.00 AM**Work Order #:** 621828**Acceptable Temperature Range:** 0 - 6 degC**Air and Metal samples Acceptable Range:** Ambient**Temperature Measuring device used :** R8**Sample Receipt Checklist****Comments**

#1 *Temperature of cooler(s)?	2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

**\* Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

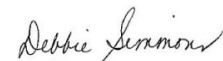
Analyst:

PH Device/Lot#:

**Checklist completed by:**

Katie Lowe

Date: 04.22.2019

**Checklist reviewed by:**

Debbie Simmons

Date: 04.23.2019





## Environment Testing America

### ANALYTICAL REPORT

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

Laboratory Job ID: 890-1572-1  
Laboratory Sample Delivery Group: 11224665  
Client Project/Site: Hunt APO State #1

For:  
GHD Services Inc.  
2135 South Loop 250 West  
Midland, Texas 79703

Attn: Becky Haskell

A handwritten signature in dark ink that reads "Chad A. Bechtold".

Authorized for release by:  
11/19/2021 4:27:28 PM  
Chad Bechtold, Project Manager  
(813)690-3563  
[chad.bechtold@eurofinset.com](mailto:chad.bechtold@eurofinset.com)

Designee for  
Debbie Simmons, Project Manager  
(832)986-6768  
[debbie.simmons@eurofinset.com](mailto:debbie.simmons@eurofinset.com)

#### LINKS

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

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

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Laboratory Job ID: 890-1572-1  
SDG: 11224665

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## Definitions/Glossary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

## Qualifiers

## GC VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

## GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

## HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
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)

Eurofins Xenco, Carlsbad

Definitions/Glossary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TNTC	Too Numerous To Count

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

## Case Narrative

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

**Job ID: 890-1572-1****Laboratory: Eurofins Xenco, Carlsbad****Narrative****Job Narrative  
890-1572-1****Receipt**

The samples were received on 11/12/2021 1:18 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 19.2°C

**GC VOA**

Method 8021B: Surrogate recovery for the following sample was outside control limits: HA2 (890-1572-21). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

**GC Semi VOA**

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: (LCSD 880-12224/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD\_NM: The method blank for preparation batch 880-12229 and analytical batch 880-12237 contained Diesel Range Organics (Over C10-C28) above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: TP31-2 (890-1572-18). Evidence of matrix interferences is not obvious.

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: (MB 880-12340/1-A) and (890-1551-A-2-B). Evidence of matrix interferences is not obvious.

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

**HPLC/IC**

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

## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Client Sample ID: TP19-3

Lab Sample ID: 890-1572-1

Date Collected: 11/12/21 08:10

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000610	J	0.00201	0.000387	mg/Kg		11/15/21 08:07	11/15/21 16:38	1
Toluene	0.000657	J	0.00201	0.000458	mg/Kg		11/15/21 08:07	11/15/21 16:38	1
Ethylbenzene	<0.00201	U	0.00201	0.000567	mg/Kg		11/15/21 08:07	11/15/21 16:38	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	0.00101	mg/Kg		11/15/21 08:07	11/15/21 16:38	1
o-Xylene	0.000523	J	0.00201	0.000345	mg/Kg		11/15/21 08:07	11/15/21 16:38	1
Xylenes, Total	<0.00402	U	0.00402	0.00101	mg/Kg		11/15/21 08:07	11/15/21 16:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	11/15/21 08:07	11/15/21 16:38	1
1,4-Difluorobenzene (Surr)	97		70 - 130	11/15/21 08:07	11/15/21 16:38	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.00179	J	0.00402	0.00101	mg/Kg			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	22.0	J	49.9	15.0	mg/Kg			11/16/21 13:46	1

## Method: 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	15.0	mg/Kg		11/15/21 14:49	11/15/21 20:36	1
Diesel Range Organics (Over C10-C28)	22.0	J	49.9	15.0	mg/Kg		11/15/21 14:49	11/15/21 20:36	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	15.0	mg/Kg		11/15/21 14:49	11/15/21 20:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130	11/15/21 14:49	11/15/21 20:36	1
o-Terphenyl	122		70 - 130	11/15/21 14:49	11/15/21 20:36	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1280		4.98	0.855	mg/Kg			11/18/21 11:41	1

Client Sample ID: TP20-2

Lab Sample ID: 890-1572-2

Date Collected: 11/12/21 08:15

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000384	mg/Kg		11/15/21 08:07	11/15/21 16:59	1
Toluene	<0.00200	U	0.00200	0.000455	mg/Kg		11/15/21 08:07	11/15/21 16:59	1
Ethylbenzene	<0.00200	U	0.00200	0.000564	mg/Kg		11/15/21 08:07	11/15/21 16:59	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	0.00101	mg/Kg		11/15/21 08:07	11/15/21 16:59	1
o-Xylene	<0.00200	U	0.00200	0.000343	mg/Kg		11/15/21 08:07	11/15/21 16:59	1
Xylenes, Total	<0.00399	U	0.00399	0.00101	mg/Kg		11/15/21 08:07	11/15/21 16:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	124		70 - 130	11/15/21 08:07	11/15/21 16:59	1
1,4-Difluorobenzene (Surr)	100		70 - 130	11/15/21 08:07	11/15/21 16:59	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Client Sample ID: TP20-2

Lab Sample ID: 890-1572-2

Date Collected: 11/12/21 08:15

Matrix: Solid

Date Received: 11/12/21 13:18

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	0.00101	mg/Kg			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	59.4		50.0	15.0	mg/Kg			11/16/21 13:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	25.3	J	50.0	15.0	mg/Kg		11/15/21 14:49	11/15/21 21:20	1
Diesel Range Organics (Over C10-C28)	16.0	J	50.0	15.0	mg/Kg		11/15/21 14:49	11/15/21 21:20	1
Oil Range Organics (Over C28-C36)	18.1	J	50.0	15.0	mg/Kg		11/15/21 14:49	11/15/21 21:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130				11/15/21 14:49	11/15/21 21:20	1
o-Terphenyl	119		70 - 130				11/15/21 14:49	11/15/21 21:20	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	336		4.95	0.850	mg/Kg			11/18/21 11:56	1

Client Sample ID: TP21-2

Lab Sample ID: 890-1572-3

Date Collected: 11/12/21 08:25

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000386	mg/Kg		11/15/21 08:07	11/15/21 17:19	1
Toluene	<0.00200	U	0.00200	0.000457	mg/Kg		11/15/21 08:07	11/15/21 17:19	1
Ethylbenzene	0.000953	J	0.00200	0.000566	mg/Kg		11/15/21 08:07	11/15/21 17:19	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	0.00101	mg/Kg		11/15/21 08:07	11/15/21 17:19	1
o-Xylene	0.000574	J	0.00200	0.000345	mg/Kg		11/15/21 08:07	11/15/21 17:19	1
Xylenes, Total	<0.00401	U	0.00401	0.00101	mg/Kg		11/15/21 08:07	11/15/21 17:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	135	S1+	70 - 130				11/15/21 08:07	11/15/21 17:19	1
1,4-Difluorobenzene (Surr)	91		70 - 130				11/15/21 08:07	11/15/21 17:19	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.00153	J	0.00401	0.00101	mg/Kg			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	52.9		49.9	15.0	mg/Kg			11/16/21 13:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	16.2	J	49.9	15.0	mg/Kg		11/15/21 14:49	11/15/21 21:41	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

## Client Sample ID: TP21-2

## Lab Sample ID: 890-1572-3

Date Collected: 11/12/21 08:25

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	21.1	J	49.9	15.0	mg/Kg		11/15/21 14:49	11/15/21 21:41	1
Oil Range Organics (Over C28-C36)	15.6	J	49.9	15.0	mg/Kg		11/15/21 14:49	11/15/21 21:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	109		70 - 130				11/15/21 14:49	11/15/21 21:41	1
o-Terphenyl	121		70 - 130				11/15/21 14:49	11/15/21 21:41	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	299		4.98	0.855	mg/Kg			11/18/21 12:01	1

## Client Sample ID: TP22-2

## Lab Sample ID: 890-1572-4

Date Collected: 11/12/21 08:35

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	0.000388	mg/Kg		11/15/21 08:07	11/15/21 17:40	1
Toluene	<0.00202	U	0.00202	0.000460	mg/Kg		11/15/21 08:07	11/15/21 17:40	1
Ethylbenzene	<0.00202	U	0.00202	0.000570	mg/Kg		11/15/21 08:07	11/15/21 17:40	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	0.00102	mg/Kg		11/15/21 08:07	11/15/21 17:40	1
o-Xylene	<0.00202	U	0.00202	0.000347	mg/Kg		11/15/21 08:07	11/15/21 17:40	1
Xylenes, Total	<0.00403	U	0.00403	0.00102	mg/Kg		11/15/21 08:07	11/15/21 17:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130				11/15/21 08:07	11/15/21 17:40	1
1,4-Difluorobenzene (Surr)	82		70 - 130				11/15/21 08:07	11/15/21 17:40	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	0.00102	mg/Kg			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	33.7	J	50.0	15.0	mg/Kg			11/16/21 13:46	1

## Method: 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	15.0	mg/Kg		11/15/21 14:49	11/15/21 22:03	1
Diesel Range Organics (Over C10-C28)	17.8	J	50.0	15.0	mg/Kg		11/15/21 14:49	11/15/21 22:03	1
Oil Range Organics (Over C28-C36)	15.9	J	50.0	15.0	mg/Kg		11/15/21 14:49	11/15/21 22:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130				11/15/21 14:49	11/15/21 22:03	1
o-Terphenyl	115		70 - 130				11/15/21 14:49	11/15/21 22:03	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Client Sample ID: TP22-2

Lab Sample ID: 890-1572-4

Date Collected: 11/12/21 08:35

Matrix: Solid

Date Received: 11/12/21 13:18

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1170		4.99	0.857	mg/Kg			11/18/21 12:06	1

Client Sample ID: TP23-S

Lab Sample ID: 890-1572-5

Date Collected: 11/12/21 08:50

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	0.000387	mg/Kg		11/15/21 08:07	11/15/21 18:00	1
Toluene	<0.00201	U	0.00201	0.000458	mg/Kg		11/15/21 08:07	11/15/21 18:00	1
Ethylbenzene	<0.00201	U	0.00201	0.000567	mg/Kg		11/15/21 08:07	11/15/21 18:00	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	0.00101	mg/Kg		11/15/21 08:07	11/15/21 18:00	1
o-Xylene	<0.00201	U	0.00201	0.000345	mg/Kg		11/15/21 08:07	11/15/21 18:00	1
Xylenes, Total	<0.00402	U	0.00402	0.00101	mg/Kg		11/15/21 08:07	11/15/21 18:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	123		70 - 130	11/15/21 08:07	11/15/21 18:00	1
1,4-Difluorobenzene (Surr)	101		70 - 130	11/15/21 08:07	11/15/21 18:00	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	0.00101	mg/Kg			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	15.7	J	49.9	15.0	mg/Kg			11/16/21 13:46	1

## Method: 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	15.0	mg/Kg		11/15/21 14:49	11/15/21 22:25	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	15.0	mg/Kg		11/15/21 14:49	11/15/21 22:25	1
Oil Range Organics (Over C28-C36)	15.7	J	49.9	15.0	mg/Kg		11/15/21 14:49	11/15/21 22:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130	11/15/21 14:49	11/15/21 22:25	1
o-Terphenyl	112		70 - 130	11/15/21 14:49	11/15/21 22:25	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	794		4.97	0.853	mg/Kg			11/18/21 12:11	1

Client Sample ID: TP23-2

Lab Sample ID: 890-1572-6

Date Collected: 11/12/21 09:00

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000385	mg/Kg		11/15/21 08:07	11/15/21 18:21	1
Toluene	0.00101	J	0.00200	0.000456	mg/Kg		11/15/21 08:07	11/15/21 18:21	1
Ethylbenzene	0.00645		0.00200	0.000565	mg/Kg		11/15/21 08:07	11/15/21 18:21	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Client Sample ID: TP23-2

Lab Sample ID: 890-1572-6

Date Collected: 11/12/21 09:00

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	0.00122	J	0.00400	0.00101	mg/Kg		11/15/21 08:07	11/15/21 18:21	1
o-Xylene	0.000440	J	0.00200	0.000344	mg/Kg		11/15/21 08:07	11/15/21 18:21	1
Xylenes, Total	0.00166	J	0.00400	0.00101	mg/Kg		11/15/21 08:07	11/15/21 18:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129		70 - 130				11/15/21 08:07	11/15/21 18:21	1
1,4-Difluorobenzene (Surr)	90		70 - 130				11/15/21 08:07	11/15/21 18:21	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.00912		0.00400	0.00101	mg/Kg			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	21.7	J	49.8	14.9	mg/Kg			11/17/21 13:26	1

## Method: 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 *1	49.8	14.9	mg/Kg		11/15/21 09:27	11/15/21 15:47	1
Diesel Range Organics (Over C10-C28)	21.7	J B	49.8	14.9	mg/Kg		11/15/21 09:27	11/15/21 15:47	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	14.9	mg/Kg		11/15/21 09:27	11/15/21 15:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130				11/15/21 09:27	11/15/21 15:47	1
o-Terphenyl	89		70 - 130				11/15/21 09:27	11/15/21 15:47	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	513		4.95	0.850	mg/Kg			11/18/21 12:26	1

Client Sample ID: TP24-2

Lab Sample ID: 890-1572-7

Date Collected: 11/12/21 09:10

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	0.000387	mg/Kg		11/15/21 08:07	11/15/21 18:41	1
Toluene	<0.00201	U	0.00201	0.000459	mg/Kg		11/15/21 08:07	11/15/21 18:41	1
Ethylbenzene	<0.00201	U	0.00201	0.000568	mg/Kg		11/15/21 08:07	11/15/21 18:41	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	0.00102	mg/Kg		11/15/21 08:07	11/15/21 18:41	1
o-Xylene	<0.00201	U	0.00201	0.000346	mg/Kg		11/15/21 08:07	11/15/21 18:41	1
Xylenes, Total	<0.00402	U	0.00402	0.00102	mg/Kg		11/15/21 08:07	11/15/21 18:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130				11/15/21 08:07	11/15/21 18:41	1
1,4-Difluorobenzene (Surr)	104		70 - 130				11/15/21 08:07	11/15/21 18:41	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	0.00102	mg/Kg			11/18/21 16:13	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Client Sample ID: TP24-2

Lab Sample ID: 890-1572-7

Date Collected: 11/12/21 09:10

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	47.2	J	49.9	15.0	mg/Kg			11/17/21 13:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	24.1	J *1	49.9	15.0	mg/Kg		11/15/21 09:27	11/15/21 16:09	1
Diesel Range Organics (Over C10-C28)	23.1	J B	49.9	15.0	mg/Kg		11/15/21 09:27	11/15/21 16:09	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	15.0	mg/Kg		11/15/21 09:27	11/15/21 16:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130				11/15/21 09:27	11/15/21 16:09	1
o-Terphenyl	109		70 - 130				11/15/21 09:27	11/15/21 16:09	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1310		4.95	0.850	mg/Kg			11/18/21 12:31	1

Client Sample ID: TP25-2

Lab Sample ID: 890-1572-8

Date Collected: 11/12/21 09:20

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	0.000383	mg/Kg		11/15/21 08:07	11/15/21 19:01	1
Toluene	<0.00199	U	0.00199	0.000453	mg/Kg		11/15/21 08:07	11/15/21 19:01	1
Ethylbenzene	<0.00199	U	0.00199	0.000562	mg/Kg		11/15/21 08:07	11/15/21 19:01	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	0.00100	mg/Kg		11/15/21 08:07	11/15/21 19:01	1
o-Xylene	<0.00199	U	0.00199	0.000342	mg/Kg		11/15/21 08:07	11/15/21 19:01	1
Xylenes, Total	<0.00398	U	0.00398	0.00100	mg/Kg		11/15/21 08:07	11/15/21 19:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	118		70 - 130				11/15/21 08:07	11/15/21 19:01	1
1,4-Difluorobenzene (Surr)	76		70 - 130				11/15/21 08:07	11/15/21 19:01	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	0.00100	mg/Kg			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	18.9	J	49.8	14.9	mg/Kg			11/17/21 13:26	1

## Method: 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 *1	49.8	14.9	mg/Kg		11/15/21 09:27	11/15/21 16:31	1
Diesel Range Organics (Over C10-C28)	18.9	J B	49.8	14.9	mg/Kg		11/15/21 09:27	11/15/21 16:31	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	14.9	mg/Kg		11/15/21 09:27	11/15/21 16:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130				11/15/21 09:27	11/15/21 16:31	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

## Client Sample ID: TP25-2

## Lab Sample ID: 890-1572-8

Date Collected: 11/12/21 09:20

Matrix: Solid

Date Received: 11/12/21 13:18

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	99		70 - 130	11/15/21 09:27	11/15/21 16:31	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1240		4.96	0.851	mg/Kg			11/18/21 12:35	1

## Client Sample ID: TP26-2

## Lab Sample ID: 890-1572-9

Date Collected: 11/12/21 09:30

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000384	mg/Kg		11/15/21 08:07	11/15/21 19:22	1
Toluene	<0.00200	U	0.00200	0.000455	mg/Kg		11/15/21 08:07	11/15/21 19:22	1
Ethylbenzene	<0.00200	U	0.00200	0.000564	mg/Kg		11/15/21 08:07	11/15/21 19:22	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	0.00101	mg/Kg		11/15/21 08:07	11/15/21 19:22	1
o-Xylene	<0.00200	U	0.00200	0.000343	mg/Kg		11/15/21 08:07	11/15/21 19:22	1
Xylenes, Total	<0.00399	U	0.00399	0.00101	mg/Kg		11/15/21 08:07	11/15/21 19:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130				11/15/21 08:07	11/15/21 19:22	1
1,4-Difluorobenzene (Surr)	99		70 - 130				11/15/21 08:07	11/15/21 19:22	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	0.00101	mg/Kg			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	22.3	J	49.9	15.0	mg/Kg			11/17/21 13:26	1

## Method: 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 *1	49.9	15.0	mg/Kg		11/15/21 09:27	11/15/21 16:53	1
Diesel Range Organics (Over C10-C28)	22.3	J B	49.9	15.0	mg/Kg		11/15/21 09:27	11/15/21 16:53	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	15.0	mg/Kg		11/15/21 09:27	11/15/21 16:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130				11/15/21 09:27	11/15/21 16:53	1
o-Terphenyl	102		70 - 130				11/15/21 09:27	11/15/21 16:53	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1230		5.02	0.862	mg/Kg			11/18/21 12:40	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Client Sample ID: TP27-S

Lab Sample ID: 890-1572-10

Date Collected: 11/12/21 09:40

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	0.000382	mg/Kg		11/15/21 08:07	11/15/21 19:42	1
<b>Toluene</b>	<b>0.000453</b>	<b>J</b>	0.00198	0.000452	mg/Kg		11/15/21 08:07	11/15/21 19:42	1
Ethylbenzene	<0.00198	U	0.00198	0.000561	mg/Kg		11/15/21 08:07	11/15/21 19:42	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	0.00100	mg/Kg		11/15/21 08:07	11/15/21 19:42	1
o-Xylene	<0.00198	U	0.00198	0.000341	mg/Kg		11/15/21 08:07	11/15/21 19:42	1
Xylenes, Total	<0.00397	U	0.00397	0.00100	mg/Kg		11/15/21 08:07	11/15/21 19:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130	11/15/21 08:07	11/15/21 19:42	1
1,4-Difluorobenzene (Surr)	95		70 - 130	11/15/21 08:07	11/15/21 19:42	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	0.00100	mg/Kg			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total TPH</b>	<b>38.0</b>	<b>J</b>	50.0	15.0	mg/Kg			11/17/21 13:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Gasoline Range Organics (GRO)-C6-C10</b>	<b>16.5</b>	<b>J *1</b>	50.0	15.0	mg/Kg		11/15/21 09:27	11/15/21 17:36	1
<b>Diesel Range Organics (Over C10-C28)</b>	<b>21.5</b>	<b>J B</b>	50.0	15.0	mg/Kg		11/15/21 09:27	11/15/21 17:36	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	15.0	mg/Kg		11/15/21 09:27	11/15/21 17:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130	11/15/21 09:27	11/15/21 17:36	1
o-Terphenyl	91		70 - 130	11/15/21 09:27	11/15/21 17:36	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>725</b>		4.98	0.855	mg/Kg			11/18/21 12:45	1

Client Sample ID: TP27-2

Lab Sample ID: 890-1572-11

Date Collected: 11/12/21 09:45

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>0.00115</b>	<b>J</b>	0.00199	0.000383	mg/Kg		11/16/21 15:49	11/16/21 19:08	1
<b>Toluene</b>	<b>0.00234</b>		0.00199	0.000454	mg/Kg		11/16/21 15:49	11/16/21 19:08	1
<b>Ethylbenzene</b>	<b>0.000637</b>	<b>J</b>	0.00199	0.000563	mg/Kg		11/16/21 15:49	11/16/21 19:08	1
<b>m-Xylene &amp; p-Xylene</b>	<b>0.00236</b>	<b>J</b>	0.00398	0.00101	mg/Kg		11/16/21 15:49	11/16/21 19:08	1
<b>o-Xylene</b>	<b>0.000649</b>	<b>J</b>	0.00199	0.000343	mg/Kg		11/16/21 15:49	11/16/21 19:08	1
<b>Xylenes, Total</b>	<b>0.00301</b>	<b>J</b>	0.00398	0.00101	mg/Kg		11/16/21 15:49	11/16/21 19:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	152	S1+	70 - 130	11/16/21 15:49	11/16/21 19:08	1
1,4-Difluorobenzene (Surr)	101		70 - 130	11/16/21 15:49	11/16/21 19:08	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Client Sample ID: TP27-2

Lab Sample ID: 890-1572-11

Date Collected: 11/12/21 09:45

Matrix: Solid

Date Received: 11/12/21 13:18

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.00714		0.00398	0.00101	mg/Kg			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	37.2	J	49.9	15.0	mg/Kg			11/17/21 13:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	17.1	J *1	49.9	15.0	mg/Kg		11/15/21 09:27	11/15/21 17:58	1
Diesel Range Organics (Over C10-C28)	20.1	J B	49.9	15.0	mg/Kg		11/15/21 09:27	11/15/21 17:58	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	15.0	mg/Kg		11/15/21 09:27	11/15/21 17:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130				11/15/21 09:27	11/15/21 17:58	1
o-Terphenyl	92		70 - 130				11/15/21 09:27	11/15/21 17:58	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	541		4.95	0.850	mg/Kg			11/18/21 12:50	1

Client Sample ID: TP28-2

Lab Sample ID: 890-1572-12

Date Collected: 11/12/21 09:50

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	0.000383	mg/Kg		11/16/21 15:49	11/16/21 19:29	1
Toluene	<0.00199	U	0.00199	0.000453	mg/Kg		11/16/21 15:49	11/16/21 19:29	1
Ethylbenzene	<0.00199	U	0.00199	0.000562	mg/Kg		11/16/21 15:49	11/16/21 19:29	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	0.00100	mg/Kg		11/16/21 15:49	11/16/21 19:29	1
o-Xylene	<0.00199	U	0.00199	0.000342	mg/Kg		11/16/21 15:49	11/16/21 19:29	1
Xylenes, Total	<0.00398	U	0.00398	0.00100	mg/Kg		11/16/21 15:49	11/16/21 19:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	119		70 - 130				11/16/21 15:49	11/16/21 19:29	1
1,4-Difluorobenzene (Surr)	99		70 - 130				11/16/21 15:49	11/16/21 19:29	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	0.00100	mg/Kg			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	22.8	J	50.0	15.0	mg/Kg			11/17/21 13:26	1

## Method: 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 *1	50.0	15.0	mg/Kg		11/15/21 09:27	11/15/21 18:19	1
Diesel Range Organics (Over C10-C28)	22.8	J B	50.0	15.0	mg/Kg		11/15/21 09:27	11/15/21 18:19	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Client Sample ID: TP28-2

Lab Sample ID: 890-1572-12

Date Collected: 11/12/21 09:50

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	15.0	mg/Kg		11/15/21 09:27	11/15/21 18:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	109		70 - 130				11/15/21 09:27	11/15/21 18:19	1
o-Terphenyl	125		70 - 130				11/15/21 09:27	11/15/21 18:19	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	862		5.03	0.863	mg/Kg			11/18/21 13:05	1

Client Sample ID: TP29-S

Lab Sample ID: 890-1572-13

Date Collected: 11/12/21 10:00

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000799	J	0.00199	0.000383	mg/Kg		11/16/21 15:49	11/16/21 19:49	1
Toluene	<0.00199	U	0.00199	0.000454	mg/Kg		11/16/21 15:49	11/16/21 19:49	1
Ethylbenzene	<0.00199	U	0.00199	0.000563	mg/Kg		11/16/21 15:49	11/16/21 19:49	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	0.00101	mg/Kg		11/16/21 15:49	11/16/21 19:49	1
o-Xylene	<0.00199	U	0.00199	0.000343	mg/Kg		11/16/21 15:49	11/16/21 19:49	1
Xylenes, Total	<0.00398	U	0.00398	0.00101	mg/Kg		11/16/21 15:49	11/16/21 19:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	119		70 - 130				11/16/21 15:49	11/16/21 19:49	1
1,4-Difluorobenzene (Surr)	71		70 - 130				11/16/21 15:49	11/16/21 19:49	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	0.00101	mg/Kg			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	23.1	J	49.9	15.0	mg/Kg			11/17/21 13:26	1

## Method: 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 *1	49.9	15.0	mg/Kg		11/15/21 09:27	11/15/21 18:40	1
Diesel Range Organics (Over C10-C28)	23.1	J B	49.9	15.0	mg/Kg		11/15/21 09:27	11/15/21 18:40	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	15.0	mg/Kg		11/15/21 09:27	11/15/21 18:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130				11/15/21 09:27	11/15/21 18:40	1
o-Terphenyl	106		70 - 130				11/15/21 09:27	11/15/21 18:40	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	65.1		4.98	0.855	mg/Kg			11/18/21 13:10	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Client Sample ID: TP29-2

Lab Sample ID: 890-1572-14

Date Collected: 11/12/21 10:10

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	0.000383	mg/Kg		11/16/21 15:49	11/16/21 20:09	1
<b>Toluene</b>	<b>0.000723</b>	<b>J</b>	0.00199	0.000454	mg/Kg		11/16/21 15:49	11/16/21 20:09	1
Ethylbenzene	<0.00199	U	0.00199	0.000563	mg/Kg		11/16/21 15:49	11/16/21 20:09	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	0.00101	mg/Kg		11/16/21 15:49	11/16/21 20:09	1
o-Xylene	<0.00199	U	0.00199	0.000343	mg/Kg		11/16/21 15:49	11/16/21 20:09	1
Xylenes, Total	<0.00398	U	0.00398	0.00101	mg/Kg		11/16/21 15:49	11/16/21 20:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	119		70 - 130	11/16/21 15:49	11/16/21 20:09	1
1,4-Difluorobenzene (Surr)	94		70 - 130	11/16/21 15:49	11/16/21 20:09	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	0.00101	mg/Kg			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total TPH</b>	<b>24.2</b>	<b>J</b>	50.0	15.0	mg/Kg			11/17/21 13:26	1

## Method: 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 *1	50.0	15.0	mg/Kg		11/15/21 09:27	11/15/21 19:02	1
<b>Diesel Range Organics (Over C10-C28)</b>	<b>24.2</b>	<b>J B</b>	50.0	15.0	mg/Kg		11/15/21 09:27	11/15/21 19:02	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	15.0	mg/Kg		11/15/21 09:27	11/15/21 19:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130	11/15/21 09:27	11/15/21 19:02	1
o-Terphenyl	106		70 - 130	11/15/21 09:27	11/15/21 19:02	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>52.4</b>		4.97	0.853	mg/Kg			11/18/21 13:25	1

Client Sample ID: TP30-S

Lab Sample ID: 890-1572-15

Date Collected: 11/12/21 10:20

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	0.000383	mg/Kg		11/16/21 15:49	11/16/21 20:30	1
Toluene	<0.00199	U	0.00199	0.000454	mg/Kg		11/16/21 15:49	11/16/21 20:30	1
Ethylbenzene	<0.00199	U	0.00199	0.000563	mg/Kg		11/16/21 15:49	11/16/21 20:30	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	0.00101	mg/Kg		11/16/21 15:49	11/16/21 20:30	1
o-Xylene	<0.00199	U	0.00199	0.000343	mg/Kg		11/16/21 15:49	11/16/21 20:30	1
Xylenes, Total	<0.00398	U	0.00398	0.00101	mg/Kg		11/16/21 15:49	11/16/21 20:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	133	S1+	70 - 130	11/16/21 15:49	11/16/21 20:30	1
1,4-Difluorobenzene (Surr)	93		70 - 130	11/16/21 15:49	11/16/21 20:30	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Client Sample ID: TP30-S

Lab Sample ID: 890-1572-15

Date Collected: 11/12/21 10:20

Matrix: Solid

Date Received: 11/12/21 13:18

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	0.00101	mg/Kg			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	30.4	J	49.8	14.9	mg/Kg			11/17/21 13:26	1

## Method: 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 *1	49.8	14.9	mg/Kg		11/15/21 09:27	11/15/21 19:23	1
Diesel Range Organics (Over C10-C28)	30.4	J B	49.8	14.9	mg/Kg		11/15/21 09:27	11/15/21 19:23	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	14.9	mg/Kg		11/15/21 09:27	11/15/21 19:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130				11/15/21 09:27	11/15/21 19:23	1
o-Terphenyl	106		70 - 130				11/15/21 09:27	11/15/21 19:23	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	761		4.95	0.850	mg/Kg			11/18/21 13:29	1

Client Sample ID: TP30-2

Lab Sample ID: 890-1572-16

Date Collected: 11/12/21 10:30

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	0.000387	mg/Kg		11/16/21 15:49	11/16/21 20:50	1
Toluene	<0.00201	U	0.00201	0.000458	mg/Kg		11/16/21 15:49	11/16/21 20:50	1
Ethylbenzene	0.000607	J	0.00201	0.000567	mg/Kg		11/16/21 15:49	11/16/21 20:50	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	0.00101	mg/Kg		11/16/21 15:49	11/16/21 20:50	1
o-Xylene	<0.00201	U	0.00201	0.000345	mg/Kg		11/16/21 15:49	11/16/21 20:50	1
Xylenes, Total	<0.00402	U	0.00402	0.00101	mg/Kg		11/16/21 15:49	11/16/21 20:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	127		70 - 130				11/16/21 15:49	11/16/21 20:50	1
1,4-Difluorobenzene (Surr)	94		70 - 130				11/16/21 15:49	11/16/21 20:50	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	0.00101	mg/Kg			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	113		49.9	15.0	mg/Kg			11/17/21 13:26	1

## Method: 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 *1	49.9	15.0	mg/Kg		11/15/21 09:27	11/15/21 19:44	1
Diesel Range Organics (Over C10-C28)	113	B	49.9	15.0	mg/Kg		11/15/21 09:27	11/15/21 19:44	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Client Sample ID: TP30-2

Lab Sample ID: 890-1572-16

Date Collected: 11/12/21 10:30

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	15.0	mg/Kg		11/15/21 09:27	11/15/21 19:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130				11/15/21 09:27	11/15/21 19:44	1
o-Terphenyl	113		70 - 130				11/15/21 09:27	11/15/21 19:44	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	441		4.99	0.857	mg/Kg			11/18/21 13:34	1

Client Sample ID: TP31-S

Lab Sample ID: 890-1572-17

Date Collected: 11/12/21 10:40

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000386	mg/Kg		11/16/21 15:49	11/16/21 21:11	1
Toluene	<0.00200	U	0.00200	0.000457	mg/Kg		11/16/21 15:49	11/16/21 21:11	1
Ethylbenzene	<0.00200	U	0.00200	0.000566	mg/Kg		11/16/21 15:49	11/16/21 21:11	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	0.00101	mg/Kg		11/16/21 15:49	11/16/21 21:11	1
o-Xylene	<0.00200	U	0.00200	0.000345	mg/Kg		11/16/21 15:49	11/16/21 21:11	1
Xylenes, Total	<0.00401	U	0.00401	0.00101	mg/Kg		11/16/21 15:49	11/16/21 21:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	124		70 - 130				11/16/21 15:49	11/16/21 21:11	1
1,4-Difluorobenzene (Surr)	71		70 - 130				11/16/21 15:49	11/16/21 21:11	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	0.00101	mg/Kg			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	27.5	J	49.9	15.0	mg/Kg			11/17/21 13:26	1

## Method: 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 *1	49.9	15.0	mg/Kg		11/15/21 09:27	11/15/21 20:05	1
Diesel Range Organics (Over C10-C28)	27.5	J B	49.9	15.0	mg/Kg		11/15/21 09:27	11/15/21 20:05	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	15.0	mg/Kg		11/15/21 09:27	11/15/21 20:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	109		70 - 130				11/15/21 09:27	11/15/21 20:05	1
o-Terphenyl	119		70 - 130				11/15/21 09:27	11/15/21 20:05	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	347		4.96	0.851	mg/Kg			11/18/21 13:39	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Client Sample ID: TP31-2

Lab Sample ID: 890-1572-18

Date Collected: 11/12/21 10:50

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000384	mg/Kg		11/16/21 15:49	11/16/21 21:31	1
Toluene	<0.00200	U	0.00200	0.000455	mg/Kg		11/16/21 15:49	11/16/21 21:31	1
Ethylbenzene	<0.00200	U	0.00200	0.000564	mg/Kg		11/16/21 15:49	11/16/21 21:31	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	0.00101	mg/Kg		11/16/21 15:49	11/16/21 21:31	1
o-Xylene	<0.00200	U	0.00200	0.000343	mg/Kg		11/16/21 15:49	11/16/21 21:31	1
Xylenes, Total	<0.00399	U	0.00399	0.00101	mg/Kg		11/16/21 15:49	11/16/21 21:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	118		70 - 130	11/16/21 15:49	11/16/21 21:31	1
1,4-Difluorobenzene (Surr)	74		70 - 130	11/16/21 15:49	11/16/21 21:31	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	0.00101	mg/Kg			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	27.6	J	49.9	15.0	mg/Kg			11/17/21 13:26	1

## Method: 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 *1	49.9	15.0	mg/Kg		11/15/21 09:27	11/15/21 20:26	1
Diesel Range Organics (Over C10-C28)	27.6	J B	49.9	15.0	mg/Kg		11/15/21 09:27	11/15/21 20:26	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	15.0	mg/Kg		11/15/21 09:27	11/15/21 20:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	125		70 - 130	11/15/21 09:27	11/15/21 20:26	1
o-Terphenyl	139	S1+	70 - 130	11/15/21 09:27	11/15/21 20:26	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	255		4.98	0.855	mg/Kg			11/18/21 13:44	1

Client Sample ID: TP32-2

Lab Sample ID: 890-1572-19

Date Collected: 11/12/21 11:00

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	0.000382	mg/Kg		11/16/21 15:49	11/16/21 21:51	1
Toluene	<0.00198	U	0.00198	0.000452	mg/Kg		11/16/21 15:49	11/16/21 21:51	1
Ethylbenzene	<0.00198	U	0.00198	0.000561	mg/Kg		11/16/21 15:49	11/16/21 21:51	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	0.00100	mg/Kg		11/16/21 15:49	11/16/21 21:51	1
o-Xylene	<0.00198	U	0.00198	0.000341	mg/Kg		11/16/21 15:49	11/16/21 21:51	1
Xylenes, Total	<0.00397	U	0.00397	0.00100	mg/Kg		11/16/21 15:49	11/16/21 21:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	128		70 - 130	11/16/21 15:49	11/16/21 21:51	1
1,4-Difluorobenzene (Surr)	95		70 - 130	11/16/21 15:49	11/16/21 21:51	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Client Sample ID: TP32-2

Lab Sample ID: 890-1572-19

Date Collected: 11/12/21 11:00

Matrix: Solid

Date Received: 11/12/21 13:18

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	0.00100	mg/Kg			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	27.2	J	49.8	14.9	mg/Kg			11/17/21 13:26	1

## Method: 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 *1	49.8	14.9	mg/Kg		11/15/21 09:27	11/15/21 20:46	1
Diesel Range Organics (Over C10-C28)	27.2	J B	49.8	14.9	mg/Kg		11/15/21 09:27	11/15/21 20:46	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	14.9	mg/Kg		11/15/21 09:27	11/15/21 20:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	111		70 - 130				11/15/21 09:27	11/15/21 20:46	1
o-Terphenyl	124		70 - 130				11/15/21 09:27	11/15/21 20:46	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	31.7		5.00	0.858	mg/Kg			11/18/21 13:49	1

Client Sample ID: HA1

Lab Sample ID: 890-1572-20

Date Collected: 11/12/21 11:10

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000419	J	0.00199	0.000383	mg/Kg		11/16/21 15:49	11/16/21 22:12	1
Toluene	<0.00199	U	0.00199	0.000454	mg/Kg		11/16/21 15:49	11/16/21 22:12	1
Ethylbenzene	<0.00199	U	0.00199	0.000563	mg/Kg		11/16/21 15:49	11/16/21 22:12	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	0.00101	mg/Kg		11/16/21 15:49	11/16/21 22:12	1
o-Xylene	<0.00199	U	0.00199	0.000343	mg/Kg		11/16/21 15:49	11/16/21 22:12	1
Xylenes, Total	<0.00398	U	0.00398	0.00101	mg/Kg		11/16/21 15:49	11/16/21 22:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	137	S1+	70 - 130				11/16/21 15:49	11/16/21 22:12	1
1,4-Difluorobenzene (Surr)	95		70 - 130				11/16/21 15:49	11/16/21 22:12	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	0.00101	mg/Kg			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	185		49.9	15.0	mg/Kg			11/17/21 13:26	1

## Method: 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	15.0	mg/Kg		11/15/21 08:59	11/15/21 20:05	1
Diesel Range Organics (Over C10-C28)	134	B	49.9	15.0	mg/Kg		11/15/21 08:59	11/15/21 20:05	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Client Sample ID: HA1

Lab Sample ID: 890-1572-20

Date Collected: 11/12/21 11:10

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	51.1		49.9	15.0	mg/Kg		11/15/21 08:59	11/15/21 20:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130				11/15/21 08:59	11/15/21 20:05	1
o-Terphenyl	120		70 - 130				11/15/21 08:59	11/15/21 20:05	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.3		5.00	0.858	mg/Kg			11/18/21 13:54	1

Client Sample ID: HA2

Lab Sample ID: 890-1572-21

Date Collected: 11/12/21 11:20

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000895	J B	0.00198	0.000381	mg/Kg		11/15/21 10:53	11/16/21 17:36	1
Toluene	0.000566	J	0.00198	0.000451	mg/Kg		11/15/21 10:53	11/16/21 17:36	1
Ethylbenzene	<0.00198	U	0.00198	0.000559	mg/Kg		11/15/21 10:53	11/16/21 17:36	1
m-Xylene & p-Xylene	0.00147	J	0.00396	0.00100	mg/Kg		11/15/21 10:53	11/16/21 17:36	1
o-Xylene	0.00105	J	0.00198	0.000341	mg/Kg		11/15/21 10:53	11/16/21 17:36	1
Xylenes, Total	0.00252	J	0.00396	0.00100	mg/Kg		11/15/21 10:53	11/16/21 17:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	134	S1+	70 - 130				11/15/21 10:53	11/16/21 17:36	1
1,4-Difluorobenzene (Surr)	102		70 - 130				11/15/21 10:53	11/16/21 17:36	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.00398		0.00396	0.00100	mg/Kg			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	52.4		49.9	15.0	mg/Kg			11/17/21 13:26	1

## Method: 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	15.0	mg/Kg		11/15/21 08:59	11/15/21 20:26	1
Diesel Range Organics (Over C10-C28)	52.4	B	49.9	15.0	mg/Kg		11/15/21 08:59	11/15/21 20:26	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	15.0	mg/Kg		11/15/21 08:59	11/15/21 20:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130				11/15/21 08:59	11/15/21 20:26	1
o-Terphenyl	110		70 - 130				11/15/21 08:59	11/15/21 20:26	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1580		24.8	4.25	mg/Kg			11/16/21 21:29	5

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Client Sample ID: HA3

Lab Sample ID: 890-1572-22

Date Collected: 11/12/21 11:30

Matrix: Solid

Date Received: 11/12/21 13:18

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	0.000383	mg/Kg		11/15/21 10:53	11/16/21 17:56	1
<b>Toluene</b>	<b>0.00150</b>	<b>J</b>	0.00199	0.000454	mg/Kg		11/15/21 10:53	11/16/21 17:56	1
Ethylbenzene	<0.00199	U	0.00199	0.000563	mg/Kg		11/15/21 10:53	11/16/21 17:56	1
<b>m-Xylene &amp; p-Xylene</b>	<b>0.00125</b>	<b>J</b>	0.00398	0.00101	mg/Kg		11/15/21 10:53	11/16/21 17:56	1
<b>o-Xylene</b>	<b>0.000857</b>	<b>J</b>	0.00199	0.000343	mg/Kg		11/15/21 10:53	11/16/21 17:56	1
<b>Xylenes, Total</b>	<b>0.00211</b>	<b>J</b>	0.00398	0.00101	mg/Kg		11/15/21 10:53	11/16/21 17:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130	11/15/21 10:53	11/16/21 17:56	1
1,4-Difluorobenzene (Surr)	100		70 - 130	11/15/21 10:53	11/16/21 17:56	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total BTEX</b>	<b>0.00361</b>	<b>J</b>	0.00398	0.00101	mg/Kg			11/18/21 16:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total TPH</b>	<b>58.7</b>		49.8	14.9	mg/Kg			11/17/21 13:26	1

## Method: 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	14.9	mg/Kg		11/15/21 08:59	11/15/21 20:46	1
Diesel Range Organics (Over C10-C28)	58.7	B	49.8	14.9	mg/Kg		11/15/21 08:59	11/15/21 20:46	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	14.9	mg/Kg		11/15/21 08:59	11/15/21 20:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130				11/15/21 08:59	11/15/21 20:46	1
o-Terphenyl	116		70 - 130				11/15/21 08:59	11/15/21 20:46	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>211</b>		4.98	0.855	mg/Kg			11/16/21 21:36	1

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## Surrogate Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-1572-1	TP19-3	113	97
890-1572-2	TP20-2	124	100
890-1572-3	TP21-2	135 S1+	91
890-1572-4	TP22-2	108	82
890-1572-5	TP23-S	123	101
890-1572-6	TP23-2	129	90
890-1572-7	TP24-2	113	104
890-1572-8	TP25-2	118	76
890-1572-9	TP26-2	113	99
890-1572-10	TP27-S	115	95
890-1572-11	TP27-2	152 S1+	101
890-1572-12	TP28-2	119	99
890-1572-13	TP29-S	119	71
890-1572-14	TP29-2	119	94
890-1572-15	TP30-S	133 S1+	93
890-1572-16	TP30-2	127	94
890-1572-17	TP31-S	124	71
890-1572-18	TP31-2	118	74
890-1572-19	TP32-2	128	95
890-1572-20	HA1	137 S1+	95
890-1572-21	HA2	134 S1+	102
890-1572-22	HA3	116	100
LCS 880-12215/1-A	Lab Control Sample	110	109
LCS 880-12275/1-A	Lab Control Sample	111	95
LCS 880-12349/1-A	Lab Control Sample	108	109
LCSD 880-12215/2-A	Lab Control Sample Dup	115	107
LCSD 880-12275/2-A	Lab Control Sample Dup	121	98
LCSD 880-12349/2-A	Lab Control Sample Dup	109	105
MB 880-12215/5-A	Method Blank	113	93
MB 880-12275/5-A	Method Blank	125	108
MB 880-12349/5-A	Method Blank	125	97

**Surrogate Legend**

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-1572-1	TP19-3	108	122
890-1572-2	TP20-2	106	119
890-1572-3	TP21-2	109	121
890-1572-4	TP22-2	103	115
890-1572-5	TP23-S	103	112
890-1572-6	TP23-2	87	89
890-1572-7	TP24-2	102	109
890-1572-8	TP25-2	93	99

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## Surrogate Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

## 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)
890-1572-9	TP26-2	94	102
890-1572-10	TP27-S	87	91
890-1572-11	TP27-2	89	92
890-1572-12	TP28-2	109	125
890-1572-13	TP29-S	102	106
890-1572-14	TP29-2	100	106
890-1572-15	TP30-S	98	106
890-1572-16	TP30-2	107	113
890-1572-17	TP31-S	109	119
890-1572-18	TP31-2	125	139 S1+
890-1572-19	TP32-2	111	124
890-1572-20	HA1	113	120
890-1572-21	HA2	105	110
890-1572-22	HA3	110	116
LCS 880-12224/2-A	Lab Control Sample	83	83
LCS 880-12229/2-A	Lab Control Sample	106	101
LCS 880-12340/2-A	Lab Control Sample	99	109
LCSD 880-12224/3-A	Lab Control Sample Dup	156 S1+	161 S1+
LCSD 880-12229/3-A	Lab Control Sample Dup	132 S1+	113
LCSD 880-12340/3-A	Lab Control Sample Dup	100	110
MB 880-12224/1-A	Method Blank	107	117
MB 880-12229/1-A	Method Blank	111	122
MB 880-12340/1-A	Method Blank	129	146 S1+

## Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

## QC Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

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

Lab Sample ID: MB 880-12215/5-A

Matrix: Solid

Analysis Batch: 12219

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 12215

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000385	mg/Kg		11/15/21 08:07	11/15/21 11:50	1
Toluene	<0.00200	U	0.00200	0.000456	mg/Kg		11/15/21 08:07	11/15/21 11:50	1
Ethylbenzene	<0.00200	U	0.00200	0.000565	mg/Kg		11/15/21 08:07	11/15/21 11:50	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	0.00101	mg/Kg		11/15/21 08:07	11/15/21 11:50	1
o-Xylene	<0.00200	U	0.00200	0.000344	mg/Kg		11/15/21 08:07	11/15/21 11:50	1
Xylenes, Total	<0.00400	U	0.00400	0.00101	mg/Kg		11/15/21 08:07	11/15/21 11:50	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	11/15/21 08:07	11/15/21 11:50	1
1,4-Difluorobenzene (Surr)	93		70 - 130	11/15/21 08:07	11/15/21 11:50	1

Lab Sample ID: LCS 880-12215/1-A

Matrix: Solid

Analysis Batch: 12219

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 12215

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.09556		mg/Kg		96	70 - 130
Toluene	0.100	0.08289		mg/Kg		83	70 - 130
Ethylbenzene	0.100	0.08441		mg/Kg		84	70 - 130
m-Xylene & p-Xylene	0.200	0.1784		mg/Kg		89	70 - 130
o-Xylene	0.100	0.08696		mg/Kg		87	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

Lab Sample ID: LCSD 880-12215/2-A

Matrix: Solid

Analysis Batch: 12219

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 12215

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.09851		mg/Kg		99	70 - 130	3	35
Toluene	0.100	0.08964		mg/Kg		90	70 - 130	8	35
Ethylbenzene	0.100	0.09120		mg/Kg		91	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.1935		mg/Kg		97	70 - 130	8	35
o-Xylene	0.100	0.09564		mg/Kg		96	70 - 130	10	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	115		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

Lab Sample ID: MB 880-12275/5-A

Matrix: Solid

Analysis Batch: 12413

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 12275

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0009082	J	0.00200	0.000385	mg/Kg		11/15/21 10:53	11/16/21 12:14	1
Toluene	<0.00200	U	0.00200	0.000456	mg/Kg		11/15/21 10:53	11/16/21 12:14	1

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## QC Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

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

Lab Sample ID: MB 880-12275/5-A

Matrix: Solid

Analysis Batch: 12413

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 12275

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200	0.000565	mg/Kg		11/15/21 10:53	11/16/21 12:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	0.00101	mg/Kg		11/15/21 10:53	11/16/21 12:14	1
o-Xylene	<0.00200	U	0.00200	0.000344	mg/Kg		11/15/21 10:53	11/16/21 12:14	1
Xylenes, Total	<0.00400	U	0.00400	0.00101	mg/Kg		11/15/21 10:53	11/16/21 12:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	125		70 - 130	11/15/21 10:53	11/16/21 12:14	1
1,4-Difluorobenzene (Surr)	108		70 - 130	11/15/21 10:53	11/16/21 12:14	1

Lab Sample ID: LCS 880-12275/1-A

Matrix: Solid

Analysis Batch: 12413

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 12275

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.08564		mg/Kg		86	70 - 130
Toluene	0.100	0.08933		mg/Kg		89	70 - 130
Ethylbenzene	0.100	0.09956		mg/Kg		100	70 - 130
m-Xylene & p-Xylene	0.200	0.1887		mg/Kg		94	70 - 130
o-Xylene	0.100	0.09021		mg/Kg		90	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: LCSD 880-12275/2-A

Matrix: Solid

Analysis Batch: 12413

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 12275

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	0.100	0.09333		mg/Kg		93	70 - 130	9	35
Toluene	0.100	0.1017		mg/Kg		102	70 - 130	13	35
Ethylbenzene	0.100	0.1012		mg/Kg		101	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.2020		mg/Kg		101	70 - 130	7	35
o-Xylene	0.100	0.09711		mg/Kg		97	70 - 130	7	35

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

Lab Sample ID: MB 880-12349/5-A

Matrix: Solid

Analysis Batch: 12415

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 12349

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000385	mg/Kg		11/15/21 15:49	11/16/21 11:49	1
Toluene	<0.00200	U	0.00200	0.000456	mg/Kg		11/15/21 15:49	11/16/21 11:49	1
Ethylbenzene	<0.00200	U	0.00200	0.000565	mg/Kg		11/15/21 15:49	11/16/21 11:49	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	0.00101	mg/Kg		11/15/21 15:49	11/16/21 11:49	1

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## QC Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

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

Lab Sample ID: MB 880-12349/5-A

Matrix: Solid

Analysis Batch: 12415

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 12349

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200	0.000344	mg/Kg		11/15/21 15:49	11/16/21 11:49	1
Xylenes, Total	<0.00400	U	0.00400	0.00101	mg/Kg		11/15/21 15:49	11/16/21 11:49	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	125		70 - 130				11/15/21 15:49	11/16/21 11:49	1
1,4-Difluorobenzene (Surr)	97		70 - 130				11/15/21 15:49	11/16/21 11:49	1

Lab Sample ID: LCS 880-12349/1-A

Matrix: Solid

Analysis Batch: 12415

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 12349

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.08639		mg/Kg		86	70 - 130
Toluene	0.100	0.07898		mg/Kg		79	70 - 130
Ethylbenzene	0.100	0.08065		mg/Kg		81	70 - 130
m-Xylene & p-Xylene	0.200	0.1681		mg/Kg		84	70 - 130
o-Xylene	0.100	0.08216		mg/Kg		82	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	108		70 - 130				
1,4-Difluorobenzene (Surr)	109		70 - 130				

Lab Sample ID: LCSD 880-12349/2-A

Matrix: Solid

Analysis Batch: 12415

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 12349

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.08951		mg/Kg		90	70 - 130	4	35
Toluene	0.100	0.07681		mg/Kg		77	70 - 130	3	35
Ethylbenzene	0.100	0.08423		mg/Kg		84	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.1763		mg/Kg		88	70 - 130	5	35
o-Xylene	0.100	0.08792		mg/Kg		88	70 - 130	7	35
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	109		70 - 130						
1,4-Difluorobenzene (Surr)	105		70 - 130						

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

Lab Sample ID: MB 880-12224/1-A

Matrix: Solid

Analysis Batch: 12235

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 12224

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	15.0	mg/Kg		11/15/21 08:59	11/15/21 11:55	1
Diesel Range Organics (Over C10-C28)	36.53	J	50.0	15.0	mg/Kg		11/15/21 08:59	11/15/21 11:55	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	15.0	mg/Kg		11/15/21 08:59	11/15/21 11:55	1

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## QC Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130	11/15/21 08:59	11/15/21 11:55	1
o-Terphenyl	117		70 - 130	11/15/21 08:59	11/15/21 11:55	1

Lab Sample ID: LCS 880-12224/2-A

Matrix: Solid

Analysis Batch: 12235

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 12224

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1095		mg/Kg		109	70 - 130
Diesel Range Organics (Over C10-C28)	1000	920.3		mg/Kg		92	70 - 130

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

Lab Sample ID: LCSD 880-12224/3-A

Matrix: Solid

Analysis Batch: 12235

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 12224

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1261		mg/Kg		126	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	1000	1118		mg/Kg		112	70 - 130	19	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	156	S1+	70 - 130
o-Terphenyl	161	S1+	70 - 130

Lab Sample ID: MB 880-12229/1-A

Matrix: Solid

Analysis Batch: 12237

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 12229

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	15.0	mg/Kg		11/15/21 09:27	11/15/21 11:55	1
Diesel Range Organics (Over C10-C28)	23.75	J	50.0	15.0	mg/Kg		11/15/21 09:27	11/15/21 11:55	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	15.0	mg/Kg		11/15/21 09:27	11/15/21 11:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	111		70 - 130	11/15/21 09:27	11/15/21 11:55	1
o-Terphenyl	122		70 - 130	11/15/21 09:27	11/15/21 11:55	1

Eurofins Xenco, Carlsbad

## QC Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

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

Lab Sample ID: LCS 880-12229/2-A

Matrix: Solid

Analysis Batch: 12237

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 12229

Analyte			Spike	LCS	LCS	Unit	D	%Rec	%Rec.		
			Added	Result	Qualifier			Limits			
Gasoline Range Organics (GRO)-C6-C10			1000	769.1		mg/Kg		77	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	872.8		mg/Kg		87	70 - 130		

Lab Sample ID: LCSD 880-12229/3-A

Matrix: Solid

Analysis Batch: 12237

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 12229

Top Bottom 1223										
Analyte			Spike	LCSD	LCSD				%Rec.	RPD
			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD
Gasoline Range Organics (GRO)-C6-C10			1000	1295	*1	mg/Kg		130	70 - 130	51
Diesel Range Organics (Over C10-C28)			1000	939.1		mg/Kg		94	70 - 130	7
Bottom 1223										
Surrogate	LCSD	LCSD	Limits							
	%Recovery	Qualifier								
1-Chlorooctane	132	S1+	70 - 130							
o-Terphenyl	113		70 - 130							

Lab Sample ID: MB 880-12340/1-A

Matrix: Solid

Analysis Batch: 12232

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 12340

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	15.0	mg/Kg		11/15/21 14:49	11/15/21 15:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	15.0	mg/Kg		11/15/21 14:49	11/15/21 15:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	15.0	mg/Kg		11/15/21 14:49	11/15/21 15:28	1
Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac			
	%Recovery	Qualifier							
1-Chlorooctane	129		70 - 130	11/15/21 14:49	11/15/21 15:28	1			
o-Terphenyl	146	S1+	70 - 130	11/15/21 14:49	11/15/21 15:28	1			

Lab Sample ID: LCS 880-12340/2-A

Matrix: Solid

Analysis Batch: 12232

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 12340

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1048		mg/Kg		105	70 - 130
Diesel Range Organics (Over C10-C28)	1000	922.2		mg/Kg		92	70 - 130

Eurofins Xenco, Carlsbad

## QC Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

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

Lab Sample ID: LCS 880-12340/2-A

Matrix: Solid

Analysis Batch: 12232

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 12340

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	109		70 - 130

Lab Sample ID: LCSD 880-12340/3-A

Matrix: Solid

Analysis Batch: 12232

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 12340

	Spike	LCSD	LCSD				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD
Gasoline Range Organics (GRO)-C6-C10	1000	1092		mg/Kg		109	70 - 130	4
Diesel Range Organics (Over C10-C28)	1000	941.2		mg/Kg		94	70 - 130	2

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	110		70 - 130

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-11958/1-A

Matrix: Solid

Analysis Batch: 12440

Client Sample ID: Method Blank

Prep Type: Soluble

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	0.858	mg/Kg			11/16/21 13:23	1

Lab Sample ID: LCS 880-11958/2-A

Matrix: Solid

Analysis Batch: 12440

Client Sample ID: Lab Control Sample

Prep Type: Soluble

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

Lab Sample ID: LCSD 880-11958/3-A

Matrix: Solid

Analysis Batch: 12440

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

	Spike	LCSD	LCSD				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD
Chloride	250	259.1		mg/Kg		104	90 - 110	0

Lab Sample ID: MB 880-12438/1-A

Matrix: Solid

Analysis Batch: 12580

Client Sample ID: Method Blank

Prep Type: Soluble

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	0.858	mg/Kg			11/18/21 11:27	1

Eurofins Xenco, Carlsbad

## QC Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

## Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-12438/2-A

Matrix: Solid

Analysis Batch: 12580

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	264.3		mg/Kg		106	90 - 110		

Lab Sample ID: LCSD 880-12438/3-A

Matrix: Solid

Analysis Batch: 12580

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	264.1		mg/Kg		106	90 - 110	0	20

Lab Sample ID: 890-1572-1 MS

Matrix: Solid

Analysis Batch: 12580

Client Sample ID: TP19-3

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	1280		249	1521	E 4	mg/Kg		96	90 - 110		

Lab Sample ID: 890-1572-1 MSD

Matrix: Solid

Analysis Batch: 12580

Client Sample ID: TP19-3

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1280		249	1514	E 4	mg/Kg		93	90 - 110	0	20

Lab Sample ID: 890-1572-11 MS

Matrix: Solid

Analysis Batch: 12580

Client Sample ID: TP27-2

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	541		248	788.8		mg/Kg		100	90 - 110		

Lab Sample ID: 890-1572-11 MSD

Matrix: Solid

Analysis Batch: 12580

Client Sample ID: TP27-2

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	541		248	784.8		mg/Kg		99	90 - 110	1	20

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## QC Association Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

## GC VOA

## Prep Batch: 12215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1572-1	TP19-3	Total/NA	Solid	5035	
890-1572-2	TP20-2	Total/NA	Solid	5035	
890-1572-3	TP21-2	Total/NA	Solid	5035	
890-1572-4	TP22-2	Total/NA	Solid	5035	
890-1572-5	TP23-S	Total/NA	Solid	5035	
890-1572-6	TP23-2	Total/NA	Solid	5035	
890-1572-7	TP24-2	Total/NA	Solid	5035	
890-1572-8	TP25-2	Total/NA	Solid	5035	
890-1572-9	TP26-2	Total/NA	Solid	5035	
890-1572-10	TP27-S	Total/NA	Solid	5035	
MB 880-12215/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-12215/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-12215/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

## Analysis Batch: 12219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1572-1	TP19-3	Total/NA	Solid	8021B	12215
890-1572-2	TP20-2	Total/NA	Solid	8021B	12215
890-1572-3	TP21-2	Total/NA	Solid	8021B	12215
890-1572-4	TP22-2	Total/NA	Solid	8021B	12215
890-1572-5	TP23-S	Total/NA	Solid	8021B	12215
890-1572-6	TP23-2	Total/NA	Solid	8021B	12215
890-1572-7	TP24-2	Total/NA	Solid	8021B	12215
890-1572-8	TP25-2	Total/NA	Solid	8021B	12215
890-1572-9	TP26-2	Total/NA	Solid	8021B	12215
890-1572-10	TP27-S	Total/NA	Solid	8021B	12215
MB 880-12215/5-A	Method Blank	Total/NA	Solid	8021B	12215
LCS 880-12215/1-A	Lab Control Sample	Total/NA	Solid	8021B	12215
LCSD 880-12215/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	12215

## Prep Batch: 12275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1572-21	HA2	Total/NA	Solid	5035	
890-1572-22	HA3	Total/NA	Solid	5035	
MB 880-12275/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-12275/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-12275/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

## Prep Batch: 12349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1572-11	TP27-2	Total/NA	Solid	5035	
890-1572-12	TP28-2	Total/NA	Solid	5035	
890-1572-13	TP29-S	Total/NA	Solid	5035	
890-1572-14	TP29-2	Total/NA	Solid	5035	
890-1572-15	TP30-S	Total/NA	Solid	5035	
890-1572-16	TP30-2	Total/NA	Solid	5035	
890-1572-17	TP31-S	Total/NA	Solid	5035	
890-1572-18	TP31-2	Total/NA	Solid	5035	
890-1572-19	TP32-2	Total/NA	Solid	5035	
890-1572-20	HA1	Total/NA	Solid	5035	
MB 880-12349/5-A	Method Blank	Total/NA	Solid	5035	

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## QC Association Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

## GC VOA (Continued)

## Prep Batch: 12349 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-12349/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-12349/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

## Analysis Batch: 12413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1572-21	HA2	Total/NA	Solid	8021B	12275
890-1572-22	HA3	Total/NA	Solid	8021B	12275
MB 880-12275/5-A	Method Blank	Total/NA	Solid	8021B	12275
LCS 880-12275/1-A	Lab Control Sample	Total/NA	Solid	8021B	12275
LCSD 880-12275/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	12275

## Analysis Batch: 12415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1572-11	TP27-2	Total/NA	Solid	8021B	12349
890-1572-12	TP28-2	Total/NA	Solid	8021B	12349
890-1572-13	TP29-S	Total/NA	Solid	8021B	12349
890-1572-14	TP29-2	Total/NA	Solid	8021B	12349
890-1572-15	TP30-S	Total/NA	Solid	8021B	12349
890-1572-16	TP30-2	Total/NA	Solid	8021B	12349
890-1572-17	TP31-S	Total/NA	Solid	8021B	12349
890-1572-18	TP31-2	Total/NA	Solid	8021B	12349
890-1572-19	TP32-2	Total/NA	Solid	8021B	12349
890-1572-20	HA1	Total/NA	Solid	8021B	12349
MB 880-12349/5-A	Method Blank	Total/NA	Solid	8021B	12349
LCS 880-12349/1-A	Lab Control Sample	Total/NA	Solid	8021B	12349
LCSD 880-12349/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	12349

## Analysis Batch: 12693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1572-1	TP19-3	Total/NA	Solid	Total BTEX	
890-1572-2	TP20-2	Total/NA	Solid	Total BTEX	
890-1572-3	TP21-2	Total/NA	Solid	Total BTEX	
890-1572-4	TP22-2	Total/NA	Solid	Total BTEX	
890-1572-5	TP23-S	Total/NA	Solid	Total BTEX	
890-1572-6	TP23-2	Total/NA	Solid	Total BTEX	
890-1572-7	TP24-2	Total/NA	Solid	Total BTEX	
890-1572-8	TP25-2	Total/NA	Solid	Total BTEX	
890-1572-9	TP26-2	Total/NA	Solid	Total BTEX	
890-1572-10	TP27-S	Total/NA	Solid	Total BTEX	
890-1572-11	TP27-2	Total/NA	Solid	Total BTEX	
890-1572-12	TP28-2	Total/NA	Solid	Total BTEX	
890-1572-13	TP29-S	Total/NA	Solid	Total BTEX	
890-1572-14	TP29-2	Total/NA	Solid	Total BTEX	
890-1572-15	TP30-S	Total/NA	Solid	Total BTEX	
890-1572-16	TP30-2	Total/NA	Solid	Total BTEX	
890-1572-17	TP31-S	Total/NA	Solid	Total BTEX	
890-1572-18	TP31-2	Total/NA	Solid	Total BTEX	
890-1572-19	TP32-2	Total/NA	Solid	Total BTEX	
890-1572-20	HA1	Total/NA	Solid	Total BTEX	
890-1572-21	HA2	Total/NA	Solid	Total BTEX	
890-1572-22	HA3	Total/NA	Solid	Total BTEX	

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## QC Association Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

## GC Semi VOA

## Prep Batch: 12224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1572-20	HA1	Total/NA	Solid	8015NM Prep	
890-1572-21	HA2	Total/NA	Solid	8015NM Prep	
890-1572-22	HA3	Total/NA	Solid	8015NM Prep	
MB 880-12224/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-12224/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-12224/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

## Prep Batch: 12229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1572-6	TP23-2	Total/NA	Solid	8015NM Prep	
890-1572-7	TP24-2	Total/NA	Solid	8015NM Prep	
890-1572-8	TP25-2	Total/NA	Solid	8015NM Prep	
890-1572-9	TP26-2	Total/NA	Solid	8015NM Prep	
890-1572-10	TP27-S	Total/NA	Solid	8015NM Prep	
890-1572-11	TP27-2	Total/NA	Solid	8015NM Prep	
890-1572-12	TP28-2	Total/NA	Solid	8015NM Prep	
890-1572-13	TP29-S	Total/NA	Solid	8015NM Prep	
890-1572-14	TP29-2	Total/NA	Solid	8015NM Prep	
890-1572-15	TP30-S	Total/NA	Solid	8015NM Prep	
890-1572-16	TP30-2	Total/NA	Solid	8015NM Prep	
890-1572-17	TP31-S	Total/NA	Solid	8015NM Prep	
890-1572-18	TP31-2	Total/NA	Solid	8015NM Prep	
890-1572-19	TP32-2	Total/NA	Solid	8015NM Prep	
MB 880-12229/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-12229/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-12229/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

## Analysis Batch: 12232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1572-1	TP19-3	Total/NA	Solid	8015B NM	12340
890-1572-2	TP20-2	Total/NA	Solid	8015B NM	12340
890-1572-3	TP21-2	Total/NA	Solid	8015B NM	12340
890-1572-4	TP22-2	Total/NA	Solid	8015B NM	12340
890-1572-5	TP23-S	Total/NA	Solid	8015B NM	12340
MB 880-12340/1-A	Method Blank	Total/NA	Solid	8015B NM	12340
LCS 880-12340/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	12340
LCSD 880-12340/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	12340

## Analysis Batch: 12235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1572-20	HA1	Total/NA	Solid	8015B NM	12224
890-1572-21	HA2	Total/NA	Solid	8015B NM	12224
890-1572-22	HA3	Total/NA	Solid	8015B NM	12224
MB 880-12224/1-A	Method Blank	Total/NA	Solid	8015B NM	12224
LCS 880-12224/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	12224
LCSD 880-12224/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	12224

## Analysis Batch: 12237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1572-6	TP23-2	Total/NA	Solid	8015B NM	12229
890-1572-7	TP24-2	Total/NA	Solid	8015B NM	12229

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## QC Association Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

## GC Semi VOA (Continued)

## Analysis Batch: 12237 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1572-8	TP25-2	Total/NA	Solid	8015B NM	12229
890-1572-9	TP26-2	Total/NA	Solid	8015B NM	12229
890-1572-10	TP27-S	Total/NA	Solid	8015B NM	12229
890-1572-11	TP27-2	Total/NA	Solid	8015B NM	12229
890-1572-12	TP28-2	Total/NA	Solid	8015B NM	12229
890-1572-13	TP29-S	Total/NA	Solid	8015B NM	12229
890-1572-14	TP29-2	Total/NA	Solid	8015B NM	12229
890-1572-15	TP30-S	Total/NA	Solid	8015B NM	12229
890-1572-16	TP30-2	Total/NA	Solid	8015B NM	12229
890-1572-17	TP31-S	Total/NA	Solid	8015B NM	12229
890-1572-18	TP31-2	Total/NA	Solid	8015B NM	12229
890-1572-19	TP32-2	Total/NA	Solid	8015B NM	12229
MB 880-12229/1-A	Method Blank	Total/NA	Solid	8015B NM	12229
LCS 880-12229/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	12229
LCSD 880-12229/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	12229

## Prep Batch: 12340

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1572-1	TP19-3	Total/NA	Solid	8015NM Prep	
890-1572-2	TP20-2	Total/NA	Solid	8015NM Prep	
890-1572-3	TP21-2	Total/NA	Solid	8015NM Prep	
890-1572-4	TP22-2	Total/NA	Solid	8015NM Prep	
890-1572-5	TP23-S	Total/NA	Solid	8015NM Prep	
MB 880-12340/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-12340/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-12340/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

## Analysis Batch: 12448

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1572-1	TP19-3	Total/NA	Solid	8015 NM	
890-1572-2	TP20-2	Total/NA	Solid	8015 NM	
890-1572-3	TP21-2	Total/NA	Solid	8015 NM	
890-1572-4	TP22-2	Total/NA	Solid	8015 NM	
890-1572-5	TP23-S	Total/NA	Solid	8015 NM	

## Analysis Batch: 12574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1572-6	TP23-2	Total/NA	Solid	8015 NM	
890-1572-7	TP24-2	Total/NA	Solid	8015 NM	
890-1572-8	TP25-2	Total/NA	Solid	8015 NM	
890-1572-9	TP26-2	Total/NA	Solid	8015 NM	
890-1572-10	TP27-S	Total/NA	Solid	8015 NM	
890-1572-11	TP27-2	Total/NA	Solid	8015 NM	
890-1572-12	TP28-2	Total/NA	Solid	8015 NM	
890-1572-13	TP29-S	Total/NA	Solid	8015 NM	
890-1572-14	TP29-2	Total/NA	Solid	8015 NM	
890-1572-15	TP30-S	Total/NA	Solid	8015 NM	
890-1572-16	TP30-2	Total/NA	Solid	8015 NM	
890-1572-17	TP31-S	Total/NA	Solid	8015 NM	
890-1572-18	TP31-2	Total/NA	Solid	8015 NM	
890-1572-19	TP32-2	Total/NA	Solid	8015 NM	

Eurofins Xenco, Carlsbad

## QC Association Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

## GC Semi VOA (Continued)

## Analysis Batch: 12574 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1572-20	HA1	Total/NA	Solid	8015 NM	
890-1572-21	HA2	Total/NA	Solid	8015 NM	
890-1572-22	HA3	Total/NA	Solid	8015 NM	

## HPLC/IC

## Leach Batch: 11958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1572-21	HA2	Soluble	Solid	DI Leach	
890-1572-22	HA3	Soluble	Solid	DI Leach	
MB 880-11958/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-11958/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11958/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

## Leach Batch: 12438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1572-1	TP19-3	Soluble	Solid	DI Leach	
890-1572-2	TP20-2	Soluble	Solid	DI Leach	
890-1572-3	TP21-2	Soluble	Solid	DI Leach	
890-1572-4	TP22-2	Soluble	Solid	DI Leach	
890-1572-5	TP23-S	Soluble	Solid	DI Leach	
890-1572-6	TP23-2	Soluble	Solid	DI Leach	
890-1572-7	TP24-2	Soluble	Solid	DI Leach	
890-1572-8	TP25-2	Soluble	Solid	DI Leach	
890-1572-9	TP26-2	Soluble	Solid	DI Leach	
890-1572-10	TP27-S	Soluble	Solid	DI Leach	
890-1572-11	TP27-2	Soluble	Solid	DI Leach	
890-1572-12	TP28-2	Soluble	Solid	DI Leach	
890-1572-13	TP29-S	Soluble	Solid	DI Leach	
890-1572-14	TP29-2	Soluble	Solid	DI Leach	
890-1572-15	TP30-S	Soluble	Solid	DI Leach	
890-1572-16	TP30-2	Soluble	Solid	DI Leach	
890-1572-17	TP31-S	Soluble	Solid	DI Leach	
890-1572-18	TP31-2	Soluble	Solid	DI Leach	
890-1572-19	TP32-2	Soluble	Solid	DI Leach	
890-1572-20	HA1	Soluble	Solid	DI Leach	
MB 880-12438/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-12438/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-12438/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1572-1 MS	TP19-3	Soluble	Solid	DI Leach	
890-1572-1 MSD	TP19-3	Soluble	Solid	DI Leach	
890-1572-11 MS	TP27-2	Soluble	Solid	DI Leach	
890-1572-11 MSD	TP27-2	Soluble	Solid	DI Leach	

## Analysis Batch: 12440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1572-21	HA2	Soluble	Solid	300.0	11958
890-1572-22	HA3	Soluble	Solid	300.0	11958
MB 880-11958/1-A	Method Blank	Soluble	Solid	300.0	11958
LCS 880-11958/2-A	Lab Control Sample	Soluble	Solid	300.0	11958
LCSD 880-11958/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11958

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## QC Association Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

## HPLC/IC

## Analysis Batch: 12580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1572-1	TP19-3	Soluble	Solid	300.0	12438
890-1572-2	TP20-2	Soluble	Solid	300.0	12438
890-1572-3	TP21-2	Soluble	Solid	300.0	12438
890-1572-4	TP22-2	Soluble	Solid	300.0	12438
890-1572-5	TP23-S	Soluble	Solid	300.0	12438
890-1572-6	TP23-2	Soluble	Solid	300.0	12438
890-1572-7	TP24-2	Soluble	Solid	300.0	12438
890-1572-8	TP25-2	Soluble	Solid	300.0	12438
890-1572-9	TP26-2	Soluble	Solid	300.0	12438
890-1572-10	TP27-S	Soluble	Solid	300.0	12438
890-1572-11	TP27-2	Soluble	Solid	300.0	12438
890-1572-12	TP28-2	Soluble	Solid	300.0	12438
890-1572-13	TP29-S	Soluble	Solid	300.0	12438
890-1572-14	TP29-2	Soluble	Solid	300.0	12438
890-1572-15	TP30-S	Soluble	Solid	300.0	12438
890-1572-16	TP30-2	Soluble	Solid	300.0	12438
890-1572-17	TP31-S	Soluble	Solid	300.0	12438
890-1572-18	TP31-2	Soluble	Solid	300.0	12438
890-1572-19	TP32-2	Soluble	Solid	300.0	12438
890-1572-20	HA1	Soluble	Solid	300.0	12438
MB 880-12438/1-A	Method Blank	Soluble	Solid	300.0	12438
LCS 880-12438/2-A	Lab Control Sample	Soluble	Solid	300.0	12438
LCSD 880-12438/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	12438
890-1572-1 MS	TP19-3	Soluble	Solid	300.0	12438
890-1572-1 MSD	TP19-3	Soluble	Solid	300.0	12438
890-1572-11 MS	TP27-2	Soluble	Solid	300.0	12438
890-1572-11 MSD	TP27-2	Soluble	Solid	300.0	12438

Eurofins Xenco, Carlsbad

## Lab Chronicle

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Client Sample ID: TP19-3

Lab Sample ID: 890-1572-1

Date Collected: 11/12/21 08:10

Matrix: Solid

Date Received: 11/12/21 13:18

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	12215	11/15/21 08:07	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12219	11/15/21 16:38	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12448	11/16/21 13:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	12340	11/15/21 14:49	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12232	11/15/21 20:36	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	12438	11/16/21 10:15	CH	XEN MID
Soluble	Analysis	300.0		1			12580	11/18/21 11:41	CH	XEN MID

Client Sample ID: TP20-2

Lab Sample ID: 890-1572-2

Date Collected: 11/12/21 08:15

Matrix: Solid

Date Received: 11/12/21 13:18

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	12215	11/15/21 08:07	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12219	11/15/21 16:59	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12448	11/16/21 13:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	12340	11/15/21 14:49	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12232	11/15/21 21:20	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	12438	11/16/21 10:15	CH	XEN MID
Soluble	Analysis	300.0		1			12580	11/18/21 11:56	CH	XEN MID

Client Sample ID: TP21-2

Lab Sample ID: 890-1572-3

Date Collected: 11/12/21 08:25

Matrix: Solid

Date Received: 11/12/21 13:18

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	12215	11/15/21 08:07	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12219	11/15/21 17:19	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12448	11/16/21 13:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	12340	11/15/21 14:49	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12232	11/15/21 21:41	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	12438	11/16/21 10:15	CH	XEN MID
Soluble	Analysis	300.0		1			12580	11/18/21 12:01	CH	XEN MID

Client Sample ID: TP22-2

Lab Sample ID: 890-1572-4

Date Collected: 11/12/21 08:35

Matrix: Solid

Date Received: 11/12/21 13:18

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	12215	11/15/21 08:07	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12219	11/15/21 17:40	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID

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## Lab Chronicle

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Client Sample ID: TP22-2

Lab Sample ID: 890-1572-4

Date Collected: 11/12/21 08:35

Matrix: Solid

Date Received: 11/12/21 13:18

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			12448	11/16/21 13:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	12340	11/15/21 14:49	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12232	11/15/21 22:03	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	12438	11/16/21 10:15	CH	XEN MID
Soluble	Analysis	300.0		1			12580	11/18/21 12:06	CH	XEN MID

Client Sample ID: TP23-S

Lab Sample ID: 890-1572-5

Date Collected: 11/12/21 08:50

Matrix: Solid

Date Received: 11/12/21 13:18

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	12215	11/15/21 08:07	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12219	11/15/21 18:00	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12448	11/16/21 13:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	12340	11/15/21 14:49	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12232	11/15/21 22:25	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	12438	11/16/21 10:15	CH	XEN MID
Soluble	Analysis	300.0		1			12580	11/18/21 12:11	CH	XEN MID

Client Sample ID: TP23-2

Lab Sample ID: 890-1572-6

Date Collected: 11/12/21 09:00

Matrix: Solid

Date Received: 11/12/21 13:18

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	12215	11/15/21 08:07	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12219	11/15/21 18:21	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12574	11/17/21 13:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	12229	11/15/21 09:27	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12237	11/15/21 15:47	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	12438	11/16/21 10:15	CH	XEN MID
Soluble	Analysis	300.0		1			12580	11/18/21 12:26	CH	XEN MID

Client Sample ID: TP24-2

Lab Sample ID: 890-1572-7

Date Collected: 11/12/21 09:10

Matrix: Solid

Date Received: 11/12/21 13:18

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	12215	11/15/21 08:07	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12219	11/15/21 18:41	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12574	11/17/21 13:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	12229	11/15/21 09:27	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12237	11/15/21 16:09	AJ	XEN MID

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## Lab Chronicle

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

## Client Sample ID: TP24-2

## Lab Sample ID: 890-1572-7

Date Collected: 11/12/21 09:10

Matrix: Solid

Date Received: 11/12/21 13:18

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	12438	11/16/21 10:15	CH	XEN MID
Soluble	Analysis	300.0		1			12580	11/18/21 12:31	CH	XEN MID

## Client Sample ID: TP25-2

## Lab Sample ID: 890-1572-8

Date Collected: 11/12/21 09:20

Matrix: Solid

Date Received: 11/12/21 13:18

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	12215	11/15/21 08:07	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12219	11/15/21 19:01	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12574	11/17/21 13:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	12229	11/15/21 09:27	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12237	11/15/21 16:31	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	12438	11/16/21 10:15	CH	XEN MID
Soluble	Analysis	300.0		1			12580	11/18/21 12:35	CH	XEN MID

## Client Sample ID: TP26-2

## Lab Sample ID: 890-1572-9

Date Collected: 11/12/21 09:30

Matrix: Solid

Date Received: 11/12/21 13:18

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	12215	11/15/21 08:07	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12219	11/15/21 19:22	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12574	11/17/21 13:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	12229	11/15/21 09:27	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12237	11/15/21 16:53	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	12438	11/16/21 10:15	CH	XEN MID
Soluble	Analysis	300.0		1			12580	11/18/21 12:40	CH	XEN MID

## Client Sample ID: TP27-S

## Lab Sample ID: 890-1572-10

Date Collected: 11/12/21 09:40

Matrix: Solid

Date Received: 11/12/21 13:18

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	12215	11/15/21 08:07	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12219	11/15/21 19:42	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12574	11/17/21 13:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	12229	11/15/21 09:27	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12237	11/15/21 17:36	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	12438	11/16/21 10:15	CH	XEN MID
Soluble	Analysis	300.0		1			12580	11/18/21 12:45	CH	XEN MID

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## Lab Chronicle

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Client Sample ID: TP27-2

Lab Sample ID: 890-1572-11

Date Collected: 11/12/21 09:45

Matrix: Solid

Date Received: 11/12/21 13:18

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	12349	11/16/21 15:49	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12415	11/16/21 19:08	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12574	11/17/21 13:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	12229	11/15/21 09:27	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12237	11/15/21 17:58	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	12438	11/16/21 10:15	CH	XEN MID
Soluble	Analysis	300.0		1			12580	11/18/21 12:50	CH	XEN MID

Client Sample ID: TP28-2

Lab Sample ID: 890-1572-12

Date Collected: 11/12/21 09:50

Matrix: Solid

Date Received: 11/12/21 13:18

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	12349	11/16/21 15:49	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12415	11/16/21 19:29	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12574	11/17/21 13:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	12229	11/15/21 09:27	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12237	11/15/21 18:19	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	12438	11/16/21 10:15	CH	XEN MID
Soluble	Analysis	300.0		1			12580	11/18/21 13:05	CH	XEN MID

Client Sample ID: TP29-S

Lab Sample ID: 890-1572-13

Date Collected: 11/12/21 10:00

Matrix: Solid

Date Received: 11/12/21 13:18

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	12349	11/16/21 15:49	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12415	11/16/21 19:49	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12574	11/17/21 13:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	12229	11/15/21 09:27	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12237	11/15/21 18:40	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	12438	11/16/21 10:15	CH	XEN MID
Soluble	Analysis	300.0		1			12580	11/18/21 13:10	CH	XEN MID

Client Sample ID: TP29-2

Lab Sample ID: 890-1572-14

Date Collected: 11/12/21 10:10

Matrix: Solid

Date Received: 11/12/21 13:18

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	12349	11/16/21 15:49	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12415	11/16/21 20:09	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID

Eurofins Xenco, Carlsbad

## Lab Chronicle

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Client Sample ID: TP29-2

Lab Sample ID: 890-1572-14

Date Collected: 11/12/21 10:10

Matrix: Solid

Date Received: 11/12/21 13:18

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			12574	11/17/21 13:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	12229	11/15/21 09:27	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12237	11/15/21 19:02	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	12438	11/16/21 10:15	CH	XEN MID
Soluble	Analysis	300.0		1			12580	11/18/21 13:25	CH	XEN MID

Client Sample ID: TP30-S

Lab Sample ID: 890-1572-15

Date Collected: 11/12/21 10:20

Matrix: Solid

Date Received: 11/12/21 13:18

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	12349	11/16/21 15:49	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12415	11/16/21 20:30	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12574	11/17/21 13:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	12229	11/15/21 09:27	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12237	11/15/21 19:23	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	12438	11/16/21 10:15	CH	XEN MID
Soluble	Analysis	300.0		1			12580	11/18/21 13:29	CH	XEN MID

Client Sample ID: TP30-2

Lab Sample ID: 890-1572-16

Date Collected: 11/12/21 10:30

Matrix: Solid

Date Received: 11/12/21 13:18

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	12349	11/16/21 15:49	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12415	11/16/21 20:50	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12574	11/17/21 13:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	12229	11/15/21 09:27	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12237	11/15/21 19:44	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	12438	11/16/21 10:15	CH	XEN MID
Soluble	Analysis	300.0		1			12580	11/18/21 13:34	CH	XEN MID

Client Sample ID: TP31-S

Lab Sample ID: 890-1572-17

Date Collected: 11/12/21 10:40

Matrix: Solid

Date Received: 11/12/21 13:18

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	12349	11/16/21 15:49	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12415	11/16/21 21:11	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12574	11/17/21 13:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	12229	11/15/21 09:27	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12237	11/15/21 20:05	AJ	XEN MID

Eurofins Xenco, Carlsbad

## Lab Chronicle

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Client Sample ID: TP31-S

Lab Sample ID: 890-1572-17

Date Collected: 11/12/21 10:40

Matrix: Solid

Date Received: 11/12/21 13:18

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	12438	11/16/21 10:15	CH	XEN MID
Soluble	Analysis	300.0		1			12580	11/18/21 13:39	CH	XEN MID

Client Sample ID: TP31-2

Lab Sample ID: 890-1572-18

Date Collected: 11/12/21 10:50

Matrix: Solid

Date Received: 11/12/21 13:18

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	12349	11/16/21 15:49	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12415	11/16/21 21:31	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12574	11/17/21 13:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	12229	11/15/21 09:27	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12237	11/15/21 20:26	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	12438	11/16/21 10:15	CH	XEN MID
Soluble	Analysis	300.0		1			12580	11/18/21 13:44	CH	XEN MID

Client Sample ID: TP32-2

Lab Sample ID: 890-1572-19

Date Collected: 11/12/21 11:00

Matrix: Solid

Date Received: 11/12/21 13:18

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	12349	11/16/21 15:49	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12415	11/16/21 21:51	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12574	11/17/21 13:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	12229	11/15/21 09:27	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12237	11/15/21 20:46	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	12438	11/16/21 10:15	CH	XEN MID
Soluble	Analysis	300.0		1			12580	11/18/21 13:49	CH	XEN MID

Client Sample ID: HA1

Lab Sample ID: 890-1572-20

Date Collected: 11/12/21 11:10

Matrix: Solid

Date Received: 11/12/21 13:18

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	12349	11/16/21 15:49	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12415	11/16/21 22:12	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12574	11/17/21 13:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	12224	11/15/21 08:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12235	11/15/21 20:05	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	12438	11/16/21 10:15	CH	XEN MID
Soluble	Analysis	300.0		1			12580	11/18/21 13:54	CH	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Client Sample ID: HA2  
Date Collected: 11/12/21 11:20  
Date Received: 11/12/21 13:18

Lab Sample ID: 890-1572-21  
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	12275	11/15/21 10:53	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12413	11/16/21 17:36	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12574	11/17/21 13:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	12224	11/15/21 08:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12235	11/15/21 20:26	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	11958	11/15/21 15:07	SC	XEN MID
Soluble	Analysis	300.0		5			12440	11/16/21 21:29	CH	XEN MID

Client Sample ID: HA3  
Date Collected: 11/12/21 11:30  
Date Received: 11/12/21 13:18

Lab Sample ID: 890-1572-22  
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	12275	11/15/21 10:53	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	12413	11/16/21 17:56	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			12693	11/18/21 16:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12574	11/17/21 13:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	12224	11/15/21 08:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			12235	11/15/21 20:46	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	11958	11/15/21 15:07	SC	XEN MID
Soluble	Analysis	300.0		1			12440	11/16/21 21:36	CH	XEN MID

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



Accreditation/Certification Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Laboratory: Eurofins Xenco, Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

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

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

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

## Method Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

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

**Protocol References:**

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

**Laboratory References:**

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

## Sample Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-1572-1  
SDG: 11224665

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
890-1572-1	TP19-3	Solid	11/12/21 08:10	11/12/21 13:18
890-1572-2	TP20-2	Solid	11/12/21 08:15	11/12/21 13:18
890-1572-3	TP21-2	Solid	11/12/21 08:25	11/12/21 13:18
890-1572-4	TP22-2	Solid	11/12/21 08:35	11/12/21 13:18
890-1572-5	TP23-S	Solid	11/12/21 08:50	11/12/21 13:18
890-1572-6	TP23-2	Solid	11/12/21 09:00	11/12/21 13:18
890-1572-7	TP24-2	Solid	11/12/21 09:10	11/12/21 13:18
890-1572-8	TP25-2	Solid	11/12/21 09:20	11/12/21 13:18
890-1572-9	TP26-2	Solid	11/12/21 09:30	11/12/21 13:18
890-1572-10	TP27-S	Solid	11/12/21 09:40	11/12/21 13:18
890-1572-11	TP27-2	Solid	11/12/21 09:45	11/12/21 13:18
890-1572-12	TP28-2	Solid	11/12/21 09:50	11/12/21 13:18
890-1572-13	TP29-S	Solid	11/12/21 10:00	11/12/21 13:18
890-1572-14	TP29-2	Solid	11/12/21 10:10	11/12/21 13:18
890-1572-15	TP30-S	Solid	11/12/21 10:20	11/12/21 13:18
890-1572-16	TP30-2	Solid	11/12/21 10:30	11/12/21 13:18
890-1572-17	TP31-S	Solid	11/12/21 10:40	11/12/21 13:18
890-1572-18	TP31-2	Solid	11/12/21 10:50	11/12/21 13:18
890-1572-19	TP32-2	Solid	11/12/21 11:00	11/12/21 13:18
890-1572-20	HA1	Solid	11/12/21 11:10	11/12/21 13:18
890-1572-21	HA2	Solid	11/12/21 11:20	11/12/21 13:18
890-1572-22	HA3	Solid	11/12/21 11:30	11/12/21 13:18

**Service Center - San Antonio, Texas (210-509-3334)**

**CHAIN OF CUSTODY**

Page 1 of 3

Page 1 of 5

**Lakeland, Florida (863-646-8526)**  
**Tampa, Florida (813-620-2000)**

Page 48 of 55

Service Center - San Antonio, Texas (210-509-3334) www.xenco.com

Xenco Quote #

Xenco Job #

Matrix Codes

S = Soil/Sed/Solid  
GW = Ground Water  
DW = Drinking Water  
P = Product  
SW = Surface water  
SL = Sludge  
OW = Ocean/Sea Water  
W = Waste  
O = Oil  
WW = Waste Water  
A = Air

Client / Reporting Information

Company Name / Branch:

GHD/Midland

Company Address: 2135 S. Loop 250 West Midland TX

Project Information

Project Name/Number:

Hunt APO State #1 / 11224665

Project Location:

Eddy County, New Mexico

Invoice To:

EOG / James Kennedy

Email: becky.haskell@ghd.com

Phone No: (432)260-7917

Matthew.laughlin@ghd.com

Zach.comino@ghd.com

James.kennedy@eogresources.com

Iorn.Jarson@ghd.com

Project Contact:

Becky Haskell / Glenn Quinney

Sampler's Name Zach Comino

PO Number: NA

Analytical Information

Field ID / Point of Collection

Collection

Sample Depth

Date

Time

Matrix

# of bottles

HCl

NaOH/Zn Acetate

HNO<sub>3</sub>

H<sub>2</sub>SO<sub>4</sub>

NaOH

NaHSO<sub>4</sub>

MeOH

NONE

TPH By 8015 Mod (GRO, DRO & MRO)

BTEx 8021 B

Chloride 600

Field Comments

890-1572 Chain of Custody

Data Deliverable Information

☐ Same Day TAT

☒ 5 Day TAT

☐ Level II Std QC

☐ Level IV (Full Data Pkg /raw data)

☐ Next Day EMERGENCY

☐ 7 Day TAT

☐ Level III Std QC+ Forms

☐ TRRP Level IV

☐ 2 Day EMERGENCY

☐ Contract TAT

☐ Level 3 (CLP Forms)

☐ UST / RG -411

☐ 3 Day EMERGENCY

☐ TRRP Checklist

TAT Starts Day received by Lab, if received by 5:00 pm

Report MDLs and J values.

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by Sampler:

Date Time:

Received By:

Date Time:

Relinquished By:

Date Time:

Custody Seal #

Preserved where applicable

On Ice

Cooler Temp.

Thermo. Corr. Factor

19.4/19.2

0.2

TNM

Relinquished by:

Date Time:

Received By:

Date Time:

Relinquished By:

Date Time:

Custody Seal #

Preserved where applicable

On Ice

Cooler Temp.

Thermo. Corr. Factor

19.4/19.2

0.2

TNM

Relinquished by:

Date Time:

Received By:

Date Time:

Relinquished By:

Date Time:

Custody Seal #

Preserved where applicable

On Ice

Cooler Temp.

Thermo. Corr. Factor

19.4/19.2

Dallas, Texas (214-902-0300)

**Service Center - San Antonio, Texas (210-509-3334)**

[www.xenco.com](http://www.xenco.com)

**Norcross, Georgia (770-449-8800)**

Tampa, Florida (813-620-2000)

## CHAIN OF CUSTODY

Page 1 of 3

<b>Service Center - San Antonio, Texas (210-509-3334)</b>															
<b>www.xenco.com</b>															
<b>Client / Reporting Information</b>			<b>Project Information</b>			<b>Analytical Information</b>									
Company Name / Branch: GHDMidland Company Address: 2135 S. Loop 260 West Midland TX			Project Name/Number: Hunt APO State #1 / 11224685			Xenco Quote # _____ Xenco Job # _____									
Email: becky.haskell@ghd.com    Phone No: (432)256-7917 Matthew.laughlin@ghd.com    Zach.comino@ghd.com James.Kennedy@geosources.com    tom.larson@ghd.com			Project Location: Eddy County, New Mexico												
Project Contact: Becky Haskell / Glenn Quinney			Invoice To: EOG / James Kennedy												
Sampler's Name Zach Comino			PO Number: NA												
No.	Field ID / Point of Collection	Collection	Number of preserved bottles							Field Comments					
		Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO <sub>3</sub>		H <sub>2</sub> SO <sub>4</sub>	NaOH	NaHSO <sub>4</sub>	MEOH	NONE
1	TP27-2													X	TPH By 8015 Mod (GRO, DRO & MRO)
2	TP28-2													X	BTEX 8021 B
3	TP29-S													X	Chloride 600
4	TP29-2														
5	TP30-S														
6	TP30-2														
7	TP31-S														
8	TP31-2														
9	TP32-2														
10	HAI														
Turnaround Time (Business days)															
<input type="checkbox"/> Same Day TAT		<input checked="" type="checkbox"/> 5 Day TAT		<input type="checkbox"/> Level II Std QC		<input type="checkbox"/> Level IV (Full Data Pkg raw data)									
<input type="checkbox"/> Next Day EMERGENCY		<input type="checkbox"/> 7 Day TAT		<input type="checkbox"/> Level III Std QC + Forms		<input type="checkbox"/> TRRP Level IV									
<input type="checkbox"/> 2 Day EMERGENCY		<input type="checkbox"/> Contract TAT		<input type="checkbox"/> Level 3 (CLP Forms)		<input type="checkbox"/> UST / RG 411									
<input type="checkbox"/> 3 Day EMERGENCY				<input type="checkbox"/> TRRP Checklist											
TAT Starts Day received by Lab, if received by 5:00 pm				Report MDLs and J values.											
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY															
Relinquished by Sampler:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
1 Zach Comino		11/28/13		1 The Corp		11-27-13		1 The Corp		11-27-13		2		2	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
3		3		3		3		3		3		3		3	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		5		5		5		5		5		5		5	
Preserved where applicable				On Ice				Cooler Temp.				Thermo. Corr. Factor			
No SGW - Direct Bill to EOG															
<p>S = Soil/Sed/Solid GW = Ground Water DW = Drinking Water P = Product SW = Surface water SL = Sludge OW = Ocean/Sea Water W = Wipe O = Oil WW = Waste Water A = Air</p>															





CHAIN OF CUSTODY

Setting the Standard since 1990  
Stafford, Texas (281-240-4200)  
Dallas, Texas (214-902-0300)

Page 7 of 1  
3 3

Service Center - San Antonio, Texas (210-509-3334)

www.xenco.com

Odessa, Texas (432-563-1800)

Norcross, Georgia (770-449-8800)

Lakeland, Florida (888-646-8526)  
Tampa, Florida (813-620-2000)

Xenco Quote #

Xenco Job #

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes						
Company Name / Branch: GHD/Midland				Project Name/Number: Hunt APO State #1 / 11224665														
Company Address: 2135 S. Loop 250 West Midland TX				Project Location: Eddy County, New Mexico														
Email: Becky Haskell@ghd.com Phone No: (432)250-7917 Matthew Jauchin@ghd.com Zach Comino@ghd.com James Kennedy@georesources.com tom.larson@ghd.com				Invoice To: EOG / James Kennedy														
Project Contact: Becky Haskell / Glenn Quinney				PO Number: NA														
Sampler's Name Zach Comino																		
No.	Field ID / Point of Collection	Sample Depth	Collection Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MeOH	NONE	TPH By 8015 Mod (GRO, DRO & MRO)	BTEX 8021 B	Chloride 600	Field Comments
1	AA-2		11/2/20	1720	S	1									X	X	X	
2	AA-3		11/2/20	1730	S	1									X	X	X	
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
Turnaround Time (Business days)																		
Data Deliverable Information																		
<input checked="" type="checkbox"/> Same Day TAT <input type="checkbox"/> 5 Day TAT <input type="checkbox"/> Level II Std QC <input type="checkbox"/> Level IV (Full Data Pkg / raw data)																		
<input type="checkbox"/> Next Day EMERGENCY <input type="checkbox"/> 7 Day TAT <input type="checkbox"/> Level III Std QC + Forms <input type="checkbox"/> TRRP Level IV																		
<input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> Contract TAT <input type="checkbox"/> Level 3 (CLP Forms) <input type="checkbox"/> UST / RG 411																		
<input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> TRRP Checklist																		
TAT Starts Day received by Lab, if received by 5:00 pm																		
Report MDLs and J values.																		
Relinquished by Sampler: 1 Date Time: 11/2/20 Received By: 2 Date Time: 11/2/21																		
Relinquished by: 1 Date Time: 11/2/20 Received By: 2 Date Time: 11/2/21																		
Relinquished by: 3 Date Time: 11/2/21 Received By: 4 Date Time: 11/2/21																		
Relinquished by: 5 Date Time: 11/2/21 Received By: 6 Date Time: 11/2/21																		
Custody Seal # 4 Preserved where applicable On Ice Cooler Temp. Thermo. Corr. Factor																		

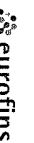


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- 12
- 13
- 14

Eurofins Xenco, Carlsbad

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

Chain of Custody Record



Environment Testing  
America

<b>Client Information (Sub Contract Lab)</b>		Sampler	Lab PM	Carrier Tracking Note(s)		COC No:
Client Contact:	Phone	Simmons Debbie	State of Origin:		Page	890-507 1
Shipping/Receiving	E-Mail	debble simmons@eurofinsnet.com		New Mexico	Page 1 of 3	
Company:	Eurofins Xenco		Accreditations Required (See note)		Job #	890-1572-1
Address		Due Date Requested	NELAP - Louisiana, NELAP - Texas		Preservation Codes	
1211 W Florida Ave	11/18/2021					
City	TAT Requested (days)	Analysis Requested				
Midland						
State Zip:						
TX, 79701						
Phone:	PO #:					
432-704-5440(Tel)						
Email	WFO #:					
Project Name	Project #:					
Hunt APO State #1	88000221					
Site	SSOW#:					
<b>Sample Identification - Client ID (Lab ID)</b>		<b>Sample Date</b>	<b>Sample Time</b>	<b>Sample Type (C=Cmp, G=grab)</b>	<b>Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air)</b>	<b>Field Filtered Sample (Yes or No)</b>
TP19-3 (890-1572-1)	11/12/21	08 10	Mountain	Solid		
TP20-2 (890-1572-2)	11/12/21	08 15	Mountain	Solid		
TP21-2 (890-1572-3)	11/12/21	08 25	Mountain	Solid		
TP22-2 (890-1572-4)	11/12/21	08 35	Mountain	Solid		
TP23-S (890-1572-5)	11/12/21	08 50	Mountain	Solid		
TP23-2 (890-1572-6)	11/12/21	09 00	Mountain	Solid		
TP24-2 (890-1572-7)	11/12/21	09 10	Mountain	Solid		
TP25-2 (890-1572-8)	11/12/21	09 20	Mountain	Solid		
TP26-2 (890-1572-9)	11/12/21	09 30	Mountain	Solid		
Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Xenco LLC.						
<b>Possible Hazard Identification</b>						
Unconfirmed						
Deliverable Requested I II III IV Other (specify)						
Primary Deliverable Rank 2						
Special Instructions/QC Requirements						
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)						
Return To Client						
Disposal By Lab						
Archive For						
Months						
Empty Kit Relinquished by						
Relinquished by	Date/Time:	Company	Received by	Date/Time:	Company	
	11/12/21			11/15/21		
Relinquished by	Date/Time:	Company	Received by	Date/Time:	Company	
Relinquished by	Date/Time:	Company	Received by	Date/Time:	Company	
Custody Seals Intact:	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.				
Δ Yes Δ No		1511P				

- 1
- 2
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- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Eurofins Xenco, Carlsbad

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

Chain of Custody Record



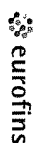
Environment Testing  
America

<b>Client Information (Sub Contract Lab)</b>		Sampler		Lab PM		Carrier Tracking No(s)		COC No																							
Client Contact:		Phone:		Simmons Debbie				890-5072																							
Shipping/Receiving				Email: debbie.simmons@eurofinsnet.com		State of Origin: New Mexico		Page 2 of 3																							
Company: Eurofins Xenco		Due Date Requested: 11/18/2021		Accreditations Required (See note): NELAP - Louisiana, NELAP - Texas				Job #: 890-1572-1																							
Address: 1211 W Florida Ave		TAT Requested (days):		<b>Analysis Requested</b>				<b>Preservation Codes</b>																							
City: Midland								A HCL B NaOH C Zn Acetate D Nitric Acid E NaHSO4 F MeOH G Anhydrous H Ascorbic Acid I Ice J DI Water K EDTA L EDA Other:																							
State Zip: TX 79701		PO #:						M Hexane N None O Ascorbic P Na2CO3 Q Na2SO3 R Na2S2O3 S H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4.5 Z other (specify)																							
Phone: 432-04-5440(Te)		WO #:																													
Email:																															
Project Name: Hunt APO State #1		Project #:																													
Site:		SSOW#:																													
<b>Sample Identification - Client ID (Lab ID)</b>				<b>Sample Date</b>		<b>Sample Time</b>		<b>Sample Type (IC=Comp, G=grab)</b>		<b>Matrix (W=Water, S=solid, O=soil, BT=trace, AA=)</b>		<b>Field Filtered Sample (Yes or No)</b>		<b>Perform MS/MSD (Yes or No)</b>		<b>8015MOD_NM/8015NM_S_Prep Full TPH - NM</b>		<b>8021B/5035FP_Calc BTEX (bulk jar/FP prep)</b>		<b>300_ORGFM_28D/DI_LEACH Chloride</b>		<b>8015MOD_Calc</b>		<b>Total_BTEX_GCV</b>		<b>Total Number of containers</b>		<b>Special Instructions/Note:</b>			
TP27-S (890-1572-10)				11/12/21		09:40		Mountain		Solid		X		X		X		X		X		X		X		X		1			
TP27-2 (890-1572-11)				11/12/21		09:45		Mountain		Solid		X		X		X		X		X		X		X		X		1			
TP28-2 (890-1572-12)				11/12/21		09:50		Mountain		Solid		X		X		X		X		X		X		X		X		1			
TP29-S (890-1572-13)				11/12/21		10:00		Mountain		Solid		X		X		X		X		X		X		X		X		1			
TP29-2 (890-1572-14)				11/12/21		10:10		Mountain		Solid		X		X		X		X		X		X		X		X		1			
TP30-S (890-1572-15)				11/12/21		10:20		Mountain		Solid		X		X		X		X		X		X		X		X		1			
TP30-2 (890-1572-16)				11/12/21		10:30		Mountain		Solid		X		X		X		X		X		X		X		X		1			
TP31-S (890-1572-17)				11/12/21		10:40		Mountain		Solid		X		X		X		X		X		X		X		X		1			
TP31-2 (890-1572-18)				11/12/21		10:50		Mountain		Solid		X		X		X		X		X		X		X		X		1			
<p>Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method, analyte &amp; accreditation compliance upon out 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 analysts/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Xenco LLC.</p>																															
<b>Possible Hazard Identification</b>																															
<b>Unconfirmed</b>																															
Deliverable Requested: I II III IV Other (specify): Primary Deliverable Rank: 2																															
Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____																															
Relinquished by: _____ Date/Time: 11/12/21 Company: _____ Received by: _____ Date/Time: _____ Company: _____																															
Relinquished by: _____ Date/Time: _____ Company: _____ Received by: _____ Date/Time: _____ Company: _____																															
Custody Seals Intact: _____ Custody Seal No: _____ Cooler Temperature(s) °C and Other Remarks: _____																															

Eurofins Xenco, Carlsbad

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

## Chain of Custody Record



## Environment Testing America

[illegible]

## Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 890-1572-1

SDG Number: 11224665

Login Number: 1572

List Number: 1

Creator: Clifton, Cloe

List Source: Eurofins Xenco, Carlsbad

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

## Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 890-1572-1

SDG Number: 11224665

Login Number: 1572

List Number: 2

Creator: Teel, Brianna

List Source: Eurofins Xenco, Midland

List Creation: 11/15/21 09:09 AM

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





## Environment Testing America

### ANALYTICAL REPORT

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

Laboratory Job ID: 890-2172-1  
Laboratory Sample Delivery Group: 11224665  
Client Project/Site: HUNT APO STATE #1

For:  
GHD Services Inc.  
2135 South Loop 250 West  
Midland, Texas 79703

Attn: Becky Haskell

A handwritten signature in cursive script, reading "Debbie Simmons".

Authorized for release by:  
4/12/2022 5:15:51 PM

Debbie Simmons, Project Manager  
(832)986-6768  
[Debbie.Simmons@et.eurofinsus.com](mailto:Debbie.Simmons@et.eurofinsus.com)

#### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

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

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



Client: GHD Services Inc.  
Project/Site: HUNT APO STATE #1

Laboratory Job ID: 890-2172-1  
SDG: 11224665

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## Definitions/Glossary

Client: GHD Services Inc.  
Project/Site: HUNT APO STATE #1

Job ID: 890-2172-1  
SDG: 11224665

## Qualifiers

## GC VOA

Qualifier	Qualifier Description
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.

## GC Semi VOA

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

## HPLC/IC

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

## Glossary

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

## Case Narrative

Client: GHD Services Inc.  
Project/Site: HUNT APO STATE #1

Job ID: 890-2172-1  
SDG: 11224665

**Job ID: 890-2172-1**

**Laboratory: Eurofins Carlsbad**

**Narrative**

**Job Narrative  
890-2172-1**

**Receipt**

The samples were received on 4/7/2022 3:00 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 22.0°C . Local delivery to lab same day as collection.

**GC VOA**

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

**GC Semi VOA**

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

**HPLC/IC**

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

## Client Sample Results

Client: GHD Services Inc.  
Project/Site: HUNT APO STATE #1

Job ID: 890-2172-1  
SDG: 11224665

Client Sample ID: TB8-2\*

Lab Sample ID: 890-2172-1

Date Collected: 04/07/22 11:45

Matrix: Solid

Date Received: 04/07/22 15:00

Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000829	J	0.00200	0.000384	mg/Kg		04/11/22 09:57	04/11/22 14:32	1
Toluene	0.00261		0.00200	0.000455	mg/Kg		04/11/22 09:57	04/11/22 14:32	1
Ethylbenzene	<0.000564	U	0.00200	0.000564	mg/Kg		04/11/22 09:57	04/11/22 14:32	1
m-Xylene & p-Xylene	<0.00101	U	0.00399	0.00101	mg/Kg		04/11/22 09:57	04/11/22 14:32	1
o-Xylene	<0.000343	U	0.00200	0.000343	mg/Kg		04/11/22 09:57	04/11/22 14:32	1
Xylenes, Total	<0.00101	U	0.00399	0.00101	mg/Kg		04/11/22 09:57	04/11/22 14:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	04/11/22 09:57	04/11/22 14:32	1
1,4-Difluorobenzene (Surr)	105		70 - 130	04/11/22 09:57	04/11/22 14:32	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.00344	J	0.00399	0.00101	mg/Kg			04/11/22 17:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<14.9	U	49.8	14.9	mg/Kg			04/11/22 20:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<14.9	U	49.8	14.9	mg/Kg		04/11/22 10:09	04/11/22 11:19	1
Diesel Range Organics (Over C10-C28)	<14.9	U	49.8	14.9	mg/Kg		04/11/22 10:09	04/11/22 11:19	1
Oil Range Organics (Over C28-C36)	<14.9	U	49.8	14.9	mg/Kg		04/11/22 10:09	04/11/22 11:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130	04/11/22 10:09	04/11/22 11:19	1
o-Terphenyl	108		70 - 130	04/11/22 10:09	04/11/22 11:19	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	48.4		5.00	0.858	mg/Kg			04/12/22 13:14	1

Client Sample ID: TP8-4\*

Lab Sample ID: 890-2172-2

Date Collected: 04/07/22 12:00

Matrix: Solid

Date Received: 04/07/22 15:00

Sample Depth: 4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000975	J	0.00199	0.000383	mg/Kg		04/11/22 09:57	04/11/22 14:53	1
Toluene	0.00466		0.00199	0.000454	mg/Kg		04/11/22 09:57	04/11/22 14:53	1
Ethylbenzene	<0.000563	U	0.00199	0.000563	mg/Kg		04/11/22 09:57	04/11/22 14:53	1
m-Xylene & p-Xylene	<0.00101	U	0.00398	0.00101	mg/Kg		04/11/22 09:57	04/11/22 14:53	1
o-Xylene	<0.000343	U	0.00199	0.000343	mg/Kg		04/11/22 09:57	04/11/22 14:53	1
Xylenes, Total	<0.00101	U	0.00398	0.00101	mg/Kg		04/11/22 09:57	04/11/22 14:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	04/11/22 09:57	04/11/22 14:53	1

Eurofins Carlsbad

## Client Sample Results

Client: GHD Services Inc.  
Project/Site: HUNT APO STATE #1

Job ID: 890-2172-1  
SDG: 11224665

Client Sample ID: TP8-4\*

Lab Sample ID: 890-2172-2

Date Collected: 04/07/22 12:00

Matrix: Solid

Date Received: 04/07/22 15:00

Sample Depth: 4

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	98		70 - 130	04/11/22 09:57	04/11/22 14:53	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.00564		0.00398	0.00101	mg/Kg			04/11/22 17:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<14.9	U	49.8	14.9	mg/Kg			04/11/22 20:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<14.9	U	49.8	14.9	mg/Kg		04/11/22 10:09	04/11/22 12:23	1
Diesel Range Organics (Over C10-C28)	<14.9	U	49.8	14.9	mg/Kg		04/11/22 10:09	04/11/22 12:23	1
Oil Range Organics (Over C28-C36)	<14.9	U	49.8	14.9	mg/Kg		04/11/22 10:09	04/11/22 12:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130				04/11/22 10:09	04/11/22 12:23	1
o-Terphenyl	122		70 - 130				04/11/22 10:09	04/11/22 12:23	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	33.9		4.99	0.857	mg/Kg			04/12/22 13:40	1

Client Sample ID: BH-1

Lab Sample ID: 890-2172-3

Date Collected: 04/07/22 13:45

Matrix: Solid

Date Received: 04/07/22 15:00

Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		04/11/22 09:57	04/11/22 15:13	1
Toluene	<0.000453	U	0.00199	0.000453	mg/Kg		04/11/22 09:57	04/11/22 15:13	1
Ethylbenzene	<0.000562	U	0.00199	0.000562	mg/Kg		04/11/22 09:57	04/11/22 15:13	1
m-Xylene & p-Xylene	<0.00100	U	0.00398	0.00100	mg/Kg		04/11/22 09:57	04/11/22 15:13	1
o-Xylene	<0.000342	U	0.00199	0.000342	mg/Kg		04/11/22 09:57	04/11/22 15:13	1
Xylenes, Total	<0.00100	U	0.00398	0.00100	mg/Kg		04/11/22 09:57	04/11/22 15:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	04/11/22 09:57	04/11/22 15:13	1
1,4-Difluorobenzene (Surr)	103		70 - 130	04/11/22 09:57	04/11/22 15:13	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00100	U	0.00398	0.00100	mg/Kg			04/11/22 17:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<15.0	U	50.0	15.0	mg/Kg			04/11/22 20:04	1

Eurofins Carlsbad

## Client Sample Results

Client: GHD Services Inc.  
Project/Site: HUNT APO STATE #1

Job ID: 890-2172-1  
SDG: 11224665

## Client Sample ID: BH-1

## Lab Sample ID: 890-2172-3

Date Collected: 04/07/22 13:45

Matrix: Solid

Date Received: 04/07/22 15:00

Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		04/11/22 10:09	04/11/22 12:44	1
Diesel Range Organics (Over C10-C28)	<15.0	U	50.0	15.0	mg/Kg		04/11/22 10:09	04/11/22 12:44	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		04/11/22 10:09	04/11/22 12:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130				04/11/22 10:09	04/11/22 12:44	1
o-Terphenyl	102		70 - 130				04/11/22 10:09	04/11/22 12:44	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	486		4.96	0.851	mg/Kg			04/12/22 13:49	1

## Client Sample ID: SW-1

## Lab Sample ID: 890-2172-4

Date Collected: 04/07/22 13:50

Matrix: Solid

Date Received: 04/07/22 15:00

Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000384	U	0.00200	0.000384	mg/Kg		04/11/22 09:57	04/11/22 15:33	1
Toluene	<0.000455	U	0.00200	0.000455	mg/Kg		04/11/22 09:57	04/11/22 15:33	1
Ethylbenzene	<0.000564	U	0.00200	0.000564	mg/Kg		04/11/22 09:57	04/11/22 15:33	1
m-Xylene & p-Xylene	<0.00101	U	0.00399	0.00101	mg/Kg		04/11/22 09:57	04/11/22 15:33	1
o-Xylene	<0.000343	U	0.00200	0.000343	mg/Kg		04/11/22 09:57	04/11/22 15:33	1
Xylenes, Total	<0.00101	U	0.00399	0.00101	mg/Kg		04/11/22 09:57	04/11/22 15:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130				04/11/22 09:57	04/11/22 15:33	1
1,4-Difluorobenzene (Surr)	96		70 - 130				04/11/22 09:57	04/11/22 15:33	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00399	0.00101	mg/Kg			04/11/22 17:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<15.0	U	50.0	15.0	mg/Kg			04/11/22 20:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		04/11/22 10:09	04/11/22 13:06	1
Diesel Range Organics (Over C10-C28)	<15.0	U	50.0	15.0	mg/Kg		04/11/22 10:09	04/11/22 13:06	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		04/11/22 10:09	04/11/22 13:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130				04/11/22 10:09	04/11/22 13:06	1
o-Terphenyl	116		70 - 130				04/11/22 10:09	04/11/22 13:06	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: HUNT APO STATE #1

Job ID: 890-2172-1  
SDG: 11224665

## Client Sample ID: SW-1

## Lab Sample ID: 890-2172-4

Date Collected: 04/07/22 13:50

Matrix: Solid

Date Received: 04/07/22 15:00

Sample Depth: 1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	433		5.02	0.862	mg/Kg			04/12/22 14:16	1

## Client Sample ID: BH-2

## Lab Sample ID: 890-2172-5

Date Collected: 04/07/22 13:55

Matrix: Solid

Date Received: 04/07/22 15:00

Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000466	J	0.00201	0.000387	mg/Kg		04/11/22 09:57	04/11/22 15:54	1
Toluene	0.00126	J	0.00201	0.000458	mg/Kg		04/11/22 09:57	04/11/22 15:54	1
Ethylbenzene	<0.000567	U	0.00201	0.000567	mg/Kg		04/11/22 09:57	04/11/22 15:54	1
m-Xylene & p-Xylene	<0.00101	U	0.00402	0.00101	mg/Kg		04/11/22 09:57	04/11/22 15:54	1
o-Xylene	<0.000345	U	0.00201	0.000345	mg/Kg		04/11/22 09:57	04/11/22 15:54	1
Xylenes, Total	<0.00101	U	0.00402	0.00101	mg/Kg		04/11/22 09:57	04/11/22 15:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		70 - 130				04/11/22 09:57	04/11/22 15:54	1
1,4-Difluorobenzene (Surr)	101		70 - 130				04/11/22 09:57	04/11/22 15:54	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.00173	J	0.00402	0.00101	mg/Kg			04/11/22 17:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<15.0	U	49.9	15.0	mg/Kg			04/11/22 20:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	49.9	15.0	mg/Kg		04/11/22 10:09	04/11/22 13:28	1
Diesel Range Organics (Over C10-C28)	<15.0	U	49.9	15.0	mg/Kg		04/11/22 10:09	04/11/22 13:28	1
Oil Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		04/11/22 10:09	04/11/22 13:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130				04/11/22 10:09	04/11/22 13:28	1
o-Terphenyl	108		70 - 130				04/11/22 10:09	04/11/22 13:28	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	198		5.04	0.865	mg/Kg			04/12/22 14:24	1

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## Surrogate Summary

Client: GHD Services Inc.  
Project/Site: HUNT APO STATE #1

Job ID: 890-2172-1  
SDG: 11224665

## 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)
890-2172-1	TB8-2*	101	105
890-2172-2	TP8-4*	108	98
890-2172-3	BH-1	104	103
890-2172-4	SW-1	94	96
890-2172-5	BH-2	83	101
LCS 880-23288/1-A	Lab Control Sample	97	104
LCSD 880-23288/2-A	Lab Control Sample Dup	97	102
MB 880-23288/5-A	Method Blank	97	100
<b>Surrogate Legend</b>			
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)
890-2172-1	TB8-2*	98	108
890-2172-1 MS	TB8-2*	103	105
890-2172-1 MSD	TB8-2*	102	107
890-2172-2	TP8-4*	103	122
890-2172-3	BH-1	89	102
890-2172-4	SW-1	99	116
890-2172-5	BH-2	95	108
LCS 880-23289/2-A	Lab Control Sample	101	99
LCSD 880-23289/3-A	Lab Control Sample Dup	112	109
MB 880-23289/1-A	Method Blank	115	127
<b>Surrogate Legend</b>			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

## QC Sample Results

Client: GHD Services Inc.  
Project/Site: HUNT APO STATE #1

Job ID: 890-2172-1  
SDG: 11224665

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

Lab Sample ID: MB 880-23288/5-A

Matrix: Solid

Analysis Batch: 23287

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23288

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		04/11/22 09:57	04/11/22 12:41	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		04/11/22 09:57	04/11/22 12:41	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		04/11/22 09:57	04/11/22 12:41	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		04/11/22 09:57	04/11/22 12:41	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		04/11/22 09:57	04/11/22 12:41	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		04/11/22 09:57	04/11/22 12:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	04/11/22 09:57	04/11/22 12:41	1
1,4-Difluorobenzene (Surr)	100		70 - 130	04/11/22 09:57	04/11/22 12:41	1

Lab Sample ID: LCS 880-23288/1-A

Matrix: Solid

Analysis Batch: 23287

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23288

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09572		mg/Kg		96	70 - 130
Toluene	0.100	0.1067		mg/Kg		107	70 - 130
Ethylbenzene	0.100	0.1089		mg/Kg		109	70 - 130
m-Xylene & p-Xylene	0.200	0.2191		mg/Kg		110	70 - 130
o-Xylene	0.100	0.1058		mg/Kg		106	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: LCSD 880-23288/2-A

Matrix: Solid

Analysis Batch: 23287

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 23288

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09510		mg/Kg		95	70 - 130	1	35
Toluene	0.100	0.1043		mg/Kg		104	70 - 130	2	35
Ethylbenzene	0.100	0.1068		mg/Kg		107	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.2145		mg/Kg		107	70 - 130	2	35
o-Xylene	0.100	0.1040		mg/Kg		104	70 - 130	2	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

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## QC Sample Results

Client: GHD Services Inc.  
Project/Site: HUNT APO STATE #1

Job ID: 890-2172-1  
SDG: 11224665

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

Lab Sample ID: MB 880-23289/1-A

Matrix: Solid

Analysis Batch: 23281

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23289

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		04/11/22 10:09	04/11/22 10:16	1
Diesel Range Organics (Over C10-C28)	<15.0	U	50.0	15.0	mg/Kg		04/11/22 10:09	04/11/22 10:16	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		04/11/22 10:09	04/11/22 10:16	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	115		70 - 130				04/11/22 10:09	04/11/22 10:16	1
o-Terphenyl	127		70 - 130				04/11/22 10:09	04/11/22 10:16	1

Lab Sample ID: LCS 880-23289/2-A

Matrix: Solid

Analysis Batch: 23281

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23289

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	919.9		mg/Kg		92	70 - 130
Diesel Range Organics (Over C10-C28)	1000	946.5		mg/Kg		95	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	101		70 - 130				
o-Terphenyl	99		70 - 130				

Lab Sample ID: LCSD 880-23289/3-A

Matrix: Solid

Analysis Batch: 23281

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 23289

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1003		mg/Kg		100	70 - 130	9	20
Diesel Range Organics (Over C10-C28)	1000	1100		mg/Kg		110	70 - 130	15	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	112		70 - 130						
o-Terphenyl	109		70 - 130						

Lab Sample ID: 890-2172-1 MS

Matrix: Solid

Analysis Batch: 23281

Client Sample ID: TB8-2\*

Prep Type: Total/NA

Prep Batch: 23289

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<14.9	U	997	986.3		mg/Kg		99	70 - 130
Diesel Range Organics (Over C10-C28)	<14.9	U	997	887.2		mg/Kg		89	70 - 130

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## QC Sample Results

Client: GHD Services Inc.  
Project/Site: HUNT APO STATE #1

Job ID: 890-2172-1  
SDG: 11224665

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

Lab Sample ID: 890-2172-1 MS

Matrix: Solid

Analysis Batch: 23281

Client Sample ID: TB8-2\*

Prep Type: Total/NA

Prep Batch: 23289

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	105		70 - 130

Lab Sample ID: 890-2172-1 MSD

Matrix: Solid

Analysis Batch: 23281

Client Sample ID: TB8-2\*

Prep Type: Total/NA

Prep Batch: 23289

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<14.9	U	998	1017		mg/Kg		102	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<14.9	U	998	906.1		mg/Kg		91	70 - 130	2	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	102		70 - 130								
o-Terphenyl	107		70 - 130								

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-23299/1-A

Matrix: Solid

Analysis Batch: 23344

Client Sample ID: Method Blank

Prep Type: Soluble

	MB	MB								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	<0.858	U	5.00	0.858	mg/Kg			04/12/22 10:43	1	

Lab Sample ID: LCS 880-23299/2-A

Matrix: Solid

Analysis Batch: 23344

Client Sample ID: Lab Control Sample

Prep Type: Soluble

	Spike	LCS	LCS					%Rec		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits			
Chloride	250	249.6		mg/Kg		100	90 - 110			

Lab Sample ID: LCSD 880-23299/3-A

Matrix: Solid

Analysis Batch: 23344

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

	Spike	LCSD	LCSD					%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	249.4		mg/Kg		100	90 - 110	0	20	

Lab Sample ID: 890-2172-1 MS

Matrix: Solid

Analysis Batch: 23344

Client Sample ID: TB8-2\*

Prep Type: Soluble

	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	48.4		250	296.4		mg/Kg		99	90 - 110		

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QC Sample Results

Client: GHD Services Inc.  
Project/Site: HUNT APO STATE #1

Job ID: 890-2172-1  
SDG: 11224665

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2172-1 MSD					Client Sample ID: TB8-2*							
Matrix: Solid					Prep Type: Soluble							
Analysis Batch: 23344												
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit	
Chloride	48.4		250	291.9		mg/Kg		97	90 - 110	2	20	



## QC Association Summary

Client: GHD Services Inc.  
Project/Site: HUNT APO STATE #1

Job ID: 890-2172-1  
SDG: 11224665

## GC VOA

## Analysis Batch: 23287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2172-1	TB8-2*	Total/NA	Solid	8021B	23288
890-2172-2	TP8-4*	Total/NA	Solid	8021B	23288
890-2172-3	BH-1	Total/NA	Solid	8021B	23288
890-2172-4	SW-1	Total/NA	Solid	8021B	23288
890-2172-5	BH-2	Total/NA	Solid	8021B	23288
MB 880-23288/5-A	Method Blank	Total/NA	Solid	8021B	23288
LCS 880-23288/1-A	Lab Control Sample	Total/NA	Solid	8021B	23288
LCSD 880-23288/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	23288

## Prep Batch: 23288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2172-1	TB8-2*	Total/NA	Solid	5035	
890-2172-2	TP8-4*	Total/NA	Solid	5035	
890-2172-3	BH-1	Total/NA	Solid	5035	
890-2172-4	SW-1	Total/NA	Solid	5035	
890-2172-5	BH-2	Total/NA	Solid	5035	
MB 880-23288/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-23288/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-23288/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

## Analysis Batch: 23335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2172-1	TB8-2*	Total/NA	Solid	Total BTEX	
890-2172-2	TP8-4*	Total/NA	Solid	Total BTEX	
890-2172-3	BH-1	Total/NA	Solid	Total BTEX	
890-2172-4	SW-1	Total/NA	Solid	Total BTEX	
890-2172-5	BH-2	Total/NA	Solid	Total BTEX	

## GC Semi VOA

## Analysis Batch: 23281

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2172-1	TB8-2*	Total/NA	Solid	8015B NM	23289
890-2172-2	TP8-4*	Total/NA	Solid	8015B NM	23289
890-2172-3	BH-1	Total/NA	Solid	8015B NM	23289
890-2172-4	SW-1	Total/NA	Solid	8015B NM	23289
890-2172-5	BH-2	Total/NA	Solid	8015B NM	23289
MB 880-23289/1-A	Method Blank	Total/NA	Solid	8015B NM	23289
LCS 880-23289/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	23289
LCSD 880-23289/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	23289
890-2172-1 MS	TB8-2*	Total/NA	Solid	8015B NM	23289
890-2172-1 MSD	TB8-2*	Total/NA	Solid	8015B NM	23289

## Prep Batch: 23289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2172-1	TB8-2*	Total/NA	Solid	8015NM Prep	
890-2172-2	TP8-4*	Total/NA	Solid	8015NM Prep	
890-2172-3	BH-1	Total/NA	Solid	8015NM Prep	
890-2172-4	SW-1	Total/NA	Solid	8015NM Prep	
890-2172-5	BH-2	Total/NA	Solid	8015NM Prep	
MB 880-23289/1-A	Method Blank	Total/NA	Solid	8015NM Prep	

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## QC Association Summary

Client: GHD Services Inc.  
Project/Site: HUNT APO STATE #1

Job ID: 890-2172-1  
SDG: 11224665

## GC Semi VOA (Continued)

## Prep Batch: 23289 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-23289/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-23289/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2172-1 MS	TB8-2*	Total/NA	Solid	8015NM Prep	
890-2172-1 MSD	TB8-2*	Total/NA	Solid	8015NM Prep	

## Analysis Batch: 23346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2172-1	TB8-2*	Total/NA	Solid	8015 NM	
890-2172-2	TP8-4*	Total/NA	Solid	8015 NM	
890-2172-3	BH-1	Total/NA	Solid	8015 NM	
890-2172-4	SW-1	Total/NA	Solid	8015 NM	
890-2172-5	BH-2	Total/NA	Solid	8015 NM	

## HPLC/IC

## Leach Batch: 23299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2172-1	TB8-2*	Soluble	Solid	DI Leach	
890-2172-2	TP8-4*	Soluble	Solid	DI Leach	
890-2172-3	BH-1	Soluble	Solid	DI Leach	
890-2172-4	SW-1	Soluble	Solid	DI Leach	
890-2172-5	BH-2	Soluble	Solid	DI Leach	
MB 880-23299/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-23299/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-23299/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2172-1 MS	TB8-2*	Soluble	Solid	DI Leach	
890-2172-1 MSD	TB8-2*	Soluble	Solid	DI Leach	

## Analysis Batch: 23344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2172-1	TB8-2*	Soluble	Solid	300.0	23299
890-2172-2	TP8-4*	Soluble	Solid	300.0	23299
890-2172-3	BH-1	Soluble	Solid	300.0	23299
890-2172-4	SW-1	Soluble	Solid	300.0	23299
890-2172-5	BH-2	Soluble	Solid	300.0	23299
MB 880-23299/1-A	Method Blank	Soluble	Solid	300.0	23299
LCS 880-23299/2-A	Lab Control Sample	Soluble	Solid	300.0	23299
LCSD 880-23299/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	23299
890-2172-1 MS	TB8-2*	Soluble	Solid	300.0	23299
890-2172-1 MSD	TB8-2*	Soluble	Solid	300.0	23299

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## Lab Chronicle

Client: GHD Services Inc.  
Project/Site: HUNT APO STATE #1

Job ID: 890-2172-1  
SDG: 11224665

Client Sample ID: TB8-2\*

Lab Sample ID: 890-2172-1

Date Collected: 04/07/22 11:45

Matrix: Solid

Date Received: 04/07/22 15:00

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	23288	04/11/22 09:57	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23287	04/11/22 14:32	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23335	04/11/22 17:12	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23346	04/11/22 20:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	23289	04/11/22 10:09	AM	XEN MID
Total/NA	Analysis	8015B NM		1			23281	04/11/22 11:19	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	23299	04/11/22 11:13	CH	XEN MID
Soluble	Analysis	300.0		1			23344	04/12/22 13:14	CH	XEN MID

Client Sample ID: TP8-4\*

Lab Sample ID: 890-2172-2

Date Collected: 04/07/22 12:00

Matrix: Solid

Date Received: 04/07/22 15:00

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	23288	04/11/22 09:57	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23287	04/11/22 14:53	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23335	04/11/22 17:12	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23346	04/11/22 20:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	23289	04/11/22 10:09	AM	XEN MID
Total/NA	Analysis	8015B NM		1			23281	04/11/22 12:23	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	23299	04/11/22 11:13	CH	XEN MID
Soluble	Analysis	300.0		1			23344	04/12/22 13:40	CH	XEN MID

Client Sample ID: BH-1

Lab Sample ID: 890-2172-3

Date Collected: 04/07/22 13:45

Matrix: Solid

Date Received: 04/07/22 15:00

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	23288	04/11/22 09:57	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23287	04/11/22 15:13	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23335	04/11/22 17:12	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23346	04/11/22 20:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	23289	04/11/22 10:09	AM	XEN MID
Total/NA	Analysis	8015B NM		1			23281	04/11/22 12:44	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	23299	04/11/22 11:13	CH	XEN MID
Soluble	Analysis	300.0		1			23344	04/12/22 13:49	CH	XEN MID

Client Sample ID: SW-1

Lab Sample ID: 890-2172-4

Date Collected: 04/07/22 13:50

Matrix: Solid

Date Received: 04/07/22 15:00

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	23288	04/11/22 09:57	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23287	04/11/22 15:33	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23335	04/11/22 17:12	AJ	XEN MID

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## Lab Chronicle

Client: GHD Services Inc.  
Project/Site: HUNT APO STATE #1

Job ID: 890-2172-1  
SDG: 11224665

## Client Sample ID: SW-1

## Lab Sample ID: 890-2172-4

Date Collected: 04/07/22 13:50

Matrix: Solid

Date Received: 04/07/22 15:00

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			23346	04/11/22 20:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	23289	04/11/22 10:09	AM	XEN MID
Total/NA	Analysis	8015B NM		1			23281	04/11/22 13:06	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	23299	04/11/22 11:13	CH	XEN MID
Soluble	Analysis	300.0		1			23344	04/12/22 14:16	CH	XEN MID

## Client Sample ID: BH-2

## Lab Sample ID: 890-2172-5

Date Collected: 04/07/22 13:55

Matrix: Solid

Date Received: 04/07/22 15:00

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	23288	04/11/22 09:57	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23287	04/11/22 15:54	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23335	04/11/22 17:12	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23346	04/11/22 20:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	23289	04/11/22 10:09	AM	XEN MID
Total/NA	Analysis	8015B NM		1			23281	04/11/22 13:28	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	23299	04/11/22 11:13	CH	XEN MID
Soluble	Analysis	300.0		1			23344	04/12/22 14:24	CH	XEN MID

## Laboratory References:

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

Accreditation/Certification Summary

Client: GHD Services Inc.  
Project/Site: HUNT APO STATE #1

Job ID: 890-2172-1  
SDG: 11224665

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	T104704400-21-22	06-30-22

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.  
Project/Site: HUNT APO STATE #1

Job ID: 890-2172-1  
SDG: 11224665

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

**Protocol References:**

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

**Laboratory References:**

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



## Sample Summary

Client: GHD Services Inc.  
Project/Site: HUNT APO STATE #1

Job ID: 890-2172-1  
SDG: 11224665

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2172-1	TB8-2*	Solid	04/07/22 11:45	04/07/22 15:00	2
890-2172-2	TP8-4*	Solid	04/07/22 12:00	04/07/22 15:00	4
890-2172-3	BH-1	Solid	04/07/22 13:45	04/07/22 15:00	1
890-2172-4	SW-1	Solid	04/07/22 13:50	04/07/22 15:00	1
890-2172-5	BH-2	Solid	04/07/22 13:55	04/07/22 15:00	2



## CHAIN OF CUSTODY

Page 1 of 1

Setting the Standard since 1990  
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 Dallas, Texas (214-902-0300)

Odessa, Texas (432-563-1800)

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Lakeland, Florida (883-646-8526)  
 Tampa, Florida (813-620-2000)

Service Center - San Antonio, Texas (210-509-3334)

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Xenco Quote #

Xenco Job #

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes															
Company Name / Branch: GHD/Midland				Project Name/Number: Hunt APO State #1 / 11224665																							
Company Address: 2135 S. Loop 280 West Midland TX				Project Location: Eddy County, New Mexico																							
Email: becky.haskell@ghd.com Matthew.laughlin@ghd.com James.Kennedy@geosources.com Project Contact: Becky Haskell / Glenn Guinney				Phone No: (432)250-7817 Zach.com@ghd.com tom.larson@ghd.com				Invoice To: EOG / James Kennedy																			
Sample's Name: Zach Conline				PO Number: NA																							
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	IC	NaOH/H <sub>2</sub> SO <sub>4</sub> Acetate	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NaOH	NaHSO <sub>4</sub>	MEOH	NONE	TPH By 8015 Mod (GRO, DRO & MRO)	BTEX 8021 B	Chloride 600	Field Comments									
1	TPB-2*		6/6/22	1145	S	1									X	X	X										
2	TPB-4*		6/6/22	1200	S	1									X	X	X										
3	BL-1			1345	S	1									X	X	X										
4	SLD-1			1350	S	1									X	X	X										
5	RL-2			1355	S	1									X	X	X										
6																											
7																											
8																											
9																											
10																											
Turnaround Time (Business days)		Data Deliverable Information																									
<input checked="" type="checkbox"/> Same Day TAT		<input type="checkbox"/> 5 Day TAT		<input type="checkbox"/> Level II Std QC		<input type="checkbox"/> Level IV (Full Data Pkg /raw data)																					
<input type="checkbox"/> Next Day EMERGENCY		<input type="checkbox"/> 7 Day TAT		<input type="checkbox"/> Level III Std QC+ Forms		<input type="checkbox"/> TRRP Level IV																					
<input type="checkbox"/> 2 Day EMERGENCY		<input type="checkbox"/> Contract TAT		<input type="checkbox"/> Level 3 (CLP Forms)		<input type="checkbox"/> UST / RG -411																					
<input type="checkbox"/> 3 Day EMERGENCY				<input type="checkbox"/> TRRP Checklist																							
TAT Starts Day received by Lab, if received by 5:00 pm				Report MDLs and J values.																							
Relinquished by Sampler: <i>Becky Haskell</i>				Date Time: 6/6/22 1:00				Received By: <i>Joe Vuy</i>				Date Time: 6/6/22 4:12				Relinquished By: <i>Joe Vuy</i>				Date Time: 6/6/22 4:15							
Relinquished by: <i>Becky Haskell</i>				Date Time: 6/6/22 1:00				Received By: <i>Joe Vuy</i>				Date Time: 6/6/22 4:12				Relinquished By: <i>Joe Vuy</i>				Date Time: 6/6/22 4:15							
Relinquished by:				Date Time:				Received By:				Date Time:				Custody Seal #				Preserved where applicable							
5				6				4				4				On Ice <input checked="" type="checkbox"/>				Cooler Temp. <i>7.00</i>				Thermo. Corr. Factor <i>22.2</i>			



890-2172 Chain of Custody

S = Soil/Sed/Solid  
 GW = Ground Water  
 DW = Drinking Water  
 P = Product  
 SW = Surface Water  
 SL = Sludge  
 OW = Ocean/Sea Water  
 W = Wipe  
 O = Oil  
 WW = Waste Water  
 A = Air

Eurofins Carlsbad

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

## Chain of Custody Record



## Environment Testing

[illegible]

## Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 890-2172-1

SDG Number: 11224665

Login Number: 2172

List Number: 1

Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

## Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 890-2172-1

SDG Number: 11224665

Login Number: 2172

List Number: 2

Creator: Teel, Brianna

List Source: Eurofins Midland

List Creation: 04/11/22 08:15 AM

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





## Environment Testing America

### ANALYTICAL REPORT

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

Laboratory Job ID: 890-2174-1

Laboratory Sample Delivery Group: 11224665

Client Project/Site: Hunt APO State #1

For:

GHD Services Inc.  
2135 South Loop 250 West  
Midland, Texas 79703

Attn: Becky Haskell

A handwritten signature in black ink that reads "Debbie Simmons".

Authorized for release by:  
4/12/2022 5:18:54 PM

Debbie Simmons, Project Manager  
(832)986-6768  
[Debbie.Simmons@et.eurofinsus.com](mailto:Debbie.Simmons@et.eurofinsus.com)

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

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



Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Laboratory Job ID: 890-2174-1  
SDG: 11224665

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## Definitions/Glossary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2174-1  
SDG: 11224665

## Qualifiers

## GC VOA

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

## GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD 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.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

## HPLC/IC

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

## Glossary

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

## Case Narrative

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2174-1  
SDG: 11224665

**Job ID: 890-2174-1**

**Laboratory: Eurofins Carlsbad**

### Narrative

#### Job Narrative 890-2174-1

#### Receipt

The samples were received on 4/8/2022 12:00 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 20.8°C Local delivery to lab same day as collection

#### GC VOA

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-23288 and analytical batch 880-23287 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.

#### GC Semi VOA

Method 8015MOD\_NM: The method blank for preparation batch 880-23292 and analytical batch 880-23283 contained Diesel Range Organics (Over C10-C28) above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD\_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-23292 and analytical batch 880-23283 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.

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: (890-2174-A-1-E MS). Evidence of matrix interferences is not obvious.

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

#### HPLC/IC

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

## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2174-1  
SDG: 11224665

Client Sample ID: BH-3

Lab Sample ID: 890-2174-1

Date Collected: 04/08/22 07:30

Matrix: Solid

Date Received: 04/08/22 12:00

Sample Depth: 3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000386	U F1	0.00200	0.000386	mg/Kg		04/11/22 09:57	04/11/22 13:10	1
Toluene	<0.000457	U F1	0.00200	0.000457	mg/Kg		04/11/22 09:57	04/11/22 13:10	1
Ethylbenzene	<0.000566	U	0.00200	0.000566	mg/Kg		04/11/22 09:57	04/11/22 13:10	1
m-Xylene & p-Xylene	<0.00101	U	0.00401	0.00101	mg/Kg		04/11/22 09:57	04/11/22 13:10	1
o-Xylene	<0.000345	U	0.00200	0.000345	mg/Kg		04/11/22 09:57	04/11/22 13:10	1
Xylenes, Total	<0.00101	U	0.00401	0.00101	mg/Kg		04/11/22 09:57	04/11/22 13:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	04/11/22 09:57	04/11/22 13:10	1
1,4-Difluorobenzene (Surr)	106		70 - 130	04/11/22 09:57	04/11/22 13:10	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00401	0.00101	mg/Kg			04/11/22 17:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<15.0	U	49.9	15.0	mg/Kg			04/12/22 12:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U F1 F2	49.9	15.0	mg/Kg		04/11/22 10:15	04/11/22 11:19	1
Diesel Range Organics (Over C10-C28)	<15.0	U F2	49.9	15.0	mg/Kg		04/11/22 10:15	04/11/22 11:19	1
Oil Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		04/11/22 10:15	04/11/22 11:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	81		70 - 130	04/11/22 10:15	04/11/22 11:19	1
o-Terphenyl	83		70 - 130	04/11/22 10:15	04/11/22 11:19	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	514		4.97	0.853	mg/Kg			04/12/22 14:33	1

Client Sample ID: BH-4

Lab Sample ID: 890-2174-2

Date Collected: 04/08/22 07:45

Matrix: Solid

Date Received: 04/08/22 12:00

Sample Depth: 4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000384	U	0.00200	0.000384	mg/Kg		04/11/22 09:57	04/11/22 13:31	1
Toluene	<0.000455	U	0.00200	0.000455	mg/Kg		04/11/22 09:57	04/11/22 13:31	1
Ethylbenzene	<0.000564	U	0.00200	0.000564	mg/Kg		04/11/22 09:57	04/11/22 13:31	1
m-Xylene & p-Xylene	<0.00101	U	0.00399	0.00101	mg/Kg		04/11/22 09:57	04/11/22 13:31	1
o-Xylene	<0.000343	U	0.00200	0.000343	mg/Kg		04/11/22 09:57	04/11/22 13:31	1
Xylenes, Total	<0.00101	U	0.00399	0.00101	mg/Kg		04/11/22 09:57	04/11/22 13:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130	04/11/22 09:57	04/11/22 13:31	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2174-1  
SDG: 11224665

Client Sample ID: BH-4

Lab Sample ID: 890-2174-2

Date Collected: 04/08/22 07:45

Matrix: Solid

Date Received: 04/08/22 12:00

Sample Depth: 4

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	103		70 - 130	04/11/22 09:57	04/11/22 13:31	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00399	0.00101	mg/Kg			04/11/22 17:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	21.1	J	49.9	15.0	mg/Kg			04/12/22 12:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	49.9	15.0	mg/Kg		04/11/22 10:15	04/11/22 12:23	1
Diesel Range Organics (Over C10-C28)	21.1	J B	49.9	15.0	mg/Kg		04/11/22 10:15	04/11/22 12:23	1
Oil Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		04/11/22 10:15	04/11/22 12:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130				04/11/22 10:15	04/11/22 12:23	1
o-Terphenyl	97		70 - 130				04/11/22 10:15	04/11/22 12:23	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	661		4.97	0.853	mg/Kg			04/12/22 14:42	1

Client Sample ID: SW-2

Lab Sample ID: 890-2174-3

Date Collected: 04/08/22 09:00

Matrix: Solid

Date Received: 04/08/22 12:00

Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		04/11/22 09:57	04/11/22 13:51	1
Toluene	<0.000454	U	0.00199	0.000454	mg/Kg		04/11/22 09:57	04/11/22 13:51	1
Ethylbenzene	<0.000563	U	0.00199	0.000563	mg/Kg		04/11/22 09:57	04/11/22 13:51	1
m-Xylene & p-Xylene	<0.00101	U	0.00398	0.00101	mg/Kg		04/11/22 09:57	04/11/22 13:51	1
o-Xylene	<0.000343	U	0.00199	0.000343	mg/Kg		04/11/22 09:57	04/11/22 13:51	1
Xylenes, Total	<0.00101	U	0.00398	0.00101	mg/Kg		04/11/22 09:57	04/11/22 13:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	04/11/22 09:57	04/11/22 13:51	1
1,4-Difluorobenzene (Surr)	104		70 - 130	04/11/22 09:57	04/11/22 13:51	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00398	0.00101	mg/Kg			04/11/22 17:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	19.6	J	49.8	14.9	mg/Kg			04/12/22 12:12	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2174-1  
SDG: 11224665

## Client Sample ID: SW-2

## Lab Sample ID: 890-2174-3

Date Collected: 04/08/22 09:00

Matrix: Solid

Date Received: 04/08/22 12:00

Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<14.9	U	49.8	14.9	mg/Kg		04/11/22 10:15	04/11/22 12:44	1
<b>Diesel Range Organics (Over C10-C28)</b>	<b>19.6</b>	<b>J B</b>	49.8	14.9	mg/Kg		04/11/22 10:15	04/11/22 12:44	1
Oil Range Organics (Over C28-C36)	<14.9	U	49.8	14.9	mg/Kg		04/11/22 10:15	04/11/22 12:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130				04/11/22 10:15	04/11/22 12:44	1
o-Terphenyl	92		70 - 130				04/11/22 10:15	04/11/22 12:44	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>129</b>		4.95	0.850	mg/Kg			04/12/22 14:51	1

## Client Sample ID: SW-3

## Lab Sample ID: 890-2174-4

Date Collected: 04/08/22 11:00

Matrix: Solid

Date Received: 04/08/22 12:00

Sample Depth: 3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		04/11/22 09:57	04/11/22 14:12	1
Toluene	<0.000453	U	0.00199	0.000453	mg/Kg		04/11/22 09:57	04/11/22 14:12	1
Ethylbenzene	<0.000562	U	0.00199	0.000562	mg/Kg		04/11/22 09:57	04/11/22 14:12	1
m-Xylene & p-Xylene	<0.00100	U	0.00398	0.00100	mg/Kg		04/11/22 09:57	04/11/22 14:12	1
o-Xylene	<0.000342	U	0.00199	0.000342	mg/Kg		04/11/22 09:57	04/11/22 14:12	1
Xylenes, Total	<0.00100	U	0.00398	0.00100	mg/Kg		04/11/22 09:57	04/11/22 14:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130				04/11/22 09:57	04/11/22 14:12	1
1,4-Difluorobenzene (Surr)	105		70 - 130				04/11/22 09:57	04/11/22 14:12	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00100	U	0.00398	0.00100	mg/Kg			04/11/22 17:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total TPH</b>	<b>24.2</b>	<b>J</b>	50.0	15.0	mg/Kg			04/12/22 12:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		04/11/22 10:15	04/11/22 13:06	1
<b>Diesel Range Organics (Over C10-C28)</b>	<b>24.2</b>	<b>J B</b>	50.0	15.0	mg/Kg		04/11/22 10:15	04/11/22 13:06	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		04/11/22 10:15	04/11/22 13:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	78		70 - 130				04/11/22 10:15	04/11/22 13:06	1
o-Terphenyl	82		70 - 130				04/11/22 10:15	04/11/22 13:06	1

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Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2174-1  
SDG: 11224665

Client Sample ID: SW-3  
Date Collected: 04/08/22 11:00  
Date Received: 04/08/22 12:00  
Sample Depth: 3

Lab Sample ID: 890-2174-4  
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	31.0		4.99	0.857	mg/Kg			04/12/22 15:00	1

## Surrogate Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2174-1  
SDG: 11224665

## 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)
890-2174-1	BH-3	104	106
890-2174-1 MS	BH-3	103	107
890-2174-1 MSD	BH-3	109	98
890-2174-2	BH-4	105	103
890-2174-3	SW-2	99	104
890-2174-4	SW-3	100	105
LCS 880-23288/1-A	Lab Control Sample	97	104
LCSD 880-23288/2-A	Lab Control Sample Dup	97	102
MB 880-23288/5-A	Method Blank	97	100
<b>Surrogate Legend</b>			
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)
890-2174-1	BH-3	81	83
890-2174-1 MS	BH-3	77	68 S1-
890-2174-1 MSD	BH-3	92	83
890-2174-2	BH-4	91	97
890-2174-3	SW-2	87	92
890-2174-4	SW-3	78	82
LCS 880-23292/2-A	Lab Control Sample	90	81
LCSD 880-23292/3-A	Lab Control Sample Dup	92	84
MB 880-23292/1-A	Method Blank	94	98
<b>Surrogate Legend</b>			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

## QC Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2174-1  
SDG: 11224665

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

Lab Sample ID: MB 880-23288/5-A

Matrix: Solid

Analysis Batch: 23287

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23288

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		04/11/22 09:57	04/11/22 12:41	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		04/11/22 09:57	04/11/22 12:41	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		04/11/22 09:57	04/11/22 12:41	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		04/11/22 09:57	04/11/22 12:41	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		04/11/22 09:57	04/11/22 12:41	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		04/11/22 09:57	04/11/22 12:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	04/11/22 09:57	04/11/22 12:41	1
1,4-Difluorobenzene (Surr)	100		70 - 130	04/11/22 09:57	04/11/22 12:41	1

Lab Sample ID: LCS 880-23288/1-A

Matrix: Solid

Analysis Batch: 23287

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23288

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09572		mg/Kg		96	70 - 130
Toluene	0.100	0.1067		mg/Kg		107	70 - 130
Ethylbenzene	0.100	0.1089		mg/Kg		109	70 - 130
m-Xylene & p-Xylene	0.200	0.2191		mg/Kg		110	70 - 130
o-Xylene	0.100	0.1058		mg/Kg		106	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: LCSD 880-23288/2-A

Matrix: Solid

Analysis Batch: 23287

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 23288

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	0.100	0.09510		mg/Kg		95	70 - 130	1	35
Toluene	0.100	0.1043		mg/Kg		104	70 - 130	2	35
Ethylbenzene	0.100	0.1068		mg/Kg		107	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.2145		mg/Kg		107	70 - 130	2	35
o-Xylene	0.100	0.1040		mg/Kg		104	70 - 130	2	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: 890-2174-1 MS

Matrix: Solid

Analysis Batch: 23287

Client Sample ID: BH-3

Prep Type: Total/NA

Prep Batch: 23288

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.000386	U F1	0.100	0.1337	F1	mg/Kg		133	70 - 130
Toluene	<0.000457	U F1	0.100	0.1321	F1	mg/Kg		132	70 - 130

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## QC Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2174-1  
SDG: 11224665

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

Lab Sample ID: 890-2174-1 MS

Matrix: Solid

Analysis Batch: 23287

Client Sample ID: BH-3

Prep Type: Total/NA

Prep Batch: 23288

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.000566	U	0.100	0.1193		mg/Kg		119	70 - 130
m-Xylene & p-Xylene	<0.00101	U	0.200	0.2466		mg/Kg		123	70 - 130
o-Xylene	<0.000345	U	0.100	0.1142		mg/Kg		114	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

Lab Sample ID: 890-2174-1 MSD

Matrix: Solid

Analysis Batch: 23287

Client Sample ID: BH-3

Prep Type: Total/NA

Prep Batch: 23288

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.000386	U F1	0.0996	0.1121		mg/Kg		113	70 - 130	18	35
Toluene	<0.000457	U F1	0.0996	0.1283		mg/Kg		129	70 - 130	3	35
Ethylbenzene	<0.000566	U	0.0996	0.1224		mg/Kg		123	70 - 130	3	35
m-Xylene & p-Xylene	<0.00101	U	0.199	0.2594		mg/Kg		130	70 - 130	5	35
o-Xylene	<0.000345	U	0.0996	0.1213		mg/Kg		122	70 - 130	6	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

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

Lab Sample ID: MB 880-23292/1-A

Matrix: Solid

Analysis Batch: 23283

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23292

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		04/11/22 10:15	04/11/22 10:16	1
Diesel Range Organics (Over C10-C28)	20.80	J	50.0	15.0	mg/Kg		04/11/22 10:15	04/11/22 10:16	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		04/11/22 10:15	04/11/22 10:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130	04/11/22 10:15	04/11/22 10:16	1
o-Terphenyl	98		70 - 130	04/11/22 10:15	04/11/22 10:16	1

Lab Sample ID: LCS 880-23292/2-A

Matrix: Solid

Analysis Batch: 23283

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23292

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	770.7		mg/Kg		77	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1019		mg/Kg		102	70 - 130

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## QC Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2174-1  
SDG: 11224665

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

Lab Sample ID: LCS 880-23292/2-A

Matrix: Solid

Analysis Batch: 23283

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23292

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	81		70 - 130

Lab Sample ID: LCSD 880-23292/3-A

Matrix: Solid

Analysis Batch: 23283

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 23292

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	874.1		mg/Kg		87	70 - 130	13	20
Diesel Range Organics (Over C10-C28)	1000	1043		mg/Kg		104	70 - 130	2	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	92		70 - 130
o-Terphenyl	84		70 - 130

Lab Sample ID: 890-2174-1 MS

Matrix: Solid

Analysis Batch: 23283

Client Sample ID: BH-3

Prep Type: Total/NA

Prep Batch: 23292

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<15.0	U F1 F2	999	683.1	F1	mg/Kg		68	70 - 130
Diesel Range Organics (Over C10-C28)	<15.0	U F2	999	709.8		mg/Kg		71	70 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	77		70 - 130
o-Terphenyl	68	S1-	70 - 130

Lab Sample ID: 890-2174-1 MSD

Matrix: Solid

Analysis Batch: 23283

Client Sample ID: BH-3

Prep Type: Total/NA

Prep Batch: 23292

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	<15.0	U F1 F2	998	865.0	F2	mg/Kg		87	70 - 130	23	20
Diesel Range Organics (Over C10-C28)	<15.0	U F2	998	899.2	F2	mg/Kg		90	70 - 130	24	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	92		70 - 130
o-Terphenyl	83		70 - 130

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## QC Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2174-1  
SDG: 11224665

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-23299/1-A

Matrix: Solid

Analysis Batch: 23344

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.858	U	5.00	0.858	mg/Kg			04/12/22 10:43	1

Lab Sample ID: LCS 880-23299/2-A

Matrix: Solid

Analysis Batch: 23344

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	249.6		mg/Kg		100	90 - 110

Lab Sample ID: LCSD 880-23299/3-A

Matrix: Solid

Analysis Batch: 23344

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	249.4		mg/Kg		100	90 - 110	0	20



## QC Association Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2174-1  
SDG: 11224665

## GC VOA

## Analysis Batch: 23287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2174-1	BH-3	Total/NA	Solid	8021B	23288
890-2174-2	BH-4	Total/NA	Solid	8021B	23288
890-2174-3	SW-2	Total/NA	Solid	8021B	23288
890-2174-4	SW-3	Total/NA	Solid	8021B	23288
MB 880-23288/5-A	Method Blank	Total/NA	Solid	8021B	23288
LCS 880-23288/1-A	Lab Control Sample	Total/NA	Solid	8021B	23288
LCSD 880-23288/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	23288
890-2174-1 MS	BH-3	Total/NA	Solid	8021B	23288
890-2174-1 MSD	BH-3	Total/NA	Solid	8021B	23288

## Prep Batch: 23288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2174-1	BH-3	Total/NA	Solid	5035	
890-2174-2	BH-4	Total/NA	Solid	5035	
890-2174-3	SW-2	Total/NA	Solid	5035	
890-2174-4	SW-3	Total/NA	Solid	5035	
MB 880-23288/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-23288/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-23288/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2174-1 MS	BH-3	Total/NA	Solid	5035	
890-2174-1 MSD	BH-3	Total/NA	Solid	5035	

## Analysis Batch: 23334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2174-1	BH-3	Total/NA	Solid	Total BTEX	
890-2174-2	BH-4	Total/NA	Solid	Total BTEX	
890-2174-3	SW-2	Total/NA	Solid	Total BTEX	
890-2174-4	SW-3	Total/NA	Solid	Total BTEX	

## GC Semi VOA

## Analysis Batch: 23283

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2174-1	BH-3	Total/NA	Solid	8015B NM	23292
890-2174-2	BH-4	Total/NA	Solid	8015B NM	23292
890-2174-3	SW-2	Total/NA	Solid	8015B NM	23292
890-2174-4	SW-3	Total/NA	Solid	8015B NM	23292
MB 880-23292/1-A	Method Blank	Total/NA	Solid	8015B NM	23292
LCS 880-23292/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	23292
LCSD 880-23292/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	23292
890-2174-1 MS	BH-3	Total/NA	Solid	8015B NM	23292
890-2174-1 MSD	BH-3	Total/NA	Solid	8015B NM	23292

## Prep Batch: 23292

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2174-1	BH-3	Total/NA	Solid	8015NM Prep	
890-2174-2	BH-4	Total/NA	Solid	8015NM Prep	
890-2174-3	SW-2	Total/NA	Solid	8015NM Prep	
890-2174-4	SW-3	Total/NA	Solid	8015NM Prep	
MB 880-23292/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-23292/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

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## QC Association Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2174-1  
SDG: 11224665

## GC Semi VOA (Continued)

## Prep Batch: 23292 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-23292/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2174-1 MS	BH-3	Total/NA	Solid	8015NM Prep	
890-2174-1 MSD	BH-3	Total/NA	Solid	8015NM Prep	

## Analysis Batch: 23379

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2174-1	BH-3	Total/NA	Solid	8015 NM	
890-2174-2	BH-4	Total/NA	Solid	8015 NM	
890-2174-3	SW-2	Total/NA	Solid	8015 NM	
890-2174-4	SW-3	Total/NA	Solid	8015 NM	

## HPLC/IC

## Leach Batch: 23299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2174-1	BH-3	Soluble	Solid	DI Leach	
890-2174-2	BH-4	Soluble	Solid	DI Leach	
890-2174-3	SW-2	Soluble	Solid	DI Leach	
890-2174-4	SW-3	Soluble	Solid	DI Leach	
MB 880-23299/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-23299/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-23299/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

## Analysis Batch: 23344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2174-1	BH-3	Soluble	Solid	300.0	23299
890-2174-2	BH-4	Soluble	Solid	300.0	23299
890-2174-3	SW-2	Soluble	Solid	300.0	23299
890-2174-4	SW-3	Soluble	Solid	300.0	23299
MB 880-23299/1-A	Method Blank	Soluble	Solid	300.0	23299
LCS 880-23299/2-A	Lab Control Sample	Soluble	Solid	300.0	23299
LCSD 880-23299/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	23299

## Lab Chronicle

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2174-1  
SDG: 11224665

## Client Sample ID: BH-3

## Lab Sample ID: 890-2174-1

Date Collected: 04/08/22 07:30

Matrix: Solid

Date Received: 04/08/22 12:00

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	23288	04/11/22 09:57	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23287	04/11/22 13:10	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23334	04/11/22 17:12	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23379	04/12/22 12:12	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	23292	04/11/22 10:15	AM	XEN MID
Total/NA	Analysis	8015B NM		1			23283	04/11/22 11:19	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	23299	04/11/22 11:13	CH	XEN MID
Soluble	Analysis	300.0		1			23344	04/12/22 14:33	CH	XEN MID

## Client Sample ID: BH-4

## Lab Sample ID: 890-2174-2

Date Collected: 04/08/22 07:45

Matrix: Solid

Date Received: 04/08/22 12:00

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	23288	04/11/22 09:57	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23287	04/11/22 13:31	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23334	04/11/22 17:12	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23379	04/12/22 12:12	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	23292	04/11/22 10:15	AM	XEN MID
Total/NA	Analysis	8015B NM		1			23283	04/11/22 12:23	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	23299	04/11/22 11:13	CH	XEN MID
Soluble	Analysis	300.0		1			23344	04/12/22 14:42	CH	XEN MID

## Client Sample ID: SW-2

## Lab Sample ID: 890-2174-3

Date Collected: 04/08/22 09:00

Matrix: Solid

Date Received: 04/08/22 12:00

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	23288	04/11/22 09:57	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23287	04/11/22 13:51	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23334	04/11/22 17:12	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23379	04/12/22 12:12	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	23292	04/11/22 10:15	AM	XEN MID
Total/NA	Analysis	8015B NM		1			23283	04/11/22 12:44	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	23299	04/11/22 11:13	CH	XEN MID
Soluble	Analysis	300.0		1			23344	04/12/22 14:51	CH	XEN MID

## Client Sample ID: SW-3

## Lab Sample ID: 890-2174-4

Date Collected: 04/08/22 11:00

Matrix: Solid

Date Received: 04/08/22 12:00

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	23288	04/11/22 09:57	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23287	04/11/22 14:12	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23334	04/11/22 17:12	AJ	XEN MID

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Lab Chronicle

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2174-1  
SDG: 11224665

Client Sample ID: SW-3  
Date Collected: 04/08/22 11:00  
Date Received: 04/08/22 12:00

Lab Sample ID: 890-2174-4  
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			23379	04/12/22 12:12	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	23292	04/11/22 10:15	AM	XEN MID
Total/NA	Analysis	8015B NM		1			23283	04/11/22 13:06	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	23299	04/11/22 11:13	CH	XEN MID
Soluble	Analysis	300.0		1			23344	04/12/22 15:00	CH	XEN MID

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

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Accreditation/Certification Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2174-1  
SDG: 11224665

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	T104704400-21-22	06-30-22

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.  
Project/Site: Hunt APO State #1

Job ID: 890-2174-1  
SDG: 11224665

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

**Protocol References:**

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

**Laboratory References:**

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



Sample Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2174-1  
SDG: 11224665

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2174-1	BH-3	Solid	04/08/22 07:30	04/08/22 12:00	3
890-2174-2	BH-4	Solid	04/08/22 07:45	04/08/22 12:00	4
890-2174-3	SW-2	Solid	04/08/22 09:00	04/08/22 12:00	2
890-2174-4	SW-3	Solid	04/08/22 11:00	04/08/22 12:00	3

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## CHAIN OF CUSTODY

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 Tampa, Florida (813-620-2000)

Xenco Quote #

Xenco Job #

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes						
Company Name / Branch: GHDMidland				Project Name/Number: Hunt APO State #1 / 11224655														
Company Address: 2135 S. Loop 260 West Midland TX				Project Location: Eddy County, New Mexico														
Email: becky.haskell@ghd.com Matthew.laughlin@ghd.com James.Kennedy@geosources.com Project Contact: Becky Haskell / Glenn Quinney				Phone No: (432)250-7917 Zach.comino@ghd.com tom.larson@ghd.com				Invoice To: EOG / James Kennedy										
Sample's Name Zach Comino				PO Number: NA														
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HC1	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH By 8015 Mod (GRO, DRO & MRO)	BTEX 8021 B	Chloride 600	Field Comments
1	BH-3		CHC82	0730	S	1									X	X	X	
2	BH-4			0545											X	X	X	
3	SW-2			0906											X	X	X	
4	SW-3			1100											X	X	X	
5																		
6																		
7																		
8																		
9																		
10																		
Turnaround Time (Business days)				Data Deliverable Information														
<input checked="" type="checkbox"/> Same Day TAT				<input type="checkbox"/> 5 Day TAT				<input type="checkbox"/> Level II Std QC				<input type="checkbox"/> Level IV (Full Data Pkg /raw data)						
<input type="checkbox"/> Next Day EMERGENCY				<input type="checkbox"/> 7 Day TAT				<input type="checkbox"/> Level III Std QC+ Forms				<input type="checkbox"/> TRRP Level IV						
<input type="checkbox"/> 2 Day EMERGENCY				<input type="checkbox"/> Contract TAT				<input type="checkbox"/> Level 3 (CLP Forms)				<input type="checkbox"/> UST / RG -411						
<input type="checkbox"/> 3 Day EMERGENCY				<input type="checkbox"/> TRRP Checklist														
TAT Starts Day received by Lab, if received by 5:00 pm				Report MDLs and J values.														
Relinquished by Sampler: <i>[Signature]</i>				Date Time: 06/02/2022				Received By: <i>[Signature]</i>				Date Time: 06/02/2022						
Relinquished by: <i>[Signature]</i>				Date Time: 06/02/2022				Received By: <i>[Signature]</i>				Date Time: 06/02/2022						
Relinquished by:				Date Time:				Received By:				Date Time:						
5				5				4				4						
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless previously negotiated under a fully executed client contract.																		

890-2174 Chain of Custody



Field Comments

S = Soil/Sed/Solid  
 GW = Ground Water  
 DW = Drinking Water  
 P = Product  
 SW = Surface water  
 SL = Sludge  
 OW = Ocean/Sea Water  
 W = Wipe  
 O = Oil  
 WW = Waste Water  
 A = Air



## Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 890-2174-1

SDG Number: 11224665

Login Number: 2174

List Number: 1

Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

## Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 890-2174-1

SDG Number: 11224665

Login Number: 2174

List Number: 2

Creator: Teel, Brianna

List Source: Eurofins Midland

List Creation: 04/11/22 08:15 AM

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





## Environment Testing America

### ANALYTICAL REPORT

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

Laboratory Job ID: 890-2182-1

Laboratory Sample Delivery Group: 11224665

Client Project/Site: Hunt APO State #1

For:

GHD Services Inc.  
2135 South Loop 250 West  
Midland, Texas 79703

Attn: Becky Haskell

A handwritten signature in black ink that reads "Debbie Simmons".

Authorized for release by:  
4/13/2022 11:41:05 AM

Debbie Simmons, Project Manager  
(832)986-6768  
[Debbie.Simmons@et.eurofinsus.com](mailto:Debbie.Simmons@et.eurofinsus.com)

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

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



Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Laboratory Job ID: 890-2182-1  
SDG: 11224665

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## Definitions/Glossary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2182-1  
SDG: 11224665

## Qualifiers

## GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

## GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
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.

## 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.  
Project/Site: Hunt APO State #1

Job ID: 890-2182-1  
SDG: 11224665

**Job ID: 890-2182-1**

**Laboratory: Eurofins Carlsbad**

### Narrative

#### Job Narrative 890-2182-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 4/11/2022 2:41 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 25.8° C.

#### GC VOA

Method 8021B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-23326 and analytical batch 880-23363 recovered outside control limits for several analytes. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

#### GC Semi VOA

Method 8015B NM: The method blank for preparation batch 880-23410 and analytical batch 880-23357 contained <AffectedAnalytes> above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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

#### General Chemistry

Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-23421 and analytical batch 880-23424 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.

#### 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.  
Project/Site: Hunt APO State #1

Job ID: 890-2182-1  
SDG: 11224665

Client Sample ID: BH-5

Lab Sample ID: 890-2182-1

Date Collected: 04/11/22 12:30

Matrix: Solid

Date Received: 04/11/22 14:41

Sample Depth: 5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U *	0.00199	0.000383	mg/Kg		04/11/22 16:58	04/12/22 19:45	1
Toluene	<0.000454	U *	0.00199	0.000454	mg/Kg		04/11/22 16:58	04/12/22 19:45	1
Ethylbenzene	<0.000563	U	0.00199	0.000563	mg/Kg		04/11/22 16:58	04/12/22 19:45	1
m-Xylene & p-Xylene	<0.00101	U	0.00398	0.00101	mg/Kg		04/11/22 16:58	04/12/22 19:45	1
o-Xylene	<0.000343	U	0.00199	0.000343	mg/Kg		04/11/22 16:58	04/12/22 19:45	1
Xylenes, Total	<0.00101	U	0.00398	0.00101	mg/Kg		04/11/22 16:58	04/12/22 19:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	04/11/22 16:58	04/12/22 19:45	1
1,4-Difluorobenzene (Surr)	94		70 - 130	04/11/22 16:58	04/12/22 19:45	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00398	0.00101	mg/Kg			04/13/22 10:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	19.8	J	49.9	15.0	mg/Kg			04/13/22 09:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	49.9	15.0	mg/Kg		04/12/22 16:53	04/12/22 23:03	1
Diesel Range Organics (Over C10-C28)	19.8	J B	49.9	15.0	mg/Kg		04/12/22 16:53	04/12/22 23:03	1
Oil Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		04/12/22 16:53	04/12/22 23:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130	04/12/22 16:53	04/12/22 23:03	1
o-Terphenyl	99		70 - 130	04/12/22 16:53	04/12/22 23:03	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	345	F1	5.00	0.858	mg/Kg			04/13/22 02:35	1

Client Sample ID: BH-6

Lab Sample ID: 890-2182-2

Date Collected: 04/11/22 12:35

Matrix: Solid

Date Received: 04/11/22 14:41

Sample Depth: 6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U *	0.00199	0.000383	mg/Kg		04/11/22 16:58	04/12/22 20:11	1
Toluene	<0.000453	U *	0.00199	0.000453	mg/Kg		04/11/22 16:58	04/12/22 20:11	1
Ethylbenzene	<0.000562	U	0.00199	0.000562	mg/Kg		04/11/22 16:58	04/12/22 20:11	1
m-Xylene & p-Xylene	<0.00100	U	0.00398	0.00100	mg/Kg		04/11/22 16:58	04/12/22 20:11	1
o-Xylene	<0.000342	U	0.00199	0.000342	mg/Kg		04/11/22 16:58	04/12/22 20:11	1
Xylenes, Total	<0.00100	U	0.00398	0.00100	mg/Kg		04/11/22 16:58	04/12/22 20:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130	04/11/22 16:58	04/12/22 20:11	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2182-1  
SDG: 11224665

Client Sample ID: BH-6

Lab Sample ID: 890-2182-2

Date Collected: 04/11/22 12:35

Matrix: Solid

Date Received: 04/11/22 14:41

Sample Depth: 6

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	90		70 - 130	04/11/22 16:58	04/12/22 20:11	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00100	U	0.00398	0.00100	mg/Kg			04/13/22 10:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	25.6	J	49.9	15.0	mg/Kg			04/13/22 09:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	49.9	15.0	mg/Kg		04/12/22 16:53	04/12/22 23:23	1
Diesel Range Organics (Over C10-C28)	25.6	J B	49.9	15.0	mg/Kg		04/12/22 16:53	04/12/22 23:23	1
Oil Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		04/12/22 16:53	04/12/22 23:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130				04/12/22 16:53	04/12/22 23:23	1
o-Terphenyl	99		70 - 130				04/12/22 16:53	04/12/22 23:23	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	498		4.99	0.857	mg/Kg			04/13/22 03:03	1

Client Sample ID: BH-7

Lab Sample ID: 890-2182-3

Date Collected: 04/11/22 13:00

Matrix: Solid

Date Received: 04/11/22 14:41

Sample Depth: 7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000384	U *	0.00200	0.000384	mg/Kg		04/11/22 16:58	04/12/22 20:38	1
Toluene	<0.000455	U *	0.00200	0.000455	mg/Kg		04/11/22 16:58	04/12/22 20:38	1
Ethylbenzene	<0.000564	U	0.00200	0.000564	mg/Kg		04/11/22 16:58	04/12/22 20:38	1
m-Xylene & p-Xylene	<0.00101	U	0.00399	0.00101	mg/Kg		04/11/22 16:58	04/12/22 20:38	1
o-Xylene	<0.000343	U	0.00200	0.000343	mg/Kg		04/11/22 16:58	04/12/22 20:38	1
Xylenes, Total	<0.00101	U	0.00399	0.00101	mg/Kg		04/11/22 16:58	04/12/22 20:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130	04/11/22 16:58	04/12/22 20:38	1
1,4-Difluorobenzene (Surr)	90		70 - 130	04/11/22 16:58	04/12/22 20:38	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00399	0.00101	mg/Kg			04/13/22 10:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	21.7	J	50.0	15.0	mg/Kg			04/13/22 09:50	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2182-1  
SDG: 11224665

Client Sample ID: BH-7

Lab Sample ID: 890-2182-3

Date Collected: 04/11/22 13:00

Matrix: Solid

Date Received: 04/11/22 14:41

Sample Depth: 7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg	-	04/12/22 16:53	04/12/22 23:44	1
<b>Diesel Range Organics (Over C10-C28)</b>	<b>21.7</b>	<b>J B</b>	50.0	15.0	mg/Kg	-	04/12/22 16:53	04/12/22 23:44	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg	-	04/12/22 16:53	04/12/22 23:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130				04/12/22 16:53	04/12/22 23:44	1
o-Terphenyl	108		70 - 130				04/12/22 16:53	04/12/22 23:44	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	41.9		4.95	0.850	mg/Kg	-		04/13/22 03:12	1

Client Sample ID: BH-8

Lab Sample ID: 890-2182-4

Date Collected: 04/11/22 13:05

Matrix: Solid

Date Received: 04/11/22 14:41

Sample Depth: 8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000384	U *	0.00200	0.000384	mg/Kg	-	04/11/22 16:58	04/12/22 21:04	1
Toluene	<0.000455	U *	0.00200	0.000455	mg/Kg	-	04/11/22 16:58	04/12/22 21:04	1
Ethylbenzene	<0.000564	U	0.00200	0.000564	mg/Kg	-	04/11/22 16:58	04/12/22 21:04	1
m-Xylene & p-Xylene	<0.00101	U	0.00399	0.00101	mg/Kg	-	04/11/22 16:58	04/12/22 21:04	1
o-Xylene	<0.000343	U	0.00200	0.000343	mg/Kg	-	04/11/22 16:58	04/12/22 21:04	1
Xylenes, Total	<0.00101	U	0.00399	0.00101	mg/Kg	-	04/11/22 16:58	04/12/22 21:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130				04/11/22 16:58	04/12/22 21:04	1
1,4-Difluorobenzene (Surr)	92		70 - 130				04/11/22 16:58	04/12/22 21:04	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00399	0.00101	mg/Kg	-		04/13/22 10:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total TPH</b>	<b>21.3</b>	<b>J</b>	50.0	15.0	mg/Kg	-		04/13/22 09:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg	-	04/12/22 16:53	04/13/22 00:04	1
<b>Diesel Range Organics (Over C10-C28)</b>	<b>21.3</b>	<b>J B</b>	50.0	15.0	mg/Kg	-	04/12/22 16:53	04/13/22 00:04	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg	-	04/12/22 16:53	04/13/22 00:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130				04/12/22 16:53	04/13/22 00:04	1
o-Terphenyl	103		70 - 130				04/12/22 16:53	04/13/22 00:04	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2182-1  
SDG: 11224665

Client Sample ID: BH-8

Lab Sample ID: 890-2182-4

Date Collected: 04/11/22 13:05

Matrix: Solid

Date Received: 04/11/22 14:41

Sample Depth: 8

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	191		5.04	0.865	mg/Kg			04/13/22 03:21	1

Client Sample ID: BH-9

Lab Sample ID: 890-2182-5

Date Collected: 04/11/22 13:10

Matrix: Solid

Date Received: 04/11/22 14:41

Sample Depth: 9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U *	0.00199	0.000383	mg/Kg		04/11/22 16:58	04/12/22 21:30	1
Toluene	<0.000454	U *	0.00199	0.000454	mg/Kg		04/11/22 16:58	04/12/22 21:30	1
Ethylbenzene	<0.000563	U	0.00199	0.000563	mg/Kg		04/11/22 16:58	04/12/22 21:30	1
m-Xylene & p-Xylene	<0.00101	U	0.00398	0.00101	mg/Kg		04/11/22 16:58	04/12/22 21:30	1
o-Xylene	<0.000343	U	0.00199	0.000343	mg/Kg		04/11/22 16:58	04/12/22 21:30	1
Xylenes, Total	<0.00101	U	0.00398	0.00101	mg/Kg		04/11/22 16:58	04/12/22 21:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		70 - 130				04/11/22 16:58	04/12/22 21:30	1
1,4-Difluorobenzene (Surr)	83		70 - 130				04/11/22 16:58	04/12/22 21:30	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00398	0.00101	mg/Kg			04/13/22 10:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	20.9	J	49.9	15.0	mg/Kg			04/13/22 09:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	49.9	15.0	mg/Kg		04/12/22 16:53	04/13/22 00:25	1
Diesel Range Organics (Over C10-C28)	20.9	J B	49.9	15.0	mg/Kg		04/12/22 16:53	04/13/22 00:25	1
Oil Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		04/12/22 16:53	04/13/22 00:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130				04/12/22 16:53	04/13/22 00:25	1
o-Terphenyl	103		70 - 130				04/12/22 16:53	04/13/22 00:25	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	282		4.97	0.853	mg/Kg			04/13/22 03:30	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2182-1  
SDG: 11224665

Client Sample ID: BH-10

Lab Sample ID: 890-2182-6

Date Collected: 04/11/22 13:15

Matrix: Solid

Date Received: 04/11/22 14:41

Sample Depth: 10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U *	0.00199	0.000383	mg/Kg	-	04/11/22 16:58	04/12/22 21:56	1
Toluene	<0.000453	U *	0.00199	0.000453	mg/Kg	-	04/11/22 16:58	04/12/22 21:56	1
Ethylbenzene	<0.000562	U	0.00199	0.000562	mg/Kg	-	04/11/22 16:58	04/12/22 21:56	1
m-Xylene & p-Xylene	<0.00100	U	0.00398	0.00100	mg/Kg	-	04/11/22 16:58	04/12/22 21:56	1
o-Xylene	<0.000342	U	0.00199	0.000342	mg/Kg	-	04/11/22 16:58	04/12/22 21:56	1
Xylenes, Total	<0.00100	U	0.00398	0.00100	mg/Kg	-	04/11/22 16:58	04/12/22 21:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130	04/11/22 16:58	04/12/22 21:56	1
1,4-Difluorobenzene (Surr)	91		70 - 130	04/11/22 16:58	04/12/22 21:56	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00100	U	0.00398	0.00100	mg/Kg	-		04/13/22 10:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	20.6	J	49.9	15.0	mg/Kg	-		04/13/22 09:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	49.9	15.0	mg/Kg	-	04/12/22 16:53	04/13/22 00:45	1
Diesel Range Organics (Over C10-C28)	20.6	J B	49.9	15.0	mg/Kg	-	04/12/22 16:53	04/13/22 00:45	1
Oil Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg	-	04/12/22 16:53	04/13/22 00:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130	04/12/22 16:53	04/13/22 00:45	1
o-Terphenyl	103		70 - 130	04/12/22 16:53	04/13/22 00:45	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	112		4.98	0.855	mg/Kg	-		04/13/22 03:58	1

Client Sample ID: BH-11

Lab Sample ID: 890-2182-7

Date Collected: 04/11/22 13:20

Matrix: Solid

Date Received: 04/11/22 14:41

Sample Depth: 11

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000387	U *	0.00201	0.000387	mg/Kg	-	04/11/22 16:58	04/12/22 22:22	1
Toluene	<0.000458	U *	0.00201	0.000458	mg/Kg	-	04/11/22 16:58	04/12/22 22:22	1
Ethylbenzene	<0.000567	U	0.00201	0.000567	mg/Kg	-	04/11/22 16:58	04/12/22 22:22	1
m-Xylene & p-Xylene	<0.00101	U	0.00402	0.00101	mg/Kg	-	04/11/22 16:58	04/12/22 22:22	1
o-Xylene	<0.000345	U	0.00201	0.000345	mg/Kg	-	04/11/22 16:58	04/12/22 22:22	1
Xylenes, Total	<0.00101	U	0.00402	0.00101	mg/Kg	-	04/11/22 16:58	04/12/22 22:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130	04/11/22 16:58	04/12/22 22:22	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2182-1  
SDG: 11224665

Client Sample ID: BH-11

Lab Sample ID: 890-2182-7

Date Collected: 04/11/22 13:20

Matrix: Solid

Date Received: 04/11/22 14:41

Sample Depth: 11

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	84		70 - 130	04/11/22 16:58	04/12/22 22:22	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00402	0.00101	mg/Kg			04/13/22 10:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	21.0	J	50.0	15.0	mg/Kg			04/13/22 09:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		04/12/22 16:53	04/13/22 01:26	1
Diesel Range Organics (Over C10-C28)	21.0	J B	50.0	15.0	mg/Kg		04/12/22 16:53	04/13/22 01:26	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		04/12/22 16:53	04/13/22 01:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130				04/12/22 16:53	04/13/22 01:26	1
o-Terphenyl	100		70 - 130				04/12/22 16:53	04/13/22 01:26	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	352		4.95	0.850	mg/Kg			04/13/22 04:07	1

Client Sample ID: BH-12

Lab Sample ID: 890-2182-8

Date Collected: 04/11/22 13:25

Matrix: Solid

Date Received: 04/11/22 14:41

Sample Depth: 12

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000386	U *	0.00200	0.000386	mg/Kg		04/11/22 16:58	04/12/22 22:48	1
Toluene	<0.000457	U *	0.00200	0.000457	mg/Kg		04/11/22 16:58	04/12/22 22:48	1
Ethylbenzene	<0.000566	U	0.00200	0.000566	mg/Kg		04/11/22 16:58	04/12/22 22:48	1
m-Xylene & p-Xylene	<0.00101	U	0.00401	0.00101	mg/Kg		04/11/22 16:58	04/12/22 22:48	1
o-Xylene	<0.000345	U	0.00200	0.000345	mg/Kg		04/11/22 16:58	04/12/22 22:48	1
Xylenes, Total	<0.00101	U	0.00401	0.00101	mg/Kg		04/11/22 16:58	04/12/22 22:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130	04/11/22 16:58	04/12/22 22:48	1
1,4-Difluorobenzene (Surr)	93		70 - 130	04/11/22 16:58	04/12/22 22:48	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00401	0.00101	mg/Kg			04/13/22 10:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	40.2	J	49.9	15.0	mg/Kg			04/13/22 09:50	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2182-1  
SDG: 11224665

Client Sample ID: BH-12

Lab Sample ID: 890-2182-8

Date Collected: 04/11/22 13:25

Matrix: Solid

Date Received: 04/11/22 14:41

Sample Depth: 12

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	20.0	J	49.9	15.0	mg/Kg		04/12/22 16:53	04/13/22 01:47	1
Diesel Range Organics (Over C10-C28)	20.2	J B	49.9	15.0	mg/Kg		04/12/22 16:53	04/13/22 01:47	1
OII Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		04/12/22 16:53	04/13/22 01:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130				04/12/22 16:53	04/13/22 01:47	1
o-Terphenyl	110		70 - 130				04/12/22 16:53	04/13/22 01:47	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	301		4.99	0.857	mg/Kg			04/13/22 04:16	1

## Surrogate Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2182-1  
SDG: 11224665

## 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)
890-2182-1	BH-5	107	94
890-2182-2	BH-6	114	90
890-2182-3	BH-7	116	90
890-2182-4	BH-8	116	92
890-2182-5	BH-9	81	83
890-2182-6	BH-10	110	91
890-2182-7	BH-11	105	84
890-2182-8	BH-12	115	93
LCS 880-23326/1-A	Lab Control Sample	101	102
LCSD 880-23326/2-A	Lab Control Sample Dup	111	100
MB 880-23326/5-A	Method Blank	73	86
<b>Surrogate Legend</b>			
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)
890-2182-1	BH-5	86	99
890-2182-2	BH-6	86	99
890-2182-3	BH-7	92	108
890-2182-4	BH-8	89	103
890-2182-5	BH-9	88	103
890-2182-6	BH-10	88	103
890-2182-7	BH-11	86	100
890-2182-8	BH-12	94	110
<b>Surrogate Legend</b>			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

## 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	1CO2 (70-130)	OTPH2 (70-130)
LCS 880-23410/2-A	Lab Control Sample	91	108
LCSD 880-23410/3-A	Lab Control Sample Dup	102	123
MB 880-23410/1-A	Method Blank	88	107
<b>Surrogate Legend</b>			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

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## QC Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2182-1  
SDG: 11224665

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

Lab Sample ID: MB 880-23326/5-A

Matrix: Solid

Analysis Batch: 23363

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23326

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		04/11/22 16:58	04/12/22 12:36	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		04/11/22 16:58	04/12/22 12:36	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		04/11/22 16:58	04/12/22 12:36	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		04/11/22 16:58	04/12/22 12:36	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		04/11/22 16:58	04/12/22 12:36	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		04/11/22 16:58	04/12/22 12:36	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	73		70 - 130	04/11/22 16:58	04/12/22 12:36	1
1,4-Difluorobenzene (Surr)	86		70 - 130	04/11/22 16:58	04/12/22 12:36	1

Lab Sample ID: LCS 880-23326/1-A

Matrix: Solid

Analysis Batch: 23363

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23326

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1328	*+	mg/Kg		133	70 - 130
Toluene	0.100	0.1240		mg/Kg		124	70 - 130
Ethylbenzene	0.100	0.1084		mg/Kg		108	70 - 130
m-Xylene & p-Xylene	0.200	0.2254		mg/Kg		113	70 - 130
o-Xylene	0.100	0.1067		mg/Kg		107	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: LCSD 880-23326/2-A

Matrix: Solid

Analysis Batch: 23363

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 23326

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	0.100	0.1527	*+	mg/Kg		153	70 - 130	14	35
Toluene	0.100	0.1433	*+	mg/Kg		143	70 - 130	14	35
Ethylbenzene	0.100	0.1239		mg/Kg		124	70 - 130	13	35
m-Xylene & p-Xylene	0.200	0.2565		mg/Kg		128	70 - 130	13	35
o-Xylene	0.100	0.1220		mg/Kg		122	70 - 130	13	35

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

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## QC Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2182-1  
SDG: 11224665

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

Lab Sample ID: MB 880-23410/1-A

Matrix: Solid

Analysis Batch: 23357

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23410

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		04/12/22 16:53	04/12/22 19:58	1
Diesel Range Organics (Over C10-C28)	18.06	J	50.0	15.0	mg/Kg		04/12/22 16:53	04/12/22 19:58	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		04/12/22 16:53	04/12/22 19:58	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130				04/12/22 16:53	04/12/22 19:58	1
o-Terphenyl	107		70 - 130				04/12/22 16:53	04/12/22 19:58	1

Lab Sample ID: LCS 880-23410/2-A

Matrix: Solid

Analysis Batch: 23357

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23410

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1073		mg/Kg		107	70 - 130
Diesel Range Organics (Over C10-C28)	1000	991.2		mg/Kg		99	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	91		70 - 130				
o-Terphenyl	108		70 - 130				

Lab Sample ID: LCSD 880-23410/3-A

Matrix: Solid

Analysis Batch: 23357

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 23410

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1089		mg/Kg		109	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	1000	1009		mg/Kg		101	70 - 130	2	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	102		70 - 130						
o-Terphenyl	123		70 - 130						

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-23421/1-A

Matrix: Solid

Analysis Batch: 23424

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.858	U	5.00	0.858	mg/Kg			04/13/22 02:08	1

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## QC Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2182-1  
SDG: 11224665

## Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-23421/2-A

Matrix: Solid

Analysis Batch: 23424

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	249.0		mg/Kg		100	90 - 110

Lab Sample ID: LCSD 880-23421/3-A

Matrix: Solid

Analysis Batch: 23424

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	242.0		mg/Kg		97	90 - 110	3	20

Lab Sample ID: 890-2182-1 MS

Matrix: Solid

Analysis Batch: 23424

Client Sample ID: BH-5

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	345	F1	250	568.4	F1	mg/Kg		89	90 - 110

Lab Sample ID: 890-2182-1 MSD

Matrix: Solid

Analysis Batch: 23424

Client Sample ID: BH-5

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	345	F1	250	600.4		mg/Kg		102	90 - 110	5	20

## QC Association Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2182-1  
SDG: 11224665

## GC VOA

## Prep Batch: 23326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2182-1	BH-5	Total/NA	Solid	5035	
890-2182-2	BH-6	Total/NA	Solid	5035	
890-2182-3	BH-7	Total/NA	Solid	5035	
890-2182-4	BH-8	Total/NA	Solid	5035	
890-2182-5	BH-9	Total/NA	Solid	5035	
890-2182-6	BH-10	Total/NA	Solid	5035	
890-2182-7	BH-11	Total/NA	Solid	5035	
890-2182-8	BH-12	Total/NA	Solid	5035	
MB 880-23326/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-23326/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-23326/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

## Analysis Batch: 23363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2182-1	BH-5	Total/NA	Solid	8021B	23326
890-2182-2	BH-6	Total/NA	Solid	8021B	23326
890-2182-3	BH-7	Total/NA	Solid	8021B	23326
890-2182-4	BH-8	Total/NA	Solid	8021B	23326
890-2182-5	BH-9	Total/NA	Solid	8021B	23326
890-2182-6	BH-10	Total/NA	Solid	8021B	23326
890-2182-7	BH-11	Total/NA	Solid	8021B	23326
890-2182-8	BH-12	Total/NA	Solid	8021B	23326
MB 880-23326/5-A	Method Blank	Total/NA	Solid	8021B	23326
LCS 880-23326/1-A	Lab Control Sample	Total/NA	Solid	8021B	23326
LCSD 880-23326/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	23326

## Analysis Batch: 23442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2182-1	BH-5	Total/NA	Solid	Total BTEX	
890-2182-2	BH-6	Total/NA	Solid	Total BTEX	
890-2182-3	BH-7	Total/NA	Solid	Total BTEX	
890-2182-4	BH-8	Total/NA	Solid	Total BTEX	
890-2182-5	BH-9	Total/NA	Solid	Total BTEX	
890-2182-6	BH-10	Total/NA	Solid	Total BTEX	
890-2182-7	BH-11	Total/NA	Solid	Total BTEX	
890-2182-8	BH-12	Total/NA	Solid	Total BTEX	

## GC Semi VOA

## Analysis Batch: 23357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2182-1	BH-5	Total/NA	Solid	8015B NM	23410
890-2182-2	BH-6	Total/NA	Solid	8015B NM	23410
890-2182-3	BH-7	Total/NA	Solid	8015B NM	23410
890-2182-4	BH-8	Total/NA	Solid	8015B NM	23410
890-2182-5	BH-9	Total/NA	Solid	8015B NM	23410
890-2182-6	BH-10	Total/NA	Solid	8015B NM	23410
890-2182-7	BH-11	Total/NA	Solid	8015B NM	23410
890-2182-8	BH-12	Total/NA	Solid	8015B NM	23410
MB 880-23410/1-A	Method Blank	Total/NA	Solid	8015B NM	23410
LCS 880-23410/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	23410

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## QC Association Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2182-1  
SDG: 11224665

## GC Semi VOA (Continued)

## Analysis Batch: 23357 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-23410/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	23410

## Prep Batch: 23410

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2182-1	BH-5	Total/NA	Solid	8015NM Prep	
890-2182-2	BH-6	Total/NA	Solid	8015NM Prep	
890-2182-3	BH-7	Total/NA	Solid	8015NM Prep	
890-2182-4	BH-8	Total/NA	Solid	8015NM Prep	
890-2182-5	BH-9	Total/NA	Solid	8015NM Prep	
890-2182-6	BH-10	Total/NA	Solid	8015NM Prep	
890-2182-7	BH-11	Total/NA	Solid	8015NM Prep	
890-2182-8	BH-12	Total/NA	Solid	8015NM Prep	
MB 880-23410/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-23410/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-23410/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

## Analysis Batch: 23438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2182-1	BH-5	Total/NA	Solid	8015 NM	
890-2182-2	BH-6	Total/NA	Solid	8015 NM	
890-2182-3	BH-7	Total/NA	Solid	8015 NM	
890-2182-4	BH-8	Total/NA	Solid	8015 NM	
890-2182-5	BH-9	Total/NA	Solid	8015 NM	
890-2182-6	BH-10	Total/NA	Solid	8015 NM	
890-2182-7	BH-11	Total/NA	Solid	8015 NM	
890-2182-8	BH-12	Total/NA	Solid	8015 NM	

## HPLC/IC

## Leach Batch: 23421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2182-1	BH-5	Soluble	Solid	DI Leach	
890-2182-2	BH-6	Soluble	Solid	DI Leach	
890-2182-3	BH-7	Soluble	Solid	DI Leach	
890-2182-4	BH-8	Soluble	Solid	DI Leach	
890-2182-5	BH-9	Soluble	Solid	DI Leach	
890-2182-6	BH-10	Soluble	Solid	DI Leach	
890-2182-7	BH-11	Soluble	Solid	DI Leach	
890-2182-8	BH-12	Soluble	Solid	DI Leach	
MB 880-23421/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-23421/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-23421/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2182-1 MS	BH-5	Soluble	Solid	DI Leach	
890-2182-1 MSD	BH-5	Soluble	Solid	DI Leach	

## Analysis Batch: 23424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2182-1	BH-5	Soluble	Solid	300.0	23421
890-2182-2	BH-6	Soluble	Solid	300.0	23421
890-2182-3	BH-7	Soluble	Solid	300.0	23421
890-2182-4	BH-8	Soluble	Solid	300.0	23421

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## QC Association Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2182-1  
SDG: 11224665

## HPLC/IC (Continued)

## Analysis Batch: 23424 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2182-5	BH-9	Soluble	Solid	300.0	23421
890-2182-6	BH-10	Soluble	Solid	300.0	23421
890-2182-7	BH-11	Soluble	Solid	300.0	23421
890-2182-8	BH-12	Soluble	Solid	300.0	23421
MB 880-23421/1-A	Method Blank	Soluble	Solid	300.0	23421
LCS 880-23421/2-A	Lab Control Sample	Soluble	Solid	300.0	23421
LCSD 880-23421/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	23421
890-2182-1 MS	BH-5	Soluble	Solid	300.0	23421
890-2182-1 MSD	BH-5	Soluble	Solid	300.0	23421

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## Lab Chronicle

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2182-1  
SDG: 11224665

Client Sample ID: BH-5

Lab Sample ID: 890-2182-1

Date Collected: 04/11/22 12:30

Matrix: Solid

Date Received: 04/11/22 14:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	23326	04/11/22 16:58	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23363	04/12/22 19:45	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23442	04/13/22 10:18	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23438	04/13/22 09:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	23410	04/12/22 16:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23357	04/12/22 23:03	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	23421	04/12/22 17:07	CH	XEN MID
Soluble	Analysis	300.0		1			23424	04/13/22 02:35	CH	XEN MID

Client Sample ID: BH-6

Lab Sample ID: 890-2182-2

Date Collected: 04/11/22 12:35

Matrix: Solid

Date Received: 04/11/22 14:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	23326	04/11/22 16:58	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23363	04/12/22 20:11	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23442	04/13/22 10:18	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23438	04/13/22 09:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	23410	04/12/22 16:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23357	04/12/22 23:23	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	23421	04/12/22 17:07	CH	XEN MID
Soluble	Analysis	300.0		1			23424	04/13/22 03:03	CH	XEN MID

Client Sample ID: BH-7

Lab Sample ID: 890-2182-3

Date Collected: 04/11/22 13:00

Matrix: Solid

Date Received: 04/11/22 14:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	23326	04/11/22 16:58	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23363	04/12/22 20:38	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23442	04/13/22 10:18	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23438	04/13/22 09:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	23410	04/12/22 16:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23357	04/12/22 23:44	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	23421	04/12/22 17:07	CH	XEN MID
Soluble	Analysis	300.0		1			23424	04/13/22 03:12	CH	XEN MID

Client Sample ID: BH-8

Lab Sample ID: 890-2182-4

Date Collected: 04/11/22 13:05

Matrix: Solid

Date Received: 04/11/22 14:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	23326	04/11/22 16:58	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23363	04/12/22 21:04	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23442	04/13/22 10:18	AJ	XEN MID

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## Lab Chronicle

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2182-1  
SDG: 11224665

Client Sample ID: BH-8

Lab Sample ID: 890-2182-4

Date Collected: 04/11/22 13:05

Matrix: Solid

Date Received: 04/11/22 14:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			23438	04/13/22 09:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	23410	04/12/22 16:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23357	04/13/22 00:04	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	23421	04/12/22 17:07	CH	XEN MID
Soluble	Analysis	300.0		1			23424	04/13/22 03:21	CH	XEN MID

Client Sample ID: BH-9

Lab Sample ID: 890-2182-5

Date Collected: 04/11/22 13:10

Matrix: Solid

Date Received: 04/11/22 14:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	23326	04/11/22 16:58	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23363	04/12/22 21:30	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23442	04/13/22 10:18	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23438	04/13/22 09:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	23410	04/12/22 16:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23357	04/13/22 00:25	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	23421	04/12/22 17:07	CH	XEN MID
Soluble	Analysis	300.0		1			23424	04/13/22 03:30	CH	XEN MID

Client Sample ID: BH-10

Lab Sample ID: 890-2182-6

Date Collected: 04/11/22 13:15

Matrix: Solid

Date Received: 04/11/22 14:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	23326	04/11/22 16:58	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23363	04/12/22 21:56	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23442	04/13/22 10:18	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23438	04/13/22 09:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	23410	04/12/22 16:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23357	04/13/22 00:45	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	23421	04/12/22 17:07	CH	XEN MID
Soluble	Analysis	300.0		1			23424	04/13/22 03:58	CH	XEN MID

Client Sample ID: BH-11

Lab Sample ID: 890-2182-7

Date Collected: 04/11/22 13:20

Matrix: Solid

Date Received: 04/11/22 14:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	23326	04/11/22 16:58	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23363	04/12/22 22:22	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23442	04/13/22 10:18	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23438	04/13/22 09:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	23410	04/12/22 16:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23357	04/13/22 01:26	AJ	XEN MID

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## Lab Chronicle

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2182-1  
SDG: 11224665

Client Sample ID: BH-11

Date Collected: 04/11/22 13:20

Date Received: 04/11/22 14:41

Lab Sample ID: 890-2182-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.05 g	50 mL	23421	04/12/22 17:07	CH	XEN MID
Soluble	Analysis	300.0		1			23424	04/13/22 04:07	CH	XEN MID

Client Sample ID: BH-12

Date Collected: 04/11/22 13:25

Date Received: 04/11/22 14:41

Lab Sample ID: 890-2182-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	23326	04/11/22 16:58	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23363	04/12/22 22:48	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23442	04/13/22 10:18	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23438	04/13/22 09:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	23410	04/12/22 16:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23357	04/13/22 01:47	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	23421	04/12/22 17:07	CH	XEN MID
Soluble	Analysis	300.0		1			23424	04/13/22 04:16	CH	XEN MID

## Laboratory References:

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

Accreditation/Certification Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2182-1  
SDG: 11224665

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	T104704400-21-22	06-30-22
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.  
Project/Site: Hunt APO State #1

Job ID: 890-2182-1  
SDG: 11224665

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

### Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

### Laboratory References:

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

## Sample Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2182-1  
SDG: 11224665

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2182-1	BH-5	Solid	04/11/22 12:30	04/11/22 14:41	5
890-2182-2	BH-6	Solid	04/11/22 12:35	04/11/22 14:41	6
890-2182-3	BH-7	Solid	04/11/22 13:00	04/11/22 14:41	7
890-2182-4	BH-8	Solid	04/11/22 13:05	04/11/22 14:41	8
890-2182-5	BH-9	Solid	04/11/22 13:10	04/11/22 14:41	9
890-2182-6	BH-10	Solid	04/11/22 13:15	04/11/22 14:41	10
890-2182-7	BH-11	Solid	04/11/22 13:20	04/11/22 14:41	11
890-2182-8	BH-12	Solid	04/11/22 13:25	04/11/22 14:41	12



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Stafford, Texas (281-240-4200)

**Dallas Texas (214-902-0300)**

**Service Center - San Antonio, Texas (210-509-3334)**

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**CHAIN OF CUSTODY**

Page 1 Of 1

Page 1 Of 1

**Odessa, Texas (432-563-1800)**

Lakeland, Florida (863-646-8525)

**Norcross, Georgia (770-449-8800)**

Tampa, Florida (813-620-2000)

Xenco Quote #

Xenco Job #

<b>Client / Reporting Information</b> Company Name / Branch: <b>GHD/Midland</b> Company Address: 2135 S. Loop 250 West Midland TX Email: becky.haskell@ghd.com Mathew.laughlin@ghd.com James.kennedy@georesources.com Project Contact: <b>Becky Haskell / Glenn Quinney</b>			<b>Project Information</b> Project Name/Number: <b>Hunt APO State #1 / 11224665</b> Project Location: <b>Eddy County, New Mexico</b> Invoice To: <b>EOG / James Kennedy</b> PO Number: <b>NA</b>			<b>Matrix Codes</b> S = Soil/Sed/Solid GW = Ground Water DW = Drinking Water P = Product SW = Surface water SL = Sludge OW = Ocean/Sea Water W = Wipe O = Oil WW = Waste Water A = Air		
<b>Field ID / Point of Collection</b> No. _____			<b>Collection</b> Sample Depth _____ Date _____ Time _____ Matrix _____ # of bottles _____ HCl _____			<b>Number of preserved bottles</b> NaOH/Zn Acetate _____ HNO3 _____ H2SO4 _____ NaOH _____ NaHSO4 _____ MEQH _____ NONE _____		
<b>Field Comments</b> _____			<b>TPH By 8015 Mod (GRO, DRO &amp; MRO)</b> _____			<b>BTEX 8021 B</b> _____		
<b>Field Comments</b> _____			<b>Chloride 600</b> _____			<b>Field Comments</b> _____		

No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEQH	NONE	TPH By 8015 Mod (GRO, DRO & MRO)	BTEX 8021 B	Chloride 600
1	B4-5		Online	1230	S	1								X	X	X	
2	B4-6			1235										X	X	X	
3	B4-7			1300										X	X	X	
4	B4-8			1305										X	X	X	
5	B4-9			1310										X	X	X	
6	B4-10			1315										X	X	X	
7	B4-11			1320										X	X	X	
8	B4-12			1325										X	X	X	
9																	
10																	

**Turnaround Time (Business days)**

☒ Same Day TAT    ☐ 5 Day TAT

☐ Next Day EMERGENCY    ☐ 7 Day TAT

☐ 2 Day EMERGENCY    ☐ Contract TAT

☐ 3 Day EMERGENCY    ☐ TRRP Checklist

**TAT Starts Day received by Lab, if received by 5:00 pm**

**Relinquished by:** \_\_\_\_\_ **Date Time:** \_\_\_\_\_

**Report MDLs and J values.**

☐ Level II Std QC    ☐ Level IV (Full Data Pkg /raw data)

☐ Level III Std QC+ Forms    ☐ TRRP Level IV

☐ Level 3 (CLP Forms)    ☐ UST / RG 411

**Relinquished by:** \_\_\_\_\_ **Date Time:** \_\_\_\_\_

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## Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 890-2182-1

SDG Number: 11224665

**Login Number: 2182****List Number: 1****Creator: Clifton, Cloe****List Source: Eurofins Carlsbad**

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



## Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 890-2182-1

SDG Number: 11224665

**Login Number: 2182****List Number: 2****Creator: Carlisle, Spring****List Source: Eurofins Midland****List Creation: 04/12/22 06:09 PM**

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



## Environment Testing America

### ANALYTICAL REPORT

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

Laboratory Job ID: 890-2187-1

Laboratory Sample Delivery Group: 11224665

Client Project/Site: Hunt APO State #1

For:

GHD Services Inc.  
2135 South Loop 250 West  
Midland, Texas 79703

Attn: Becky Haskell

A handwritten signature in black ink that reads "Debbie Simmons".

Authorized for release by:  
4/13/2022 12:18:30 PM

Debbie Simmons, Project Manager  
(832)986-6768  
[Debbie.Simmons@et.eurofinsus.com](mailto:Debbie.Simmons@et.eurofinsus.com)

#### LINKS

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

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

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Laboratory Job ID: 890-2187-1  
SDG: 11224665

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## Definitions/Glossary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2187-1  
SDG: 11224665

## Qualifiers

## GC VOA

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

## GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
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.

## HPLC/IC

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

## Glossary

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

## Case Narrative

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2187-1  
SDG: 11224665

**Job ID: 890-2187-1**

**Laboratory: Eurofins Carlsbad**

### Narrative

#### Job Narrative 890-2187-1

### Comments

No additional comments.

### Receipt

The samples were received on 4/12/2022 1:10 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 was 24.8° C. Local delivery to lab same day as collection

### GC VOA

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

### GC Semi VOA

Method 8015B NM: The method blank for preparation batch 880-23410 and analytical batch 880-23357 contained <AffectedAnalytes> above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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

### General Chemistry

No analytical or quality issues were noted, other than those described 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.  
Project/Site: Hunt APO State #1

Job ID: 890-2187-1  
SDG: 11224665

Client Sample ID: BH-13

Lab Sample ID: 890-2187-1

Date Collected: 04/12/22 08:00

Matrix: Solid

Date Received: 04/12/22 13:10

Sample Depth: 13

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000388	U	0.00202	0.000388	mg/Kg	-	04/12/22 14:39	04/13/22 03:26	1
Toluene	<0.000460	U	0.00202	0.000460	mg/Kg	-	04/12/22 14:39	04/13/22 03:26	1
Ethylbenzene	<0.000570	U	0.00202	0.000570	mg/Kg	-	04/12/22 14:39	04/13/22 03:26	1
m-Xylene & p-Xylene	<0.00102	U	0.00403	0.00102	mg/Kg	-	04/12/22 14:39	04/13/22 03:26	1
o-Xylene	<0.000347	U	0.00202	0.000347	mg/Kg	-	04/12/22 14:39	04/13/22 03:26	1
Xylenes, Total	<0.00102	U	0.00403	0.00102	mg/Kg	-	04/12/22 14:39	04/13/22 03:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	04/12/22 14:39	04/13/22 03:26	1
1,4-Difluorobenzene (Surr)	97		70 - 130	04/12/22 14:39	04/13/22 03:26	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00102	U	0.00403	0.00102	mg/Kg	-		04/13/22 10:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	20.7	J	50.0	15.0	mg/Kg	-		04/13/22 09:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg	-	04/12/22 16:53	04/13/22 02:07	1
Diesel Range Organics (Over C10-C28)	20.7	J B	50.0	15.0	mg/Kg	-	04/12/22 16:53	04/13/22 02:07	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg	-	04/12/22 16:53	04/13/22 02:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	85		70 - 130	04/12/22 16:53	04/13/22 02:07	1
o-Terphenyl	99		70 - 130	04/12/22 16:53	04/13/22 02:07	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	459		4.96	0.851	mg/Kg	-		04/13/22 04:25	1

Client Sample ID: BH-14

Lab Sample ID: 890-2187-2

Date Collected: 04/12/22 08:30

Matrix: Solid

Date Received: 04/12/22 13:10

Sample Depth: 14

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000387	U	0.00201	0.000387	mg/Kg	-	04/12/22 14:39	04/13/22 03:47	1
Toluene	<0.000459	U	0.00201	0.000459	mg/Kg	-	04/12/22 14:39	04/13/22 03:47	1
Ethylbenzene	<0.000568	U	0.00201	0.000568	mg/Kg	-	04/12/22 14:39	04/13/22 03:47	1
m-Xylene & p-Xylene	<0.00102	U	0.00402	0.00102	mg/Kg	-	04/12/22 14:39	04/13/22 03:47	1
o-Xylene	<0.000346	U	0.00201	0.000346	mg/Kg	-	04/12/22 14:39	04/13/22 03:47	1
Xylenes, Total	<0.00102	U	0.00402	0.00102	mg/Kg	-	04/12/22 14:39	04/13/22 03:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	04/12/22 14:39	04/13/22 03:47	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2187-1  
SDG: 11224665

Client Sample ID: BH-14

Lab Sample ID: 890-2187-2

Date Collected: 04/12/22 08:30

Matrix: Solid

Date Received: 04/12/22 13:10

Sample Depth: 14

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	99		70 - 130	04/12/22 14:39	04/13/22 03:47	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00102	U	0.00402	0.00102	mg/Kg			04/13/22 10:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	20.3	J	49.9	15.0	mg/Kg			04/13/22 09:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	49.9	15.0	mg/Kg		04/12/22 16:53	04/13/22 02:28	1
Diesel Range Organics (Over C10-C28)	20.3	J B	49.9	15.0	mg/Kg		04/12/22 16:53	04/13/22 02:28	1
Oil Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		04/12/22 16:53	04/13/22 02:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	85		70 - 130				04/12/22 16:53	04/13/22 02:28	1
o-Terphenyl	98		70 - 130				04/12/22 16:53	04/13/22 02:28	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	337		5.01	0.860	mg/Kg			04/13/22 04:35	1

Client Sample ID: BH-15

Lab Sample ID: 890-2187-3

Date Collected: 04/12/22 09:00

Matrix: Solid

Date Received: 04/12/22 13:10

Sample Depth: 15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000389	U	0.00202	0.000389	mg/Kg		04/12/22 14:39	04/13/22 04:07	1
Toluene	<0.000461	U	0.00202	0.000461	mg/Kg		04/12/22 14:39	04/13/22 04:07	1
Ethylbenzene	<0.000571	U	0.00202	0.000571	mg/Kg		04/12/22 14:39	04/13/22 04:07	1
m-Xylene & p-Xylene	<0.00102	U	0.00404	0.00102	mg/Kg		04/12/22 14:39	04/13/22 04:07	1
o-Xylene	<0.000347	U	0.00202	0.000347	mg/Kg		04/12/22 14:39	04/13/22 04:07	1
Xylenes, Total	<0.00102	U	0.00404	0.00102	mg/Kg		04/12/22 14:39	04/13/22 04:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	04/12/22 14:39	04/13/22 04:07	1
1,4-Difluorobenzene (Surr)	97		70 - 130	04/12/22 14:39	04/13/22 04:07	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00102	U	0.00404	0.00102	mg/Kg			04/13/22 10:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	20.7	J	50.0	15.0	mg/Kg			04/13/22 09:50	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2187-1  
SDG: 11224665

## Client Sample ID: BH-15

Date Collected: 04/12/22 09:00

Date Received: 04/12/22 13:10

Sample Depth: 15

## Lab Sample ID: 890-2187-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg	-	04/12/22 16:53	04/13/22 02:48	1
<b>Diesel Range Organics (Over C10-C28)</b>	<b>20.7</b>	<b>J B</b>	50.0	15.0	mg/Kg	-	04/12/22 16:53	04/13/22 02:48	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg	-	04/12/22 16:53	04/13/22 02:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	85		70 - 130				04/12/22 16:53	04/13/22 02:48	1
o-Terphenyl	96		70 - 130				04/12/22 16:53	04/13/22 02:48	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	385		4.97	0.853	mg/Kg	-		04/13/22 04:44	1

## Client Sample ID: BH-16

Date Collected: 04/12/22 09:30

Date Received: 04/12/22 13:10

Sample Depth: 16

## Lab Sample ID: 890-2187-4

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000388	U	0.00202	0.000388	mg/Kg	-	04/12/22 14:39	04/13/22 04:28	1
Toluene	<0.000460	U	0.00202	0.000460	mg/Kg	-	04/12/22 14:39	04/13/22 04:28	1
Ethylbenzene	<0.000570	U	0.00202	0.000570	mg/Kg	-	04/12/22 14:39	04/13/22 04:28	1
m-Xylene & p-Xylene	<0.00102	U	0.00403	0.00102	mg/Kg	-	04/12/22 14:39	04/13/22 04:28	1
o-Xylene	<0.000347	U	0.00202	0.000347	mg/Kg	-	04/12/22 14:39	04/13/22 04:28	1
Xylenes, Total	<0.00102	U	0.00403	0.00102	mg/Kg	-	04/12/22 14:39	04/13/22 04:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130				04/12/22 14:39	04/13/22 04:28	1
1,4-Difluorobenzene (Surr)	87		70 - 130				04/12/22 14:39	04/13/22 04:28	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00102	U	0.00403	0.00102	mg/Kg	-		04/13/22 10:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total TPH</b>	<b>20.4</b>	<b>J</b>	50.0	15.0	mg/Kg	-		04/13/22 09:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg	-	04/12/22 16:53	04/13/22 03:09	1
<b>Diesel Range Organics (Over C10-C28)</b>	<b>20.4</b>	<b>J B</b>	50.0	15.0	mg/Kg	-	04/12/22 16:53	04/13/22 03:09	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg	-	04/12/22 16:53	04/13/22 03:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130				04/12/22 16:53	04/13/22 03:09	1
o-Terphenyl	102		70 - 130				04/12/22 16:53	04/13/22 03:09	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2187-1  
SDG: 11224665

## Client Sample ID: BH-16

Date Collected: 04/12/22 09:30

Date Received: 04/12/22 13:10

Sample Depth: 16

## Lab Sample ID: 890-2187-4

Matrix: Solid

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	397		4.98	0.855	mg/Kg			04/13/22 05:11	1

## Client Sample ID: BH-17

Date Collected: 04/12/22 10:00

Date Received: 04/12/22 13:10

Sample Depth: 17

## Lab Sample ID: 890-2187-5

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000386	U	0.00200	0.000386	mg/Kg		04/12/22 14:39	04/13/22 04:48	1
Toluene	<0.000457	U	0.00200	0.000457	mg/Kg		04/12/22 14:39	04/13/22 04:48	1
Ethylbenzene	<0.000566	U	0.00200	0.000566	mg/Kg		04/12/22 14:39	04/13/22 04:48	1
m-Xylene & p-Xylene	<0.00101	U	0.00401	0.00101	mg/Kg		04/12/22 14:39	04/13/22 04:48	1
o-Xylene	<0.000345	U	0.00200	0.000345	mg/Kg		04/12/22 14:39	04/13/22 04:48	1
Xylenes, Total	<0.00101	U	0.00401	0.00101	mg/Kg		04/12/22 14:39	04/13/22 04:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130				04/12/22 14:39	04/13/22 04:48	1
1,4-Difluorobenzene (Surr)	96		70 - 130				04/12/22 14:39	04/13/22 04:48	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00401	0.00101	mg/Kg			04/13/22 10:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	21.1	J	50.0	15.0	mg/Kg			04/13/22 09:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		04/12/22 16:53	04/13/22 03:30	1
Diesel Range Organics (Over C10-C28)	21.1	J B	50.0	15.0	mg/Kg		04/12/22 16:53	04/13/22 03:30	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		04/12/22 16:53	04/13/22 03:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130				04/12/22 16:53	04/13/22 03:30	1
o-Terphenyl	97		70 - 130				04/12/22 16:53	04/13/22 03:30	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	409		5.00	0.858	mg/Kg			04/13/22 05:21	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2187-1  
SDG: 11224665

Client Sample ID: 8 BH-1

Lab Sample ID: 890-2187-6

Date Collected: 04/12/22 12:00

Matrix: Solid

Date Received: 04/12/22 13:10

Sample Depth: 17

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000384	U	0.00200	0.000384	mg/Kg	-	04/12/22 14:39	04/13/22 05:08	1
Toluene	<0.000455	U	0.00200	0.000455	mg/Kg	-	04/12/22 14:39	04/13/22 05:08	1
Ethylbenzene	<0.000564	U	0.00200	0.000564	mg/Kg	-	04/12/22 14:39	04/13/22 05:08	1
m-Xylene & p-Xylene	<0.00101	U	0.00399	0.00101	mg/Kg	-	04/12/22 14:39	04/13/22 05:08	1
o-Xylene	<0.000343	U	0.00200	0.000343	mg/Kg	-	04/12/22 14:39	04/13/22 05:08	1
Xylenes, Total	<0.00101	U	0.00399	0.00101	mg/Kg	-	04/12/22 14:39	04/13/22 05:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	04/12/22 14:39	04/13/22 05:08	1
1,4-Difluorobenzene (Surr)	96		70 - 130	04/12/22 14:39	04/13/22 05:08	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00399	0.00101	mg/Kg	-		04/13/22 10:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	36.0	J	49.9	15.0	mg/Kg	-		04/13/22 09:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	49.9	15.0	mg/Kg	-	04/12/22 16:53	04/13/22 03:50	1
Diesel Range Organics (Over C10-C28)	36.0	J B	49.9	15.0	mg/Kg	-	04/12/22 16:53	04/13/22 03:50	1
Oil Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg	-	04/12/22 16:53	04/13/22 03:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130	04/12/22 16:53	04/13/22 03:50	1
o-Terphenyl	99		70 - 130	04/12/22 16:53	04/13/22 03:50	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	487		5.00	0.858	mg/Kg	-		04/13/22 05:48	1

Client Sample ID: 8 SW-1

Lab Sample ID: 890-2187-7

Date Collected: 04/12/22 12:05

Matrix: Solid

Date Received: 04/12/22 13:10

Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg	-	04/12/22 14:39	04/13/22 05:29	1
Toluene	<0.000454	U	0.00199	0.000454	mg/Kg	-	04/12/22 14:39	04/13/22 05:29	1
Ethylbenzene	<0.000563	U	0.00199	0.000563	mg/Kg	-	04/12/22 14:39	04/13/22 05:29	1
m-Xylene & p-Xylene	<0.00101	U	0.00398	0.00101	mg/Kg	-	04/12/22 14:39	04/13/22 05:29	1
o-Xylene	<0.000343	U	0.00199	0.000343	mg/Kg	-	04/12/22 14:39	04/13/22 05:29	1
Xylenes, Total	<0.00101	U	0.00398	0.00101	mg/Kg	-	04/12/22 14:39	04/13/22 05:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	04/12/22 14:39	04/13/22 05:29	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2187-1  
SDG: 11224665

Client Sample ID: 8 SW-1

Date Collected: 04/12/22 12:05

Date Received: 04/12/22 13:10

Sample Depth: 1

Lab Sample ID: 890-2187-7

Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	97		70 - 130	04/12/22 14:39	04/13/22 05:29	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00398	0.00101	mg/Kg			04/13/22 10:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	21.4	J	50.0	15.0	mg/Kg			04/13/22 09:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		04/12/22 16:53	04/13/22 04:11	1
Diesel Range Organics (Over C10-C28)	21.4	J B	50.0	15.0	mg/Kg		04/12/22 16:53	04/13/22 04:11	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		04/12/22 16:53	04/13/22 04:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130				04/12/22 16:53	04/13/22 04:11	1
o-Terphenyl	100		70 - 130				04/12/22 16:53	04/13/22 04:11	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	70.6		4.99	0.857	mg/Kg			04/13/22 05:57	1

Client Sample ID: 8 SW-2

Date Collected: 04/12/22 12:10

Date Received: 04/12/22 13:10

Sample Depth: 2

Lab Sample ID: 890-2187-8

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000388	U	0.00202	0.000388	mg/Kg		04/12/22 14:39	04/13/22 05:49	1
Toluene	<0.000460	U	0.00202	0.000460	mg/Kg		04/12/22 14:39	04/13/22 05:49	1
Ethylbenzene	<0.000570	U	0.00202	0.000570	mg/Kg		04/12/22 14:39	04/13/22 05:49	1
m-Xylene & p-Xylene	<0.00102	U	0.00403	0.00102	mg/Kg		04/12/22 14:39	04/13/22 05:49	1
o-Xylene	<0.000347	U	0.00202	0.000347	mg/Kg		04/12/22 14:39	04/13/22 05:49	1
Xylenes, Total	<0.00102	U	0.00403	0.00102	mg/Kg		04/12/22 14:39	04/13/22 05:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	04/12/22 14:39	04/13/22 05:49	1
1,4-Difluorobenzene (Surr)	97		70 - 130	04/12/22 14:39	04/13/22 05:49	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00102	U	0.00403	0.00102	mg/Kg			04/13/22 10:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	26.3	J	50.0	15.0	mg/Kg			04/13/22 09:50	1

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## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2187-1  
SDG: 11224665

Client Sample ID: 8 SW-2

Lab Sample ID: 890-2187-8

Date Collected: 04/12/22 12:10

Matrix: Solid

Date Received: 04/12/22 13:10

Sample Depth: 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		04/12/22 16:53	04/13/22 04:31	1
<b>Diesel Range Organics (Over C10-C28)</b>	<b>26.3</b>	<b>J B</b>	50.0	15.0	mg/Kg		04/12/22 16:53	04/13/22 04:31	1
OII Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		04/12/22 16:53	04/13/22 04:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	83		70 - 130				04/12/22 16:53	04/13/22 04:31	1
o-Terphenyl	94		70 - 130				04/12/22 16:53	04/13/22 04:31	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>242</b>		4.95	0.850	mg/Kg			04/13/22 06:07	1

## Surrogate Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2187-1  
SDG: 11224665

## 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)
890-2187-1	BH-13	99	97
890-2187-2	BH-14	103	99
890-2187-3	BH-15	104	97
890-2187-4	BH-16	103	87
890-2187-5	BH-17	100	96
890-2187-6	8 BH-1	102	96
890-2187-7	8 SW-1	101	97
890-2187-8	8 SW-2	104	97
LCS 880-23398/1-A	Lab Control Sample	103	101
LCSD 880-23398/2-A	Lab Control Sample Dup	98	99
MB 880-23368/5-A	Method Blank	99	93
MB 880-23398/5-A	Method Blank	101	94
<b>Surrogate Legend</b>			
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)
890-2187-1	BH-13	85	99
890-2187-2	BH-14	85	98
890-2187-3	BH-15	85	96
890-2187-4	BH-16	89	102
890-2187-5	BH-17	86	97
890-2187-6	8 BH-1	88	99
890-2187-7	8 SW-1	86	100
890-2187-8	8 SW-2	83	94
<b>Surrogate Legend</b>			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

## 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	1CO2 (70-130)	OTPH2 (70-130)
LCS 880-23410/2-A	Lab Control Sample	91	108
LCSD 880-23410/3-A	Lab Control Sample Dup	102	123
MB 880-23410/1-A	Method Blank	88	107
<b>Surrogate Legend</b>			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

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## QC Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2187-1  
SDG: 11224665

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

Lab Sample ID: MB 880-23368/5-A

Matrix: Solid

Analysis Batch: 23364

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23368

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		04/12/22 10:28	04/12/22 11:24	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		04/12/22 10:28	04/12/22 11:24	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		04/12/22 10:28	04/12/22 11:24	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		04/12/22 10:28	04/12/22 11:24	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		04/12/22 10:28	04/12/22 11:24	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		04/12/22 10:28	04/12/22 11:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	04/12/22 10:28	04/12/22 11:24	1
1,4-Difluorobenzene (Surr)	93		70 - 130	04/12/22 10:28	04/12/22 11:24	1

Lab Sample ID: MB 880-23398/5-A

Matrix: Solid

Analysis Batch: 23364

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23398

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		04/12/22 14:39	04/12/22 21:59	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		04/12/22 14:39	04/12/22 21:59	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		04/12/22 14:39	04/12/22 21:59	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		04/12/22 14:39	04/12/22 21:59	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		04/12/22 14:39	04/12/22 21:59	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		04/12/22 14:39	04/12/22 21:59	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	04/12/22 14:39	04/12/22 21:59	1
1,4-Difluorobenzene (Surr)	94		70 - 130	04/12/22 14:39	04/12/22 21:59	1

Lab Sample ID: LCS 880-23398/1-A

Matrix: Solid

Analysis Batch: 23364

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23398

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.08711		mg/Kg		87	70 - 130
Toluene	0.100	0.08910		mg/Kg		89	70 - 130
Ethylbenzene	0.100	0.09094		mg/Kg		91	70 - 130
m-Xylene & p-Xylene	0.200	0.1814		mg/Kg		91	70 - 130
o-Xylene	0.100	0.09375		mg/Kg		94	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: LCSD 880-23398/2-A

Matrix: Solid

Analysis Batch: 23364

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 23398

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08416		mg/Kg		84	70 - 130	3	35

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## QC Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2187-1  
SDG: 11224665

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

Lab Sample ID: LCSD 880-23398/2-A

Matrix: Solid

Analysis Batch: 23364

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 23398

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene	0.100	0.08527		mg/Kg		85	70 - 130	4	35
Ethylbenzene	0.100	0.08789		mg/Kg		88	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.1752		mg/Kg		88	70 - 130	3	35
o-Xylene	0.100	0.08928		mg/Kg		89	70 - 130	5	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

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

Lab Sample ID: MB 880-23410/1-A

Matrix: Solid

Analysis Batch: 23357

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23410

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		04/12/22 16:53	04/12/22 19:58	1
Diesel Range Organics (Over C10-C28)	18.06	J	50.0	15.0	mg/Kg		04/12/22 16:53	04/12/22 19:58	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		04/12/22 16:53	04/12/22 19:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130	04/12/22 16:53	04/12/22 19:58	1
o-Terphenyl	107		70 - 130	04/12/22 16:53	04/12/22 19:58	1

Lab Sample ID: LCS 880-23410/2-A

Matrix: Solid

Analysis Batch: 23357

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23410

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1073		mg/Kg		107	70 - 130
Diesel Range Organics (Over C10-C28)	1000	991.2		mg/Kg		99	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	108		70 - 130

Lab Sample ID: LCSD 880-23410/3-A

Matrix: Solid

Analysis Batch: 23357

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 23410

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1089		mg/Kg		109	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	1000	1009		mg/Kg		101	70 - 130	2	20

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## QC Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2187-1  
SDG: 11224665

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

Lab Sample ID: LCSD 880-23410/3-A

Matrix: Solid

Analysis Batch: 23357

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 23410

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	102		70 - 130
o-Terphenyl	123		70 - 130

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-23421/1-A

Matrix: Solid

Analysis Batch: 23424

Client Sample ID: Method Blank

Prep Type: Soluble

	MB	MB								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
Chloride	<0.858	U	5.00	0.858	mg/Kg			04/13/22 02:08		1

Lab Sample ID: LCS 880-23421/2-A

Matrix: Solid

Analysis Batch: 23424

Client Sample ID: Lab Control Sample

Prep Type: Soluble

			Spike	LCS	LCS				%Rec	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride			250	249.0		mg/Kg		100	90 - 110	

Lab Sample ID: LCSD 880-23421/3-A

Matrix: Solid

Analysis Batch: 23424

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250	242.0		mg/Kg		97	90 - 110	3	20

Lab Sample ID: 890-2187-3 MS

Matrix: Solid

Analysis Batch: 23424

Client Sample ID: BH-15

Prep Type: Soluble

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	385		249	617.2		mg/Kg		93	90 - 110	

Lab Sample ID: 890-2187-3 MSD

Matrix: Solid

Analysis Batch: 23424

Client Sample ID: BH-15

Prep Type: Soluble

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	385		249	613.6		mg/Kg		92	90 - 110	1	20

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## QC Association Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2187-1  
SDG: 11224665

## GC VOA

## Analysis Batch: 23364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2187-1	BH-13	Total/NA	Solid	8021B	23398
890-2187-2	BH-14	Total/NA	Solid	8021B	23398
890-2187-3	BH-15	Total/NA	Solid	8021B	23398
890-2187-4	BH-16	Total/NA	Solid	8021B	23398
890-2187-5	BH-17	Total/NA	Solid	8021B	23398
890-2187-6	8 BH-1	Total/NA	Solid	8021B	23398
890-2187-7	8 SW-1	Total/NA	Solid	8021B	23398
890-2187-8	8 SW-2	Total/NA	Solid	8021B	23398
MB 880-23368/5-A	Method Blank	Total/NA	Solid	8021B	23368
MB 880-23398/5-A	Method Blank	Total/NA	Solid	8021B	23398
LCS 880-23398/1-A	Lab Control Sample	Total/NA	Solid	8021B	23398
LCSD 880-23398/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	23398

## Prep Batch: 23368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-23368/5-A	Method Blank	Total/NA	Solid	5035	

## Prep Batch: 23398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2187-1	BH-13	Total/NA	Solid	5035	
890-2187-2	BH-14	Total/NA	Solid	5035	
890-2187-3	BH-15	Total/NA	Solid	5035	
890-2187-4	BH-16	Total/NA	Solid	5035	
890-2187-5	BH-17	Total/NA	Solid	5035	
890-2187-6	8 BH-1	Total/NA	Solid	5035	
890-2187-7	8 SW-1	Total/NA	Solid	5035	
890-2187-8	8 SW-2	Total/NA	Solid	5035	
MB 880-23398/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-23398/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-23398/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

## Analysis Batch: 23448

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2187-1	BH-13	Total/NA	Solid	Total BTEX	
890-2187-2	BH-14	Total/NA	Solid	Total BTEX	
890-2187-3	BH-15	Total/NA	Solid	Total BTEX	
890-2187-4	BH-16	Total/NA	Solid	Total BTEX	
890-2187-5	BH-17	Total/NA	Solid	Total BTEX	
890-2187-6	8 BH-1	Total/NA	Solid	Total BTEX	
890-2187-7	8 SW-1	Total/NA	Solid	Total BTEX	
890-2187-8	8 SW-2	Total/NA	Solid	Total BTEX	

## GC Semi VOA

## Analysis Batch: 23357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2187-1	BH-13	Total/NA	Solid	8015B NM	23410
890-2187-2	BH-14	Total/NA	Solid	8015B NM	23410
890-2187-3	BH-15	Total/NA	Solid	8015B NM	23410
890-2187-4	BH-16	Total/NA	Solid	8015B NM	23410
890-2187-5	BH-17	Total/NA	Solid	8015B NM	23410

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## QC Association Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2187-1  
SDG: 11224665

## GC Semi VOA (Continued)

## Analysis Batch: 23357 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2187-6	8 BH-1	Total/NA	Solid	8015B NM	23410
890-2187-7	8 SW-1	Total/NA	Solid	8015B NM	23410
890-2187-8	8 SW-2	Total/NA	Solid	8015B NM	23410
MB 880-23410/1-A	Method Blank	Total/NA	Solid	8015B NM	23410
LCS 880-23410/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	23410
LCSD 880-23410/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	23410

## Prep Batch: 23410

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2187-1	BH-13	Total/NA	Solid	8015NM Prep	
890-2187-2	BH-14	Total/NA	Solid	8015NM Prep	
890-2187-3	BH-15	Total/NA	Solid	8015NM Prep	
890-2187-4	BH-16	Total/NA	Solid	8015NM Prep	
890-2187-5	BH-17	Total/NA	Solid	8015NM Prep	
890-2187-6	8 BH-1	Total/NA	Solid	8015NM Prep	
890-2187-7	8 SW-1	Total/NA	Solid	8015NM Prep	
890-2187-8	8 SW-2	Total/NA	Solid	8015NM Prep	
MB 880-23410/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-23410/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-23410/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

## Analysis Batch: 23439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2187-1	BH-13	Total/NA	Solid	8015 NM	
890-2187-2	BH-14	Total/NA	Solid	8015 NM	
890-2187-3	BH-15	Total/NA	Solid	8015 NM	
890-2187-4	BH-16	Total/NA	Solid	8015 NM	
890-2187-5	BH-17	Total/NA	Solid	8015 NM	
890-2187-6	8 BH-1	Total/NA	Solid	8015 NM	
890-2187-7	8 SW-1	Total/NA	Solid	8015 NM	
890-2187-8	8 SW-2	Total/NA	Solid	8015 NM	

## HPLC/IC

## Leach Batch: 23421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2187-1	BH-13	Soluble	Solid	DI Leach	
890-2187-2	BH-14	Soluble	Solid	DI Leach	
890-2187-3	BH-15	Soluble	Solid	DI Leach	
890-2187-4	BH-16	Soluble	Solid	DI Leach	
890-2187-5	BH-17	Soluble	Solid	DI Leach	
890-2187-6	8 BH-1	Soluble	Solid	DI Leach	
890-2187-7	8 SW-1	Soluble	Solid	DI Leach	
890-2187-8	8 SW-2	Soluble	Solid	DI Leach	
MB 880-23421/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-23421/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-23421/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2187-3 MS	BH-15	Soluble	Solid	DI Leach	
890-2187-3 MSD	BH-15	Soluble	Solid	DI Leach	

Eurofins Carlsbad

## QC Association Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2187-1  
SDG: 11224665

## HPLC/IC

## Analysis Batch: 23424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2187-1	BH-13	Soluble	Solid	300.0	23421
890-2187-2	BH-14	Soluble	Solid	300.0	23421
890-2187-3	BH-15	Soluble	Solid	300.0	23421
890-2187-4	BH-16	Soluble	Solid	300.0	23421
890-2187-5	BH-17	Soluble	Solid	300.0	23421
890-2187-6	8 BH-1	Soluble	Solid	300.0	23421
890-2187-7	8 SW-1	Soluble	Solid	300.0	23421
890-2187-8	8 SW-2	Soluble	Solid	300.0	23421
MB 880-23421/1-A	Method Blank	Soluble	Solid	300.0	23421
LCS 880-23421/2-A	Lab Control Sample	Soluble	Solid	300.0	23421
LCSD 880-23421/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	23421
890-2187-3 MS	BH-15	Soluble	Solid	300.0	23421
890-2187-3 MSD	BH-15	Soluble	Solid	300.0	23421

## Lab Chronicle

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2187-1  
SDG: 11224665

Client Sample ID: BH-13

Lab Sample ID: 890-2187-1

Date Collected: 04/12/22 08:00

Matrix: Solid

Date Received: 04/12/22 13:10

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	23398	04/12/22 14:39	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23364	04/13/22 03:26	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23448	04/13/22 10:19	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23439	04/13/22 09:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	23410	04/12/22 16:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23357	04/13/22 02:07	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	23421	04/12/22 17:07	CH	XEN MID
Soluble	Analysis	300.0		1			23424	04/13/22 04:25	CH	XEN MID

Client Sample ID: BH-14

Lab Sample ID: 890-2187-2

Date Collected: 04/12/22 08:30

Matrix: Solid

Date Received: 04/12/22 13:10

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	23398	04/12/22 14:39	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23364	04/13/22 03:47	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23448	04/13/22 10:19	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23439	04/13/22 09:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	23410	04/12/22 16:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23357	04/13/22 02:28	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	23421	04/12/22 17:07	CH	XEN MID
Soluble	Analysis	300.0		1			23424	04/13/22 04:35	CH	XEN MID

Client Sample ID: BH-15

Lab Sample ID: 890-2187-3

Date Collected: 04/12/22 09:00

Matrix: Solid

Date Received: 04/12/22 13:10

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	23398	04/12/22 14:39	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23364	04/13/22 04:07	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23448	04/13/22 10:19	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23439	04/13/22 09:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	23410	04/12/22 16:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23357	04/13/22 02:48	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	23421	04/12/22 17:07	CH	XEN MID
Soluble	Analysis	300.0		1			23424	04/13/22 04:44	CH	XEN MID

Client Sample ID: BH-16

Lab Sample ID: 890-2187-4

Date Collected: 04/12/22 09:30

Matrix: Solid

Date Received: 04/12/22 13:10

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	23398	04/12/22 14:39	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23364	04/13/22 04:28	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23448	04/13/22 10:19	AJ	XEN MID

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## Lab Chronicle

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2187-1  
SDG: 11224665

Client Sample ID: BH-16

Date Collected: 04/12/22 09:30

Date Received: 04/12/22 13:10

Lab Sample ID: 890-2187-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			23439	04/13/22 09:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	23410	04/12/22 16:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23357	04/13/22 03:09	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	23421	04/12/22 17:07	CH	XEN MID
Soluble	Analysis	300.0		1			23424	04/13/22 05:11	CH	XEN MID

Client Sample ID: BH-17

Date Collected: 04/12/22 10:00

Date Received: 04/12/22 13:10

Lab Sample ID: 890-2187-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	23398	04/12/22 14:39	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23364	04/13/22 04:48	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23448	04/13/22 10:19	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23439	04/13/22 09:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	23410	04/12/22 16:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23357	04/13/22 03:30	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	23421	04/12/22 17:07	CH	XEN MID
Soluble	Analysis	300.0		1			23424	04/13/22 05:21	CH	XEN MID

Client Sample ID: 8 BH-1

Date Collected: 04/12/22 12:00

Date Received: 04/12/22 13:10

Lab Sample ID: 890-2187-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	23398	04/12/22 14:39	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23364	04/13/22 05:08	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23448	04/13/22 10:19	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23439	04/13/22 09:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	23410	04/12/22 16:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23357	04/13/22 03:50	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	23421	04/12/22 17:07	CH	XEN MID
Soluble	Analysis	300.0		1			23424	04/13/22 05:48	CH	XEN MID

Client Sample ID: 8 SW-1

Date Collected: 04/12/22 12:05

Date Received: 04/12/22 13:10

Lab Sample ID: 890-2187-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	23398	04/12/22 14:39	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23364	04/13/22 05:29	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23448	04/13/22 10:19	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23439	04/13/22 09:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	23410	04/12/22 16:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23357	04/13/22 04:11	AJ	XEN MID

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## Lab Chronicle

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2187-1  
SDG: 11224665

Client Sample ID: 8 SW-1

Date Collected: 04/12/22 12:05

Date Received: 04/12/22 13:10

Lab Sample ID: 890-2187-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	23421	04/12/22 17:07	CH	XEN MID
Soluble	Analysis	300.0		1			23424	04/13/22 05:57	CH	XEN MID

Client Sample ID: 8 SW-2

Date Collected: 04/12/22 12:10

Date Received: 04/12/22 13:10

Lab Sample ID: 890-2187-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	23398	04/12/22 14:39	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23364	04/13/22 05:49	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23448	04/13/22 10:19	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23439	04/13/22 09:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	23410	04/12/22 16:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23357	04/13/22 04:31	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	23421	04/12/22 17:07	CH	XEN MID
Soluble	Analysis	300.0		1			23424	04/13/22 06:07	CH	XEN MID

## Laboratory References:

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

Accreditation/Certification Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2187-1  
SDG: 11224665

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	T104704400-21-22	06-30-22
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.  
Project/Site: Hunt APO State #1

Job ID: 890-2187-1  
SDG: 11224665

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

### Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

### Laboratory References:

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

## Sample Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2187-1  
SDG: 11224665

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2187-1	BH-13	Solid	04/12/22 08:00	04/12/22 13:10	13
890-2187-2	BH-14	Solid	04/12/22 08:30	04/12/22 13:10	14
890-2187-3	BH-15	Solid	04/12/22 09:00	04/12/22 13:10	15
890-2187-4	BH-16	Solid	04/12/22 09:30	04/12/22 13:10	16
890-2187-5	BH-17	Solid	04/12/22 10:00	04/12/22 13:10	17
890-2187-6	8 BH-1	Solid	04/12/22 12:00	04/12/22 13:10	17
890-2187-7	8 SW-1	Solid	04/12/22 12:05	04/12/22 13:10	1
890-2187-8	8 SW-2	Solid	04/12/22 12:10	04/12/22 13:10	2

**Lakeland, Florida (863-646-8526)**

**Tampa, Florida (813-620-2000)**

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## Page 1 Of 1

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## Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 890-2187-1

SDG Number: 11224665

**Login Number: 2187****List Number: 1****Creator: Clifton, Cloe****List Source: Eurofins Carlsbad**

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

## Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 890-2187-1

SDG Number: 11224665

**Login Number: 2187****List Number: 2****Creator: Carlisle, Spring****List Source: Eurofins Midland****List Creation: 04/12/22 06:13 PM**

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





## Environment Testing America

### ANALYTICAL REPORT

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

Laboratory Job ID: 890-2189-1

Laboratory Sample Delivery Group: 11224665

Client Project/Site: Hunt APO State #1

For:

GHD Services Inc.  
2135 South Loop 250 West  
Midland, Texas 79703

Attn: Becky Haskell

Authorized for release by:

4/15/2022 10:23:35 PM

Jessica Kramer, Project Manager  
(432)704-5440

[Jessica.Kramer@et.eurofinsus.com](mailto:Jessica.Kramer@et.eurofinsus.com)

Designee for

Debbie Simmons, Project Manager  
(832)986-6768

[Debbie.Simmons@et.eurofinsus.com](mailto:Debbie.Simmons@et.eurofinsus.com)

#### LINKS

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

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

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Laboratory Job ID: 890-2189-1  
SDG: 11224665

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## Definitions/Glossary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2189-1  
SDG: 11224665

## Qualifiers

## GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

## GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

## HPLC/IC

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

## Glossary

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

## Case Narrative

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2189-1  
SDG: 11224665

**Job ID: 890-2189-1**

**Laboratory: Eurofins Carlsbad**

**Narrative**

**Job Narrative**  
**890-2189-1**

**Receipt**

The sample was received on 4/14/2022 12:35 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 23.3°C

**GC VOA**

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-23550 and analytical batch 880-23537 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.

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 method blank for preparation batch 880-23575 and analytical batch 880-23584 contained <AffectedAnalytes> above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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

**HPLC/IC**

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

## Client Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2189-1  
SDG: 11224665

Client Sample ID: BH-4A

Lab Sample ID: 890-2189-1

Date Collected: 04/14/22 08:30

Matrix: Solid

Date Received: 04/14/22 12:35

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000387	U **	0.00201	0.000387	mg/Kg		04/14/22 15:16	04/15/22 18:27	1
Toluene	<0.000458	U **	0.00201	0.000458	mg/Kg		04/14/22 15:16	04/15/22 18:27	1
Ethylbenzene	<0.000567	U	0.00201	0.000567	mg/Kg		04/14/22 15:16	04/15/22 18:27	1
m-Xylene & p-Xylene	<0.00101	U	0.00402	0.00101	mg/Kg		04/14/22 15:16	04/15/22 18:27	1
o-Xylene	<0.000345	U	0.00201	0.000345	mg/Kg		04/14/22 15:16	04/15/22 18:27	1
Xylenes, Total	<0.00101	U	0.00402	0.00101	mg/Kg		04/14/22 15:16	04/15/22 18:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	04/14/22 15:16	04/15/22 18:27	1
1,4-Difluorobenzene (Surr)	107		70 - 130	04/14/22 15:16	04/15/22 18:27	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00402	0.00101	mg/Kg			04/15/22 19:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	43.9	J	49.9	15.0	mg/Kg			04/15/22 15:35	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	23.5	J	49.9	15.0	mg/Kg		04/15/22 08:43	04/15/22 12:30	1
Diesel Range Organics (Over C10-C28)	20.4	J B	49.9	15.0	mg/Kg		04/15/22 08:43	04/15/22 12:30	1
Oil Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		04/15/22 08:43	04/15/22 12:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	74		70 - 130	04/15/22 08:43	04/15/22 12:30	1
o-Terphenyl	83		70 - 130	04/15/22 08:43	04/15/22 12:30	1

## Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	499		5.00	0.858	mg/Kg			04/15/22 12:20	1

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## Surrogate Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2189-1  
SDG: 11224665

## 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)
890-2189-1	BH-4A	100	107
890-2189-1 MS	BH-4A	97	106
890-2189-1 MSD	BH-4A	100	107
LCS 880-23550/1-A	Lab Control Sample	97	109
LCSD 880-23550/2-A	Lab Control Sample Dup	98	108
MB 880-23550/5-A	Method Blank	96	103
<b>Surrogate Legend</b>			
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)
890-2189-1	BH-4A	74	83
<b>Surrogate Legend</b>			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

## 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	1CO2 (70-130)	OTPH2 (70-130)
LCS 880-23575/2-A	Lab Control Sample	113	132 S1+
LCSD 880-23575/3-A	Lab Control Sample Dup	100	118
MB 880-23575/1-A	Method Blank	80	96
<b>Surrogate Legend</b>			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

## QC Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2189-1  
SDG: 11224665

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

Lab Sample ID: MB 880-23550/5-A

Matrix: Solid

Analysis Batch: 23537

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23550

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		04/14/22 15:16	04/15/22 17:58	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		04/14/22 15:16	04/15/22 17:58	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		04/14/22 15:16	04/15/22 17:58	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		04/14/22 15:16	04/15/22 17:58	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		04/14/22 15:16	04/15/22 17:58	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		04/14/22 15:16	04/15/22 17:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	04/14/22 15:16	04/15/22 17:58	1
1,4-Difluorobenzene (Surr)	103		70 - 130	04/14/22 15:16	04/15/22 17:58	1

Lab Sample ID: LCS 880-23550/1-A

Matrix: Solid

Analysis Batch: 23537

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23550

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1372	*+	mg/Kg		137	70 - 130
Toluene	0.100	0.1329	*+	mg/Kg		133	70 - 130
Ethylbenzene	0.100	0.1215		mg/Kg		121	70 - 130
m-Xylene & p-Xylene	0.200	0.2467		mg/Kg		123	70 - 130
o-Xylene	0.100	0.1153		mg/Kg		115	70 - 130

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

Lab Sample ID: LCSD 880-23550/2-A

Matrix: Solid

Analysis Batch: 23537

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 23550

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1435	*+	mg/Kg		144	70 - 130	4	35
Toluene	0.100	0.1405	*+	mg/Kg		140	70 - 130	6	35
Ethylbenzene	0.100	0.1275		mg/Kg		128	70 - 130	5	35
m-Xylene & p-Xylene	0.200	0.2607		mg/Kg		130	70 - 130	5	35
o-Xylene	0.100	0.1218		mg/Kg		122	70 - 130	6	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

Lab Sample ID: 890-2189-1 MS

Matrix: Solid

Analysis Batch: 23537

Client Sample ID: BH-4A

Prep Type: Total/NA

Prep Batch: 23550

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.000387	U *	0.0996	0.1084		mg/Kg		109	70 - 130
Toluene	<0.000458	U *	0.0996	0.1043		mg/Kg		105	70 - 130

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## QC Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2189-1  
SDG: 11224665

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

Lab Sample ID: 890-2189-1 MS

Matrix: Solid

Analysis Batch: 23537

Client Sample ID: BH-4A

Prep Type: Total/NA

Prep Batch: 23550

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.000567	U	0.0996	0.09248		mg/Kg		93	70 - 130
m-Xylene & p-Xylene	<0.00101	U	0.199	0.1888		mg/Kg		95	70 - 130
o-Xylene	<0.000345	U	0.0996	0.08964		mg/Kg		90	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	106		70 - 130

Lab Sample ID: 890-2189-1 MSD

Matrix: Solid

Analysis Batch: 23537

Client Sample ID: BH-4A

Prep Type: Total/NA

Prep Batch: 23550

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.000387	U *	0.0994	0.1172		mg/Kg		118	70 - 130	8	35
Toluene	<0.000458	U *	0.0994	0.1174		mg/Kg		118	70 - 130	12	35
Ethylbenzene	<0.000567	U	0.0994	0.1046		mg/Kg		105	70 - 130	12	35
m-Xylene & p-Xylene	<0.00101	U	0.199	0.2148		mg/Kg		108	70 - 130	13	35
o-Xylene	<0.000345	U	0.0994	0.1009		mg/Kg		102	70 - 130	12	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

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

Lab Sample ID: MB 880-23575/1-A

Matrix: Solid

Analysis Batch: 23584

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23575

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		04/15/22 08:43	04/15/22 10:24	1
Diesel Range Organics (Over C10-C28)	20.95	J	50.0	15.0	mg/Kg		04/15/22 08:43	04/15/22 10:24	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		04/15/22 08:43	04/15/22 10:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	80		70 - 130	04/15/22 08:43	04/15/22 10:24	1
o-Terphenyl	96		70 - 130	04/15/22 08:43	04/15/22 10:24	1

Lab Sample ID: LCS 880-23575/2-A

Matrix: Solid

Analysis Batch: 23584

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23575

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	977.3		mg/Kg		98	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1032		mg/Kg		103	70 - 130

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## QC Sample Results

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2189-1  
SDG: 11224665

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

Lab Sample ID: LCS 880-23575/2-A

Matrix: Solid

Analysis Batch: 23584

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23575

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	113		70 - 130
o-Terphenyl	132	S1+	70 - 130

Lab Sample ID: LCSD 880-23575/3-A

Matrix: Solid

Analysis Batch: 23584

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 23575

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1072		mg/Kg		107	70 - 130	9	20
Diesel Range Organics (Over C10-C28)	1000	910.6		mg/Kg		91	70 - 130	13	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	118		70 - 130

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-23553/1-A

Matrix: Solid

Analysis Batch: 23588

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.858	U	5.00	0.858	mg/Kg			04/14/22 21:22	1

Lab Sample ID: LCS 880-23553/2-A

Matrix: Solid

Analysis Batch: 23588

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	250	248.2		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-23553/3-A

Matrix: Solid

Analysis Batch: 23588

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	247.7		mg/Kg		99	90 - 110	0	20

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## QC Association Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2189-1  
SDG: 11224665

## GC VOA

## Analysis Batch: 23537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2189-1	BH-4A	Total/NA	Solid	8021B	23550
MB 880-23550/5-A	Method Blank	Total/NA	Solid	8021B	23550
LCS 880-23550/1-A	Lab Control Sample	Total/NA	Solid	8021B	23550
LCSD 880-23550/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	23550
890-2189-1 MS	BH-4A	Total/NA	Solid	8021B	23550
890-2189-1 MSD	BH-4A	Total/NA	Solid	8021B	23550

## Prep Batch: 23550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2189-1	BH-4A	Total/NA	Solid	5035	
MB 880-23550/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-23550/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-23550/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2189-1 MS	BH-4A	Total/NA	Solid	5035	
890-2189-1 MSD	BH-4A	Total/NA	Solid	5035	

## Analysis Batch: 23673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2189-1	BH-4A	Total/NA	Solid	Total BTEX	

## GC Semi VOA

## Prep Batch: 23575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2189-1	BH-4A	Total/NA	Solid	8015NM Prep	
MB 880-23575/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-23575/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-23575/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

## Analysis Batch: 23584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2189-1	BH-4A	Total/NA	Solid	8015B NM	23575
MB 880-23575/1-A	Method Blank	Total/NA	Solid	8015B NM	23575
LCS 880-23575/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	23575
LCSD 880-23575/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	23575

## Analysis Batch: 23658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2189-1	BH-4A	Total/NA	Solid	8015 NM	

## HPLC/IC

## Leach Batch: 23553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2189-1	BH-4A	Soluble	Solid	DI Leach	
MB 880-23553/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-23553/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-23553/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

## Analysis Batch: 23588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2189-1	BH-4A	Soluble	Solid	300.0	23553

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QC Association Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2189-1  
SDG: 11224665

HPLC/IC (Continued)

Analysis Batch: 23588 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-23553/1-A	Method Blank	Soluble	Solid	300.0	23553
LCS 880-23553/2-A	Lab Control Sample	Soluble	Solid	300.0	23553
LCSD 880-23553/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	23553

- 1
- 2
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- 12
- 13
- 14

Lab Chronicle

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2189-1  
SDG: 11224665

Client Sample ID: BH-4A  
Date Collected: 04/14/22 08:30  
Date Received: 04/14/22 12:35

Lab Sample ID: 890-2189-1  
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	23550	04/14/22 15:16	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23537	04/15/22 18:27	AJ	XEN MID
Total/NA	Analysis	Total BTEX		1			23673	04/15/22 19:23	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23658	04/15/22 15:35	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	23575	04/15/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23584	04/15/22 12:30	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	23553	04/15/22 12:00	SC	XEN MID
Soluble	Analysis	300.0		1			23588	04/15/22 12:20	CH	XEN MID

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

Accreditation/Certification Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2189-1  
SDG: 11224665

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	T104704400-21-22	06-30-22

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.  
Project/Site: Hunt APO State #1

Job ID: 890-2189-1  
SDG: 11224665

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

**Protocol References:**

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

**Laboratory References:**

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



Sample Summary

Client: GHD Services Inc.  
Project/Site: Hunt APO State #1

Job ID: 890-2189-1  
SDG: 11224665

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
890-2189-1	BH-4A	Solid	04/14/22 08:30	04/14/22 12:35

- 1
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- 14



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Lakeland, Florida (863-646-8526)  
Tampa, Florida (813-620-2000)

Xenco Quote #

Xenco Job #

Client / Reporting Information		Project Information		Analytical Information		Matrix Codes	
Company Name / Branch: GHC/Midland		Project Name/Number: Hunt APO State #1 / 11224665					
Company Address: 2135 S. Loop 250 West Midland TX		Project Location: Eddy County, New Mexico					
Email: becky.haskell@qnd.com Matthew.laughlin@qnd.com James.kennedy@georesources.com Project Contact: Becky Haskell / Glenn Quinney		Phone No: (432)350-7917 Zach.comino@qnd.com tom.larson@qnd.com		Invoice To: EOG / James Kennedy			
Sampler's Name Zach Comino		PO Number: NA					
No.	Field ID / Point of Collection	Collection		Number of preserved bottles		Field Comments	
		Sample Depth	Date	Time	Matrix	# of bottles	
1	BL-4A		04/12/22	08:50	S	1	
2							
3							
4							
5							
6							
7							
8							
9							
10							
Turnaround Time (Business days)		Data Deliverable Information					
<input checked="" type="checkbox"/> Same Day TAT		<input type="checkbox"/> 5 Day TAT		<input type="checkbox"/> Level II Std QC		<input type="checkbox"/> Level IV (Full Data Pkg /raw data)	
<input type="checkbox"/> Next Day EMERGENCY		<input type="checkbox"/> 7 Day TAT		<input type="checkbox"/> Level III Std QC+ Forms		<input type="checkbox"/> TRRP Level IV	
<input type="checkbox"/> 2 Day EMERGENCY		<input type="checkbox"/> Contract TAT		<input type="checkbox"/> Level 3 (CLP Forms)		<input type="checkbox"/> UST / RG -411	
<input type="checkbox"/> 3 Day EMERGENCY				<input type="checkbox"/> TRRP Checklist			
TAT Starts Day received by Lab, if received by 5:00 pm		Report MDLs and J values.					
Relinquished by Sampler:		Date Time:		Received By:		Date Time:	
1. Zach Comino		04/12/22		Glenn Quinney		4:14:00	
Relinquished by:		Date Time:		Received By:		Date Time:	
3				3			
Relinquished by:		Date Time:		Received By:		Date Time:	
6				6			
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless previously negotiated under a fully executed client agreement.		Custody Seal #		Preserved where applicable		On Ice Cooler Temp. Thermo. Corr. Factor	
		4		4		-1.7m003 -0.2 23.5	



890-2189 Chain of Custody

## Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 890-2189-1

SDG Number: 11224665

Login Number: 2189

List Number: 1

Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

## Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 890-2189-1

SDG Number: 11224665

Login Number: 2189

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 04/15/22 10:59 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  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

November 04, 2022

Nate Reece  
GHD Midland  
2135 S Loop 250 W  
Midland, TX 79703  
TEL: (432) 686-0086  
FAX:

RE: Hunt APO State 1

OrderNo.: 2210D58

Dear Nate Reece:

Hall Environmental Analysis Laboratory received 33 sample(s) on 10/27/2022 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](http://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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH13

Project: Hunt APO State 1

Collection Date: 10/25/2022 12:00:00 PM

Lab ID: 2210D58-001

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	520	59		mg/Kg	20	11/1/2022 8:41:12 PM	71218
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/31/2022 10:58:32 PM	71171
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/31/2022 10:58:32 PM	71171
Surr: DNOP	98.4	21-129		%Rec	1	10/31/2022 10:58:32 PM	71171
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/29/2022 2:05:00 PM	71125
Surr: BFB	93.4	37.7-212		%Rec	1	10/29/2022 2:05:00 PM	71125
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.023		mg/Kg	1	10/29/2022 2:05:00 PM	71125
Toluene	ND	0.046		mg/Kg	1	10/29/2022 2:05:00 PM	71125
Ethylbenzene	ND	0.046		mg/Kg	1	10/29/2022 2:05:00 PM	71125
Xylenes, Total	ND	0.091		mg/Kg	1	10/29/2022 2:05:00 PM	71125
Surr: 4-Bromofluorobenzene	117	70-130		%Rec	1	10/29/2022 2:05:00 PM	71125

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH14

Project: Hunt APO State 1

Collection Date: 10/25/2022 12:05:00 PM

Lab ID: 2210D58-002

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	500	60		mg/Kg	20	11/1/2022 8:53:36 PM	71218
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/31/2022 11:09:05 PM	71171
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/31/2022 11:09:05 PM	71171
Surr: DNOP	99.8	21-129		%Rec	1	10/31/2022 11:09:05 PM	71171
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/29/2022 2:25:00 PM	71125
Surr: BFB	101	37.7-212		%Rec	1	10/29/2022 2:25:00 PM	71125
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.024		mg/Kg	1	10/29/2022 2:25:00 PM	71125
Toluene	ND	0.049		mg/Kg	1	10/29/2022 2:25:00 PM	71125
Ethylbenzene	ND	0.049		mg/Kg	1	10/29/2022 2:25:00 PM	71125
Xylenes, Total	ND	0.098		mg/Kg	1	10/29/2022 2:25:00 PM	71125
Surr: 4-Bromofluorobenzene	117	70-130		%Rec	1	10/29/2022 2:25:00 PM	71125

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH15

Project: Hunt APO State 1

Collection Date: 10/25/2022 12:10:00 PM

Lab ID: 2210D58-003

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	670	60		mg/Kg	20	11/1/2022 9:06:00 PM	71218
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/31/2022 6:53:50 PM	71174
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/31/2022 6:53:50 PM	71174
Surr: DNOP	98.2	21-129		%Rec	1	10/31/2022 6:53:50 PM	71174
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/29/2022 3:04:00 PM	71125
Surr: BFB	102	37.7-212		%Rec	1	10/29/2022 3:04:00 PM	71125
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.023		mg/Kg	1	10/29/2022 3:04:00 PM	71125
Toluene	ND	0.047		mg/Kg	1	10/29/2022 3:04:00 PM	71125
Ethylbenzene	ND	0.047		mg/Kg	1	10/29/2022 3:04:00 PM	71125
Xylenes, Total	ND	0.093		mg/Kg	1	10/29/2022 3:04:00 PM	71125
Surr: 4-Bromofluorobenzene	120	70-130		%Rec	1	10/29/2022 3:04:00 PM	71125

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH16

Project: Hunt APO State 1

Collection Date: 10/25/2022 12:15:00 PM

Lab ID: 2210D58-004

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	680	60		mg/Kg	20	11/1/2022 9:18:25 PM	71218
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	10/31/2022 7:04:37 PM	71174
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/31/2022 7:04:37 PM	71174
Surr: DNOP	98.9	21-129		%Rec	1	10/31/2022 7:04:37 PM	71174
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/29/2022 3:24:00 PM	71125
Surr: BFB	102	37.7-212		%Rec	1	10/29/2022 3:24:00 PM	71125
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.024		mg/Kg	1	10/29/2022 3:24:00 PM	71125
Toluene	ND	0.048		mg/Kg	1	10/29/2022 3:24:00 PM	71125
Ethylbenzene	ND	0.048		mg/Kg	1	10/29/2022 3:24:00 PM	71125
Xylenes, Total	ND	0.097		mg/Kg	1	10/29/2022 3:24:00 PM	71125
Surr: 4-Bromofluorobenzene	119	70-130		%Rec	1	10/29/2022 3:24:00 PM	71125

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH17

Project: Hunt APO State 1

Collection Date: 10/25/2022 12:20:00 PM

Lab ID: 2210D58-005

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	190	60		mg/Kg	20	11/1/2022 9:30:50 PM	71218
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/31/2022 7:15:24 PM	71174
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/31/2022 7:15:24 PM	71174
Surr: DNOP	95.8	21-129		%Rec	1	10/31/2022 7:15:24 PM	71174
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/29/2022 3:44:00 PM	71125
Surr: BFB	104	37.7-212		%Rec	1	10/29/2022 3:44:00 PM	71125
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.024		mg/Kg	1	10/29/2022 3:44:00 PM	71125
Toluene	ND	0.049		mg/Kg	1	10/29/2022 3:44:00 PM	71125
Ethylbenzene	ND	0.049		mg/Kg	1	10/29/2022 3:44:00 PM	71125
Xylenes, Total	ND	0.097		mg/Kg	1	10/29/2022 3:44:00 PM	71125
Surr: 4-Bromofluorobenzene	121	70-130		%Rec	1	10/29/2022 3:44:00 PM	71125

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH18

Project: Hunt APO State 1

Collection Date: 10/25/2022 12:25:00 PM

Lab ID: 2210D58-006

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	120	60		mg/Kg	20	11/1/2022 10:08:04 PM	71218
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	10/31/2022 7:26:10 PM	71174
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/31/2022 7:26:10 PM	71174
Surr: DNOP	96.4	21-129		%Rec	1	10/31/2022 7:26:10 PM	71174
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/29/2022 4:04:00 PM	71125
Surr: BFB	101	37.7-212		%Rec	1	10/29/2022 4:04:00 PM	71125
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.024		mg/Kg	1	10/29/2022 4:04:00 PM	71125
Toluene	ND	0.047		mg/Kg	1	10/29/2022 4:04:00 PM	71125
Ethylbenzene	ND	0.047		mg/Kg	1	10/29/2022 4:04:00 PM	71125
Xylenes, Total	ND	0.095		mg/Kg	1	10/29/2022 4:04:00 PM	71125
Surr: 4-Bromofluorobenzene	119	70-130		%Rec	1	10/29/2022 4:04:00 PM	71125

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH19

Project: Hunt APO State 1

Collection Date: 10/25/2022 12:30:00 PM

Lab ID: 2210D58-007

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	60	60		mg/Kg	20	11/1/2022 10:20:29 PM	71218
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/31/2022 7:36:54 PM	71174
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/31/2022 7:36:54 PM	71174
Surr: DNOP	95.7	21-129		%Rec	1	10/31/2022 7:36:54 PM	71174
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/29/2022 4:23:00 PM	71125
Surr: BFB	104	37.7-212		%Rec	1	10/29/2022 4:23:00 PM	71125
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.024		mg/Kg	1	10/29/2022 4:23:00 PM	71125
Toluene	ND	0.048		mg/Kg	1	10/29/2022 4:23:00 PM	71125
Ethylbenzene	ND	0.048		mg/Kg	1	10/29/2022 4:23:00 PM	71125
Xylenes, Total	ND	0.097		mg/Kg	1	10/29/2022 4:23:00 PM	71125
Surr: 4-Bromofluorobenzene	114	70-130		%Rec	1	10/29/2022 4:23:00 PM	71125

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH20

Project: Hunt APO State 1

Collection Date: 10/25/2022 12:35:00 PM

Lab ID: 2210D58-008

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	480	60		mg/Kg	20	11/1/2022 10:32:53 PM	71218
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/31/2022 7:58:16 PM	71174
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/31/2022 7:58:16 PM	71174
Surr: DNOP	94.5	21-129		%Rec	1	10/31/2022 7:58:16 PM	71174
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/29/2022 4:43:00 PM	71125
Surr: BFB	94.7	37.7-212		%Rec	1	10/29/2022 4:43:00 PM	71125
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.023		mg/Kg	1	10/29/2022 4:43:00 PM	71125
Toluene	ND	0.046		mg/Kg	1	10/29/2022 4:43:00 PM	71125
Ethylbenzene	ND	0.046		mg/Kg	1	10/29/2022 4:43:00 PM	71125
Xylenes, Total	ND	0.091		mg/Kg	1	10/29/2022 4:43:00 PM	71125
Surr: 4-Bromofluorobenzene	117	70-130		%Rec	1	10/29/2022 4:43:00 PM	71125

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH21

Project: Hunt APO State 1

Collection Date: 10/25/2022 12:40:00 PM

Lab ID: 2210D58-009

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	180	60		mg/Kg	20	11/1/2022 10:45:17 PM	71218
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	10/31/2022 8:08:59 PM	71174
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/31/2022 8:08:59 PM	71174
Surr: DNOP	97.0	21-129		%Rec	1	10/31/2022 8:08:59 PM	71174
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/29/2022 5:03:00 PM	71125
Surr: BFB	98.1	37.7-212		%Rec	1	10/29/2022 5:03:00 PM	71125
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.025		mg/Kg	1	10/29/2022 5:03:00 PM	71125
Toluene	ND	0.050		mg/Kg	1	10/29/2022 5:03:00 PM	71125
Ethylbenzene	ND	0.050		mg/Kg	1	10/29/2022 5:03:00 PM	71125
Xylenes, Total	ND	0.10		mg/Kg	1	10/29/2022 5:03:00 PM	71125
Surr: 4-Bromofluorobenzene	116	70-130		%Rec	1	10/29/2022 5:03:00 PM	71125

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH22

Project: Hunt APO State 1

Collection Date: 10/25/2022 12:45:00 PM

Lab ID: 2210D58-010

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	72	60		mg/Kg	20	11/1/2022 11:22:30 PM	71220
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/31/2022 8:19:57 PM	71174
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/31/2022 8:19:57 PM	71174
Surr: DNOP	95.8	21-129		%Rec	1	10/31/2022 8:19:57 PM	71174
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/29/2022 5:22:00 PM	71125
Surr: BFB	98.5	37.7-212		%Rec	1	10/29/2022 5:22:00 PM	71125
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.023		mg/Kg	1	10/29/2022 5:22:00 PM	71125
Toluene	ND	0.047		mg/Kg	1	10/29/2022 5:22:00 PM	71125
Ethylbenzene	ND	0.047		mg/Kg	1	10/29/2022 5:22:00 PM	71125
Xylenes, Total	ND	0.093		mg/Kg	1	10/29/2022 5:22:00 PM	71125
Surr: 4-Bromofluorobenzene	118	70-130		%Rec	1	10/29/2022 5:22:00 PM	71125

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH23

Project: Hunt APO State 1

Collection Date: 10/25/2022 12:50:00 PM

Lab ID: 2210D58-011

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	120	59		mg/Kg	20	11/1/2022 11:59:42 PM	71220
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	10/31/2022 8:30:37 PM	71174
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/31/2022 8:30:37 PM	71174
Surr: DNOP	92.7	21-129		%Rec	1	10/31/2022 8:30:37 PM	71174
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/29/2022 5:42:00 PM	71125
Surr: BFB	98.2	37.7-212		%Rec	1	10/29/2022 5:42:00 PM	71125
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.025		mg/Kg	1	10/29/2022 5:42:00 PM	71125
Toluene	ND	0.050		mg/Kg	1	10/29/2022 5:42:00 PM	71125
Ethylbenzene	ND	0.050		mg/Kg	1	10/29/2022 5:42:00 PM	71125
Xylenes, Total	ND	0.10		mg/Kg	1	10/29/2022 5:42:00 PM	71125
Surr: 4-Bromofluorobenzene	119	70-130		%Rec	1	10/29/2022 5:42:00 PM	71125

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH24

Project: Hunt APO State 1

Collection Date: 10/25/2022 12:55:00 PM

Lab ID: 2210D58-012

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	690	60		mg/Kg	20	11/2/2022 1:01:43 AM	71220
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	10/31/2022 8:41:15 PM	71174
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/31/2022 8:41:15 PM	71174
Surr: DNOP	99.4	21-129		%Rec	1	10/31/2022 8:41:15 PM	71174
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/29/2022 6:02:00 PM	71125
Surr: BFB	100	37.7-212		%Rec	1	10/29/2022 6:02:00 PM	71125
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.025		mg/Kg	1	10/29/2022 6:02:00 PM	71125
Toluene	ND	0.049		mg/Kg	1	10/29/2022 6:02:00 PM	71125
Ethylbenzene	ND	0.049		mg/Kg	1	10/29/2022 6:02:00 PM	71125
Xylenes, Total	ND	0.098		mg/Kg	1	10/29/2022 6:02:00 PM	71125
Surr: 4-Bromofluorobenzene	119	70-130		%Rec	1	10/29/2022 6:02:00 PM	71125

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH25

Project: Hunt APO State 1

Collection Date: 10/25/2022 1:00:00 PM

Lab ID: 2210D58-013

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	530	60		mg/Kg	20	11/2/2022 1:14:07 AM	71220
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/31/2022 8:51:52 PM	71174
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/31/2022 8:51:52 PM	71174
Surr: DNOP	99.1	21-129		%Rec	1	10/31/2022 8:51:52 PM	71174
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/31/2022 12:31:15 PM	71130
Surr: BFB	91.0	37.7-212		%Rec	1	10/31/2022 12:31:15 PM	71130
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	10/31/2022 12:31:15 PM	71130
Toluene	ND	0.047		mg/Kg	1	10/31/2022 12:31:15 PM	71130
Ethylbenzene	ND	0.047		mg/Kg	1	10/31/2022 12:31:15 PM	71130
Xylenes, Total	ND	0.093		mg/Kg	1	10/31/2022 12:31:15 PM	71130
Surr: 4-Bromofluorobenzene	96.7	70-130		%Rec	1	10/31/2022 12:31:15 PM	71130

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH1

Project: Hunt APO State 1

Collection Date: 10/25/2022 1:05:00 PM

Lab ID: 2210D58-014

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	410	60		mg/Kg	20	11/2/2022 1:26:32 AM	71220
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	10/31/2022 9:02:28 PM	71174
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/31/2022 9:02:28 PM	71174
Surr: DNOP	98.5	21-129		%Rec	1	10/31/2022 9:02:28 PM	71174
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/31/2022 2:52:41 PM	71130
Surr: BFB	94.1	37.7-212		%Rec	1	10/31/2022 2:52:41 PM	71130
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	10/31/2022 2:52:41 PM	71130
Toluene	ND	0.049		mg/Kg	1	10/31/2022 2:52:41 PM	71130
Ethylbenzene	ND	0.049		mg/Kg	1	10/31/2022 2:52:41 PM	71130
Xylenes, Total	ND	0.099		mg/Kg	1	10/31/2022 2:52:41 PM	71130
Surr: 4-Bromofluorobenzene	99.1	70-130		%Rec	1	10/31/2022 2:52:41 PM	71130

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH2

Project: Hunt APO State 1

Collection Date: 10/25/2022 1:10:00 PM

Lab ID: 2210D58-015

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	640	60		mg/Kg	20	11/2/2022 1:38:56 AM	71220
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	10/31/2022 9:13:03 PM	71174
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/31/2022 9:13:03 PM	71174
Surr: DNOP	98.4	21-129		%Rec	1	10/31/2022 9:13:03 PM	71174
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/31/2022 4:03:22 PM	71130
Surr: BFB	91.6	37.7-212		%Rec	1	10/31/2022 4:03:22 PM	71130
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	10/31/2022 4:03:22 PM	71130
Toluene	ND	0.047		mg/Kg	1	10/31/2022 4:03:22 PM	71130
Ethylbenzene	ND	0.047		mg/Kg	1	10/31/2022 4:03:22 PM	71130
Xylenes, Total	ND	0.094		mg/Kg	1	10/31/2022 4:03:22 PM	71130
Surr: 4-Bromofluorobenzene	96.7	70-130		%Rec	1	10/31/2022 4:03:22 PM	71130

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH3

Project: Hunt APO State 1

Collection Date: 10/25/2022 1:15:00 PM

Lab ID: 2210D58-016

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	1100	61		mg/Kg	20	11/2/2022 1:51:20 AM	71220
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	10/31/2022 9:23:36 PM	71174
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/31/2022 9:23:36 PM	71174
Surr: DNOP	93.3	21-129		%Rec	1	10/31/2022 9:23:36 PM	71174
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/31/2022 4:26:42 PM	71130
Surr: BFB	93.5	37.7-212		%Rec	1	10/31/2022 4:26:42 PM	71130
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/31/2022 4:26:42 PM	71130
Toluene	ND	0.049		mg/Kg	1	10/31/2022 4:26:42 PM	71130
Ethylbenzene	ND	0.049		mg/Kg	1	10/31/2022 4:26:42 PM	71130
Xylenes, Total	ND	0.098		mg/Kg	1	10/31/2022 4:26:42 PM	71130
Surr: 4-Bromofluorobenzene	98.8	70-130		%Rec	1	10/31/2022 4:26:42 PM	71130

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH4

Project: Hunt APO State 1

Collection Date: 10/25/2022 1:20:00 PM

Lab ID: 2210D58-017

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	1300	60		mg/Kg	20	11/2/2022 2:03:44 AM	71220
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/31/2022 9:34:10 PM	71174
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/31/2022 9:34:10 PM	71174
Surr: DNOP	92.5	21-129		%Rec	1	10/31/2022 9:34:10 PM	71174
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/31/2022 4:50:05 PM	71130
Surr: BFB	93.4	37.7-212		%Rec	1	10/31/2022 4:50:05 PM	71130
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/31/2022 4:50:05 PM	71130
Toluene	ND	0.047		mg/Kg	1	10/31/2022 4:50:05 PM	71130
Ethylbenzene	ND	0.047		mg/Kg	1	10/31/2022 4:50:05 PM	71130
Xylenes, Total	ND	0.095		mg/Kg	1	10/31/2022 4:50:05 PM	71130
Surr: 4-Bromofluorobenzene	98.9	70-130		%Rec	1	10/31/2022 4:50:05 PM	71130

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH5

Project: Hunt APO State 1

Collection Date: 10/25/2022 1:25:00 PM

Lab ID: 2210D58-018

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	820	60		mg/Kg	20	11/2/2022 2:16:09 AM	71220
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/31/2022 9:44:47 PM	71174
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/31/2022 9:44:47 PM	71174
Surr: DNOP	97.8	21-129		%Rec	1	10/31/2022 9:44:47 PM	71174
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/31/2022 5:13:23 PM	71130
Surr: BFB	90.2	37.7-212		%Rec	1	10/31/2022 5:13:23 PM	71130
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	10/31/2022 5:13:23 PM	71130
Toluene	ND	0.050		mg/Kg	1	10/31/2022 5:13:23 PM	71130
Ethylbenzene	ND	0.050		mg/Kg	1	10/31/2022 5:13:23 PM	71130
Xylenes, Total	ND	0.10		mg/Kg	1	10/31/2022 5:13:23 PM	71130
Surr: 4-Bromofluorobenzene	96.4	70-130		%Rec	1	10/31/2022 5:13:23 PM	71130

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH6

Project: Hunt APO State 1

Collection Date: 10/25/2022 1:30:00 PM

Lab ID: 2210D58-019

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	440	60		mg/Kg	20	11/2/2022 2:28:33 AM	71220
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/31/2022 9:55:21 PM	71174
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/31/2022 9:55:21 PM	71174
Surr: DNOP	91.9	21-129		%Rec	1	10/31/2022 9:55:21 PM	71174
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/31/2022 5:36:48 PM	71130
Surr: BFB	90.7	37.7-212		%Rec	1	10/31/2022 5:36:48 PM	71130
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	10/31/2022 5:36:48 PM	71130
Toluene	ND	0.050		mg/Kg	1	10/31/2022 5:36:48 PM	71130
Ethylbenzene	ND	0.050		mg/Kg	1	10/31/2022 5:36:48 PM	71130
Xylenes, Total	ND	0.099		mg/Kg	1	10/31/2022 5:36:48 PM	71130
Surr: 4-Bromofluorobenzene	96.4	70-130		%Rec	1	10/31/2022 5:36:48 PM	71130

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH7

Project: Hunt APO State 1

Collection Date: 10/25/2022 1:35:00 PM

Lab ID: 2210D58-020

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	1300	60		mg/Kg	20	11/2/2022 3:05:46 AM	71220
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	10/31/2022 10:05:55 PM	71174
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/31/2022 10:05:55 PM	71174
Surr: DNOP	109	21-129		%Rec	1	10/31/2022 10:05:55 PM	71174
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/31/2022 6:00:15 PM	71130
Surr: BFB	87.5	37.7-212		%Rec	1	10/31/2022 6:00:15 PM	71130
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	10/31/2022 6:00:15 PM	71130
Toluene	ND	0.046		mg/Kg	1	10/31/2022 6:00:15 PM	71130
Ethylbenzene	ND	0.046		mg/Kg	1	10/31/2022 6:00:15 PM	71130
Xylenes, Total	ND	0.092		mg/Kg	1	10/31/2022 6:00:15 PM	71130
Surr: 4-Bromofluorobenzene	93.1	70-130		%Rec	1	10/31/2022 6:00:15 PM	71130

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH8

Project: Hunt APO State 1

Collection Date: 10/25/2022 1:40:00 PM

Lab ID: 2210D58-021

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	910	59		mg/Kg	20	11/2/2022 3:18:11 AM	71220
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/31/2022 10:16:26 PM	71174
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/31/2022 10:16:26 PM	71174
Surr: DNOP	92.8	21-129		%Rec	1	10/31/2022 10:16:26 PM	71174
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/31/2022 6:23:52 PM	71130
Surr: BFB	88.9	37.7-212		%Rec	1	10/31/2022 6:23:52 PM	71130
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/31/2022 6:23:52 PM	71130
Toluene	ND	0.048		mg/Kg	1	10/31/2022 6:23:52 PM	71130
Ethylbenzene	ND	0.048		mg/Kg	1	10/31/2022 6:23:52 PM	71130
Xylenes, Total	ND	0.096		mg/Kg	1	10/31/2022 6:23:52 PM	71130
Surr: 4-Bromofluorobenzene	94.9	70-130		%Rec	1	10/31/2022 6:23:52 PM	71130

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH9

Project: Hunt APO State 1

Collection Date: 10/25/2022 1:45:00 PM

Lab ID: 2210D58-022

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	1900	60		mg/Kg	20	11/2/2022 3:30:35 AM	71220
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	70	14		mg/Kg	1	10/31/2022 7:22:35 PM	71176
Motor Oil Range Organics (MRO)	140	48		mg/Kg	1	10/31/2022 7:22:35 PM	71176
Surr: DNOP	101	21-129		%Rec	1	10/31/2022 7:22:35 PM	71176
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/31/2022 6:47:27 PM	71130
Surr: BFB	88.1	37.7-212		%Rec	1	10/31/2022 6:47:27 PM	71130
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	10/31/2022 6:47:27 PM	71130
Toluene	ND	0.049		mg/Kg	1	10/31/2022 6:47:27 PM	71130
Ethylbenzene	ND	0.049		mg/Kg	1	10/31/2022 6:47:27 PM	71130
Xylenes, Total	ND	0.098		mg/Kg	1	10/31/2022 6:47:27 PM	71130
Surr: 4-Bromofluorobenzene	93.2	70-130		%Rec	1	10/31/2022 6:47:27 PM	71130

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH10

Project: Hunt APO State 1

Collection Date: 10/25/2022 1:50:00 PM

Lab ID: 2210D58-023

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	1200	60		mg/Kg	20	11/2/2022 3:42:59 AM	71220
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	110	14		mg/Kg	1	10/31/2022 8:33:29 PM	71176
Motor Oil Range Organics (MRO)	170	47		mg/Kg	1	10/31/2022 8:33:29 PM	71176
Surr: DNOP	97.5	21-129		%Rec	1	10/31/2022 8:33:29 PM	71176
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/31/2022 7:10:58 PM	71130
Surr: BFB	88.7	37.7-212		%Rec	1	10/31/2022 7:10:58 PM	71130
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	10/31/2022 7:10:58 PM	71130
Toluene	ND	0.050		mg/Kg	1	10/31/2022 7:10:58 PM	71130
Ethylbenzene	ND	0.050		mg/Kg	1	10/31/2022 7:10:58 PM	71130
Xylenes, Total	ND	0.099		mg/Kg	1	10/31/2022 7:10:58 PM	71130
Surr: 4-Bromofluorobenzene	93.8	70-130		%Rec	1	10/31/2022 7:10:58 PM	71130

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH11

Project: Hunt APO State 1

Collection Date: 10/25/2022 1:55:00 PM

Lab ID: 2210D58-024

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	840	59		mg/Kg	20	11/2/2022 3:55:24 AM	71220
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/31/2022 8:57:06 PM	71176
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/31/2022 8:57:06 PM	71176
Surr: DNOP	93.5	21-129		%Rec	1	10/31/2022 8:57:06 PM	71176
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/31/2022 8:21:52 PM	71130
Surr: BFB	89.6	37.7-212		%Rec	1	10/31/2022 8:21:52 PM	71130
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/31/2022 8:21:52 PM	71130
Toluene	ND	0.048		mg/Kg	1	10/31/2022 8:21:52 PM	71130
Ethylbenzene	ND	0.048		mg/Kg	1	10/31/2022 8:21:52 PM	71130
Xylenes, Total	ND	0.096		mg/Kg	1	10/31/2022 8:21:52 PM	71130
Surr: 4-Bromofluorobenzene	95.0	70-130		%Rec	1	10/31/2022 8:21:52 PM	71130

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH12

Project: Hunt APO State 1

Collection Date: 10/25/2022 2:00:00 PM

Lab ID: 2210D58-025

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	2400	150		mg/Kg	50	11/2/2022 4:32:24 PM	71220
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	10/31/2022 9:20:41 PM	71176
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/31/2022 9:20:41 PM	71176
Surr: DNOP	97.3	21-129		%Rec	1	10/31/2022 9:20:41 PM	71176
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/31/2022 8:45:23 PM	71130
Surr: BFB	92.3	37.7-212		%Rec	1	10/31/2022 8:45:23 PM	71130
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/31/2022 8:45:23 PM	71130
Toluene	ND	0.049		mg/Kg	1	10/31/2022 8:45:23 PM	71130
Ethylbenzene	ND	0.049		mg/Kg	1	10/31/2022 8:45:23 PM	71130
Xylenes, Total	ND	0.098		mg/Kg	1	10/31/2022 8:45:23 PM	71130
Surr: 4-Bromofluorobenzene	97.7	70-130		%Rec	1	10/31/2022 8:45:23 PM	71130

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: SW4

Project: Hunt APO State 1

Collection Date: 10/25/2022 2:05:00 PM

Lab ID: 2210D58-026

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	190	60		mg/Kg	20	11/2/2022 4:20:12 AM	71220
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	10/31/2022 9:44:14 PM	71176
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/31/2022 9:44:14 PM	71176
Surr: DNOP	97.2	21-129		%Rec	1	10/31/2022 9:44:14 PM	71176
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/31/2022 9:08:52 PM	71130
Surr: BFB	86.1	37.7-212		%Rec	1	10/31/2022 9:08:52 PM	71130
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/31/2022 9:08:52 PM	71130
Toluene	ND	0.047		mg/Kg	1	10/31/2022 9:08:52 PM	71130
Ethylbenzene	ND	0.047		mg/Kg	1	10/31/2022 9:08:52 PM	71130
Xylenes, Total	ND	0.094		mg/Kg	1	10/31/2022 9:08:52 PM	71130
Surr: 4-Bromofluorobenzene	91.5	70-130		%Rec	1	10/31/2022 9:08:52 PM	71130

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: SW5

Project: Hunt APO State 1

Collection Date: 10/25/2022 2:10:00 PM

Lab ID: 2210D58-027

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	4600	300		mg/Kg	100	11/2/2022 4:44:49 PM	71220
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/31/2022 10:07:49 PM	71176
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/31/2022 10:07:49 PM	71176
Surr: DNOP	98.5	21-129		%Rec	1	10/31/2022 10:07:49 PM	71176
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/31/2022 9:32:21 PM	71130
Surr: BFB	90.4	37.7-212		%Rec	1	10/31/2022 9:32:21 PM	71130
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	10/31/2022 9:32:21 PM	71130
Toluene	ND	0.046		mg/Kg	1	10/31/2022 9:32:21 PM	71130
Ethylbenzene	ND	0.046		mg/Kg	1	10/31/2022 9:32:21 PM	71130
Xylenes, Total	ND	0.091		mg/Kg	1	10/31/2022 9:32:21 PM	71130
Surr: 4-Bromofluorobenzene	97.1	70-130		%Rec	1	10/31/2022 9:32:21 PM	71130

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: SW6

Project: Hunt APO State 1

Collection Date: 10/25/2022 2:15:00 PM

Lab ID: 2210D58-028

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	360	59		mg/Kg	20	11/2/2022 4:45:01 AM	71220
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/31/2022 10:31:26 PM	71176
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/31/2022 10:31:26 PM	71176
Surr: DNOP	95.0	21-129		%Rec	1	10/31/2022 10:31:26 PM	71176
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/31/2022 9:55:50 PM	71130
Surr: BFB	90.8	37.7-212		%Rec	1	10/31/2022 9:55:50 PM	71130
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	10/31/2022 9:55:50 PM	71130
Toluene	ND	0.049		mg/Kg	1	10/31/2022 9:55:50 PM	71130
Ethylbenzene	ND	0.049		mg/Kg	1	10/31/2022 9:55:50 PM	71130
Xylenes, Total	ND	0.098		mg/Kg	1	10/31/2022 9:55:50 PM	71130
Surr: 4-Bromofluorobenzene	96.3	70-130		%Rec	1	10/31/2022 9:55:50 PM	71130

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: SW7

Project: Hunt APO State 1

Collection Date: 10/25/2022 2:20:00 PM

Lab ID: 2210D58-029

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	840	60		mg/Kg	20	11/2/2022 4:57:25 AM	71220
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/31/2022 10:55:05 PM	71176
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/31/2022 10:55:05 PM	71176
Surr: DNOP	97.0	21-129		%Rec	1	10/31/2022 10:55:05 PM	71176
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/31/2022 10:19:22 PM	71130
Surr: BFB	84.7	37.7-212		%Rec	1	10/31/2022 10:19:22 PM	71130
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	10/31/2022 10:19:22 PM	71130
Toluene	ND	0.049		mg/Kg	1	10/31/2022 10:19:22 PM	71130
Ethylbenzene	ND	0.049		mg/Kg	1	10/31/2022 10:19:22 PM	71130
Xylenes, Total	ND	0.099		mg/Kg	1	10/31/2022 10:19:22 PM	71130
Surr: 4-Bromofluorobenzene	89.9	70-130		%Rec	1	10/31/2022 10:19:22 PM	71130

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: SW8

Project: Hunt APO State 1

Collection Date: 10/25/2022 2:25:00 PM

Lab ID: 2210D58-030

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	1700	60		mg/Kg	20	11/2/2022 11:22:09 AM	71230
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/31/2022 11:18:42 PM	71176
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/31/2022 11:18:42 PM	71176
Surr: DNOP	100	21-129		%Rec	1	10/31/2022 11:18:42 PM	71176
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/31/2022 10:42:51 PM	71130
Surr: BFB	89.4	37.7-212		%Rec	1	10/31/2022 10:42:51 PM	71130
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	10/31/2022 10:42:51 PM	71130
Toluene	ND	0.046		mg/Kg	1	10/31/2022 10:42:51 PM	71130
Ethylbenzene	ND	0.046		mg/Kg	1	10/31/2022 10:42:51 PM	71130
Xylenes, Total	ND	0.092		mg/Kg	1	10/31/2022 10:42:51 PM	71130
Surr: 4-Bromofluorobenzene	95.5	70-130		%Rec	1	10/31/2022 10:42:51 PM	71130

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: SW9

Project: Hunt APO State 1

Collection Date: 10/25/2022 2:30:00 PM

Lab ID: 2210D58-031

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	690	59		mg/Kg	20	11/2/2022 11:59:22 AM	71230
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	10/31/2022 11:42:16 PM	71176
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/31/2022 11:42:16 PM	71176
Surr: DNOP	95.6	21-129		%Rec	1	10/31/2022 11:42:16 PM	71176
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/31/2022 11:06:13 PM	71130
Surr: BFB	89.5	37.7-212		%Rec	1	10/31/2022 11:06:13 PM	71130
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	10/31/2022 11:06:13 PM	71130
Toluene	ND	0.050		mg/Kg	1	10/31/2022 11:06:13 PM	71130
Ethylbenzene	ND	0.050		mg/Kg	1	10/31/2022 11:06:13 PM	71130
Xylenes, Total	ND	0.099		mg/Kg	1	10/31/2022 11:06:13 PM	71130
Surr: 4-Bromofluorobenzene	95.3	70-130		%Rec	1	10/31/2022 11:06:13 PM	71130

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: SW2A

Project: Hunt APO State 1

Collection Date: 10/25/2022 2:35:00 PM

Lab ID: 2210D58-032

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	ND	60		mg/Kg	20	11/2/2022 12:36:36 PM	71230
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	11/1/2022 12:05:59 AM	71176
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/1/2022 12:05:59 AM	71176
Surr: DNOP	99.0	21-129		%Rec	1	11/1/2022 12:05:59 AM	71176
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/31/2022 11:29:50 PM	71130
Surr: BFB	87.6	37.7-212		%Rec	1	10/31/2022 11:29:50 PM	71130
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	10/31/2022 11:29:50 PM	71130
Toluene	ND	0.048		mg/Kg	1	10/31/2022 11:29:50 PM	71130
Ethylbenzene	ND	0.048		mg/Kg	1	10/31/2022 11:29:50 PM	71130
Xylenes, Total	ND	0.096		mg/Kg	1	10/31/2022 11:29:50 PM	71130
Surr: 4-Bromofluorobenzene	93.0	70-130		%Rec	1	10/31/2022 11:29:50 PM	71130

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2210D58

Date Reported: 11/4/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: SW3A

Project: Hunt APO State 1

Collection Date: 10/25/2022 2:40:00 PM

Lab ID: 2210D58-033

Matrix: SOIL

Received Date: 10/27/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	ND	60		mg/Kg	20	11/2/2022 12:49:01 PM	71230
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	11/1/2022 12:29:34 AM	71176
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	11/1/2022 12:29:34 AM	71176
Surr: DNOP	92.4	21-129		%Rec	1	11/1/2022 12:29:34 AM	71176
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/31/2022 2:25:00 PM	71160
Surr: BFB	109	37.7-212		%Rec	1	10/31/2022 2:25:00 PM	71160
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.024		mg/Kg	1	10/31/2022 2:25:00 PM	71160
Toluene	ND	0.048		mg/Kg	1	10/31/2022 2:25:00 PM	71160
Ethylbenzene	ND	0.048		mg/Kg	1	10/31/2022 2:25:00 PM	71160
Xylenes, Total	ND	0.096		mg/Kg	1	10/31/2022 2:25:00 PM	71160
Surr: 4-Bromofluorobenzene	130	70-130		%Rec	1	10/31/2022 2:25:00 PM	71160

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2210D58

04-Nov-22

**Client:** GHD Midland  
**Project:** Hunt APO State 1

Sample ID: <b>MB-71218</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>71218</b>	RunNo: <b>92252</b>								
Prep Date: <b>11/1/2022</b>	Analysis Date: <b>11/1/2022</b>	SeqNo: <b>3313663</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-71218</b>	SampType: <b>lcs</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>71218</b>	RunNo: <b>92252</b>								
Prep Date: <b>11/1/2022</b>	Analysis Date: <b>11/1/2022</b>	SeqNo: <b>3313664</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.0	90	110			

Sample ID: <b>MB-71220</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>71220</b>	RunNo: <b>92252</b>								
Prep Date: <b>11/1/2022</b>	Analysis Date: <b>11/1/2022</b>	SeqNo: <b>3313695</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-71220</b>	SampType: <b>lcs</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>71220</b>	RunNo: <b>92252</b>								
Prep Date: <b>11/1/2022</b>	Analysis Date: <b>11/1/2022</b>	SeqNo: <b>3313696</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.7	90	110			

Sample ID: <b>MB-71230</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>71230</b>	RunNo: <b>92306</b>								
Prep Date: <b>11/2/2022</b>	Analysis Date: <b>11/2/2022</b>	SeqNo: <b>3316142</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-71230</b>	SampType: <b>lcs</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>71230</b>	RunNo: <b>92306</b>								
Prep Date: <b>11/2/2022</b>	Analysis Date: <b>11/2/2022</b>	SeqNo: <b>3316143</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.4	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 Quantitative 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#: 2210D58

04-Nov-22

**Client:** GHD Midland  
**Project:** Hunt APO State 1

Sample ID: <b>LCS-71171</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>71171</b>		RunNo: <b>92198</b>							
Prep Date: <b>10/31/2022</b>	Analysis Date: <b>10/31/2022</b>		SeqNo: <b>3311075</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	15	50.00	0	92.2	64.4	127			
Surr: DNOP	4.4		5.000		88.2	21	129			

Sample ID: <b>MB-71171</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>71171</b>		RunNo: <b>92198</b>							
Prep Date: <b>10/31/2022</b>	Analysis Date: <b>10/31/2022</b>		SeqNo: <b>3311076</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.0		10.00		90.3	21	129			

Sample ID: <b>MB-71176</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>71176</b>		RunNo: <b>92192</b>							
Prep Date: <b>10/31/2022</b>	Analysis Date: <b>10/31/2022</b>		SeqNo: <b>3311494</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.7		10.00		96.6	21	129			

Sample ID: <b>LCS-71176</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>71176</b>		RunNo: <b>92192</b>							
Prep Date: <b>10/31/2022</b>	Analysis Date: <b>10/31/2022</b>		SeqNo: <b>3311495</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	15	50.00	0	101	64.4	127			
Surr: DNOP	5.0		5.000		100	21	129			

Sample ID: <b>2210D58-022AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>BH9</b>	Batch ID: <b>71176</b>		RunNo: <b>92192</b>							
Prep Date: <b>10/31/2022</b>	Analysis Date: <b>10/31/2022</b>		SeqNo: <b>3311497</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	120	14	48.17	70.46	98.0	36.1	154			
Surr: DNOP	4.9		4.817		102	21	129			

**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 Quantitative 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#: 2210D58

04-Nov-22

**Client:** GHD Midland  
**Project:** Hunt APO State 1

Sample ID: 2210D58-022AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH9	Batch ID: 71176	RunNo: 92192								
Prep Date: 10/31/2022	Analysis Date: 10/31/2022	SeqNo: 3311498			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	110	15	49.70	70.46	74.7	36.1	154	8.95	33.9	
Surr: DNOP	5.1		4.970		103	21	129	0	0	

Sample ID: LCS-71174	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 71174	RunNo: 92198								
Prep Date: 10/31/2022	Analysis Date: 10/31/2022	SeqNo: 3312301			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	15	50.00	0	95.7	64.4	127			
Surr: DNOP	5.5		5.000		110	21	129			

Sample ID: MB-71174	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 71174	RunNo: 92198								
Prep Date: 10/31/2022	Analysis Date: 10/31/2022	SeqNo: 3312302			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.7		10.00		96.8	21	129			

**Qualifiers:**

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative 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#: 2210D58

04-Nov-22

**Client:** GHD Midland  
**Project:** Hunt APO State 1

Sample ID: <b>ics-71125</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>71125</b>			RunNo: <b>92196</b>						
Prep Date: <b>10/27/2022</b>	Analysis Date: <b>10/29/2022</b>			SeqNo: <b>3310421</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.6	72.3	137			
Surr: BFB	2200		1000		221	37.7	212			S

Sample ID: <b>mb-71125</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>PBS</b>	Batch ID: <b>71125</b>			RunNo: <b>92196</b>						
Prep Date: <b>10/27/2022</b>	Analysis Date: <b>10/29/2022</b>			SeqNo: <b>3310422</b>		Units: <b>mg/Kg</b>				
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	37.7	212			

Sample ID: <b>mb-71130</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>PBS</b>	Batch ID: <b>71130</b>			RunNo: <b>92213</b>						
Prep Date: <b>10/27/2022</b>	Analysis Date: <b>10/31/2022</b>			SeqNo: <b>3311330</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	890		1000		89.5	37.7	212			

Sample ID: <b>ics-71130</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>71130</b>			RunNo: <b>92213</b>						
Prep Date: <b>10/27/2022</b>	Analysis Date: <b>10/31/2022</b>			SeqNo: <b>3311331</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	100	72.3	137			
Surr: BFB	1900		1000		194	37.7	212			

Sample ID: <b>2210d58-013ams</b>	SampType: <b>MS</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>BH25</b>	Batch ID: <b>71130</b>			RunNo: <b>92213</b>						
Prep Date: <b>10/27/2022</b>	Analysis Date: <b>10/31/2022</b>			SeqNo: <b>3311333</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	16	4.6	23.15	0	68.1	70	130			S
Surr: BFB	1700		925.9		184	37.7	212			

Sample ID: <b>2210d58-013amsd</b>	SampType: <b>MSD</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>BH25</b>	Batch ID: <b>71130</b>			RunNo: <b>92213</b>						
Prep Date: <b>10/27/2022</b>	Analysis Date: <b>10/31/2022</b>			SeqNo: <b>3311334</b>		Units: <b>mg/Kg</b>				
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 Quantitative 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#: 2210D58

04-Nov-22

**Client:** GHD Midland  
**Project:** Hunt APO State 1

Sample ID: 2210d58-013amsd		SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range						
Client ID: BH25		Batch ID: 71130			RunNo: 92213					
Prep Date: 10/27/2022		Analysis Date: 10/31/2022			SeqNo: 3311334		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.7	23.43	0	88.1	70	130	26.8	20	R
Surr: BFB	1700		937.2		180	37.7	212	0	0	

Sample ID: <b>mb-71164</b>		SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>		Batch ID: <b>71164</b>		RunNo: <b>92213</b>							
Prep Date: <b>10/28/2022</b>		Analysis Date: <b>11/1/2022</b>		SeqNo: <b>3311358</b>		Units: <b>%Rec</b>					
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB		900		1000		89.8	37.7	212			

Sample ID: <b>Ics-71164</b>		SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>		Batch ID: <b>71164</b>		RunNo: <b>92213</b>							
Prep Date: <b>10/28/2022</b>		Analysis Date: <b>11/1/2022</b>		SeqNo: <b>3311359</b>		Units: <b>%Rec</b>					
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB		2000		1000		197	37.7	212			

Sample ID: <b>Ics-71160</b>		SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>LCSS</b>		Batch ID: <b>71160</b>		RunNo: <b>92226</b>						
Prep Date: <b>10/28/2022</b>		Analysis Date: <b>10/31/2022</b>		SeqNo: <b>3312314</b>		Units: <b>mg/Kg</b>				
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	72.3	137			
Surr: BFB	2100		1000		210	37.7	212			

Sample ID: <b>mb-71160</b>		SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>		Batch ID: <b>71160</b>		RunNo: <b>92226</b>							
Prep Date: <b>10/28/2022</b>		Analysis Date: <b>10/31/2022</b>		SeqNo: <b>3312316</b>			Units: <b>mg/Kg</b>				
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		95.2	37.7	212			

Sample ID: 2210D58-033ams		SampType: MS		TestCode: EPA Method 8015D: Gasoline Range						
Client ID: SW3A		Batch ID: 71160		RunNo: 92226						
Prep Date: 10/28/2022		Analysis Date: 10/31/2022		SeqNo: 3312318		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	15	4.7	23.65	0	64.4	70	130			S
Surr: BFB	2000		946.1		208	37.7	212			

**Qualifiers:**

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative 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#: 2210D58  
04-Nov-22

Client: GHD Midland  
Project: Hunt APO State 1

Sample ID: 2210D58-033amsd		SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range						
Client ID: SW3A		Batch ID: 71160		RunNo: 92226						
Prep Date: 10/28/2022		Analysis Date: 10/31/2022		SeqNo: 3312319		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	4.8	24.11	0	78.3	70	130	21.3	20	R
Surr: BFB	1900		964.3		200	37.7	212	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 Quantitative 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#: 2210D58

04-Nov-22

**Client:** GHD Midland  
**Project:** Hunt APO State 1

Sample ID: <b>lcs-71125</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>71125</b>			RunNo: <b>92196</b>						
Prep Date: <b>10/27/2022</b>	Analysis Date: <b>10/29/2022</b>			SeqNo: <b>3310571</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.025	1.000	0	118	80	120			
Toluene	1.2	0.050	1.000	0	118	80	120			
Ethylbenzene	1.2	0.050	1.000	0	119	80	120			
Xylenes, Total	3.6	0.10	3.000	0	119	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		121	70	130			

Sample ID: <b>mb-71125</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>PBS</b>	Batch ID: <b>71125</b>			RunNo: <b>92196</b>						
Prep Date: <b>10/27/2022</b>	Analysis Date: <b>10/29/2022</b>			SeqNo: <b>3310572</b>		Units: <b>mg/Kg</b>				
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	1.2		1.000		120	70	130			

Sample ID: <b>mb-71130</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>PBS</b>	Batch ID: <b>71130</b>			RunNo: <b>92213</b>						
Prep Date: <b>10/27/2022</b>	Analysis Date: <b>10/31/2022</b>			SeqNo: <b>3311379</b>		Units: <b>mg/Kg</b>				
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	0.96		1.000		95.8	70	130			

Sample ID: <b>LCS-71130</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>71130</b>			RunNo: <b>92213</b>						
Prep Date: <b>10/27/2022</b>	Analysis Date: <b>10/31/2022</b>			SeqNo: <b>3311380</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	96.2	80	120			
Toluene	1.0	0.050	1.000	0	99.5	80	120			
Ethylbenzene	1.0	0.050	1.000	0	100	80	120			
Xylenes, Total	3.0	0.10	3.000	0	100	80	120			
Surr: 4-Bromofluorobenzene	0.97		1.000		97.1	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 Quantitative 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#: 2210D58

04-Nov-22

**Client:** GHD Midland  
**Project:** Hunt APO State 1

Sample ID: 2210d58-014ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH1	Batch ID: 71130	RunNo: 92213								
Prep Date: 10/27/2022	Analysis Date: 10/31/2022	SeqNo: 3311383 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.025	0.9814	0	87.4	68.8	120			
Toluene	0.90	0.049	0.9814	0	91.5	73.6	124			
Ethylbenzene	0.90	0.049	0.9814	0	91.9	72.7	129			
Xylenes, Total	2.7	0.098	2.944	0.01961	91.5	75.7	126			
Surr: 4-Bromofluorobenzene	0.97		0.9814		98.7	70	130			

Sample ID: 2210d58-014amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH1	Batch ID: 71130	RunNo: 92213								
Prep Date: 10/27/2022	Analysis Date: 10/31/2022	SeqNo: 3311384 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	0.9862	0	89.5	68.8	120	2.88	20	
Toluene	0.91	0.049	0.9862	0	92.4	73.6	124	1.51	20	
Ethylbenzene	0.91	0.049	0.9862	0	92.7	72.7	129	1.36	20	
Xylenes, Total	2.7	0.099	2.959	0.01961	92.2	75.7	126	1.25	20	
Surr: 4-Bromofluorobenzene	0.98		0.9862		99.2	70	130	0	0	

Sample ID: mb-71164	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 71164	RunNo: 92213								
Prep Date: 10/28/2022	Analysis Date: 11/1/2022	SeqNo: 3311403 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.96		1.000		96.0	70	130			

Sample ID: LCS-71164	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 71164	RunNo: 92213								
Prep Date: 10/28/2022	Analysis Date: 11/1/2022	SeqNo: 3311404 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.97		1.000		96.8	70	130			

Sample ID: mb-71160	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 71160	RunNo: 92226								
Prep Date: 10/28/2022	Analysis Date: 10/31/2022	SeqNo: 3312418 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								

**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 Quantitative 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#: 2210D58

04-Nov-22

**Client:** GHD Midland  
**Project:** Hunt APO State 1

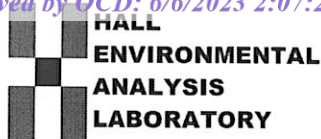
Sample ID: <b>mb-71160</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>71160</b>		RunNo: <b>92226</b>							
Prep Date: <b>10/28/2022</b>	Analysis Date: <b>10/31/2022</b>		SeqNo: <b>3312418</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.2		1.000		119	70	130			

Sample ID: <b>lcs-71160</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>71160</b>		RunNo: <b>92226</b>							
Prep Date: <b>10/28/2022</b>	Analysis Date: <b>10/31/2022</b>		SeqNo: <b>3312611</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.025	1.000	0	122	80	120			S
Toluene	1.2	0.050	1.000	0	121	80	120			S
Ethylbenzene	1.2	0.050	1.000	0	121	80	120			S
Xylenes, Total	3.6	0.10	3.000	0	120	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		120	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 Quantitative 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



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 Midland

Work Order Number: 2210D58

RcptNo: 1

Received By: Juan Rojas 10/27/2022 7:25:00 AM

Completed By: Tracy Casarrubias 10/27/2022 8:50:37 AM

Reviewed By: KPC 10.27.22

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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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: JM 10/27/22

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 001, 003, 004, 007, 010, 011, 013 have water. KPC 10.27.22

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.8	Good	Yes			











## Chain-of-Custody Record

Client: GHD

Mailing Address: 324 W Main St.

Artesia, NM 88210

Phone #: (505) 397-4218

email or Fax#: nate.rece@ghd.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)Accreditation: ☐ Az Compliance☐ NELAC ☐ Other☐ EDD (Type)

Turn-Around Time:

☒ Standard☒ Rush

Project Name:

Hunt APO State #1

Project #:

11224665

Project Manager: Nate Recco

ST Murray

Sampler: Liam Gersdorf

On Ice: ☒ Yes ☐ No

# of Coolers:

Cooler Temp (including CF): 0.040.7 = 6.5°C

Container Type and #

Preservative Type

HEAL No.

2210D58

025

026

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028

029

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031

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033

Date

Time

Via:

Received by:

Date

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Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

November 30, 2022

Nate Reece  
GHD Midland  
2135 S Loop 250 W  
Midland, TX 79703  
TEL: (432) 686-0086  
FAX:

RE: Hunt APO State 1

OrderNo.: 2211799

Dear Nate Reece:

Hall Environmental Analysis Laboratory received 17 sample(s) on 11/15/2022 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](http://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,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order 2211799

Date Reported: 11/30/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH2A

Project: Hunt APO State 1

Collection Date: 11/11/2022 11:00:00 AM

Lab ID: 2211799-001

Matrix: SOIL

Received Date: 11/15/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	710	60		mg/Kg	20	11/19/2022 2:17:17 PM	71602
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	11/18/2022 3:31:42 PM	71566
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	11/18/2022 3:31:42 PM	71566
Surr: DNOP	113	21-129		%Rec	1	11/18/2022 3:31:42 PM	71566
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/18/2022 5:23:00 PM	71522
Surr: BFB	103	37.7-212		%Rec	1	11/18/2022 5:23:00 PM	71522
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	11/18/2022 5:23:00 PM	71522
Toluene	ND	0.049		mg/Kg	1	11/18/2022 5:23:00 PM	71522
Ethylbenzene	ND	0.049		mg/Kg	1	11/18/2022 5:23:00 PM	71522
Xylenes, Total	ND	0.099		mg/Kg	1	11/18/2022 5:23:00 PM	71522
Surr: 4-Bromofluorobenzene	123	70-130		%Rec	1	11/18/2022 5:23:00 PM	71522

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

## Analytical Report

Lab Order 2211799

Date Reported: 11/30/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH3A

Project: Hunt APO State 1

Collection Date: 11/11/2022 11:05:00 AM

Lab ID: 2211799-002

Matrix: SOIL

Received Date: 11/15/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	2300	150		mg/Kg	50	11/21/2022 8:52:58 AM	71602
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	20	13		mg/Kg	1	11/18/2022 3:42:19 PM	71566
Motor Oil Range Organics (MRO)	50	43		mg/Kg	1	11/18/2022 3:42:19 PM	71566
Surr: DNOP	113	21-129		%Rec	1	11/18/2022 3:42:19 PM	71566
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/18/2022 5:42:00 PM	71522
Surr: BFB	102	37.7-212		%Rec	1	11/18/2022 5:42:00 PM	71522
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	11/18/2022 5:42:00 PM	71522
Toluene	ND	0.048		mg/Kg	1	11/18/2022 5:42:00 PM	71522
Ethylbenzene	ND	0.048		mg/Kg	1	11/18/2022 5:42:00 PM	71522
Xylenes, Total	ND	0.096		mg/Kg	1	11/18/2022 5:42:00 PM	71522
Surr: 4-Bromofluorobenzene	124	70-130		%Rec	1	11/18/2022 5:42:00 PM	71522

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

## Analytical Report

Lab Order 2211799

Date Reported: 11/30/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH4A

Project: Hunt APO State 1

Collection Date: 11/11/2022 11:10:00 AM

Lab ID: 2211799-003

Matrix: SOIL

Received Date: 11/15/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	2000	60		mg/Kg	20	11/19/2022 2:42:06 PM	71602
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	12		mg/Kg	1	11/18/2022 3:52:57 PM	71566
Motor Oil Range Organics (MRO)	ND	39		mg/Kg	1	11/18/2022 3:52:57 PM	71566
Surr: DNOP	135	21-129	S	%Rec	1	11/18/2022 3:52:57 PM	71566
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/18/2022 6:02:00 PM	71522
Surr: BFB	103	37.7-212		%Rec	1	11/18/2022 6:02:00 PM	71522
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	11/18/2022 6:02:00 PM	71522
Toluene	ND	0.048		mg/Kg	1	11/18/2022 6:02:00 PM	71522
Ethylbenzene	ND	0.048		mg/Kg	1	11/18/2022 6:02:00 PM	71522
Xylenes, Total	ND	0.096		mg/Kg	1	11/18/2022 6:02:00 PM	71522
Surr: 4-Bromofluorobenzene	124	70-130		%Rec	1	11/18/2022 6:02:00 PM	71522

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		



## Analytical Report

Lab Order 2211799

Date Reported: 11/30/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH5A

Project: Hunt APO State 1

Collection Date: 11/11/2022 11:15:00 AM

Lab ID: 2211799-004

Matrix: SOIL

Received Date: 11/15/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	870	60		mg/Kg	20	11/19/2022 2:54:31 PM	71602
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	11/18/2022 4:03:34 PM	71566
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/18/2022 4:03:34 PM	71566
Surr: DNOP	103	21-129		%Rec	1	11/18/2022 4:03:34 PM	71566
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/18/2022 6:22:00 PM	71522
Surr: BFB	102	37.7-212		%Rec	1	11/18/2022 6:22:00 PM	71522
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	11/18/2022 6:22:00 PM	71522
Toluene	ND	0.049		mg/Kg	1	11/18/2022 6:22:00 PM	71522
Ethylbenzene	ND	0.049		mg/Kg	1	11/18/2022 6:22:00 PM	71522
Xylenes, Total	ND	0.099		mg/Kg	1	11/18/2022 6:22:00 PM	71522
Surr: 4-Bromofluorobenzene	125	70-130		%Rec	1	11/18/2022 6:22:00 PM	71522

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		



## Analytical Report

Lab Order 2211799

Date Reported: 11/30/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH7A

Project: Hunt APO State 1

Collection Date: 11/11/2022 11:20:00 AM

Lab ID: 2211799-005

Matrix: SOIL

Received Date: 11/15/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	1600	60		mg/Kg	20	11/19/2022 3:06:56 PM	71602
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	11/18/2022 4:14:08 PM	71566
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/18/2022 4:14:08 PM	71566
Surr: DNOP	98.8	21-129		%Rec	1	11/18/2022 4:14:08 PM	71566
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/18/2022 6:42:00 PM	71522
Surr: BFB	103	37.7-212		%Rec	1	11/18/2022 6:42:00 PM	71522
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	11/18/2022 6:42:00 PM	71522
Toluene	ND	0.048		mg/Kg	1	11/18/2022 6:42:00 PM	71522
Ethylbenzene	ND	0.048		mg/Kg	1	11/18/2022 6:42:00 PM	71522
Xylenes, Total	ND	0.096		mg/Kg	1	11/18/2022 6:42:00 PM	71522
Surr: 4-Bromofluorobenzene	126	70-130		%Rec	1	11/18/2022 6:42:00 PM	71522

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

## Analytical Report

Lab Order 2211799

Date Reported: 11/30/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH8A

Project: Hunt APO State 1

Collection Date: 11/11/2022 11:25:00 AM

Lab ID: 2211799-006

Matrix: SOIL

Received Date: 11/15/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	1000	60		mg/Kg	20	11/19/2022 3:19:20 PM	71602
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	11/18/2022 4:24:43 PM	71566
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	11/18/2022 4:24:43 PM	71566
Surr: DNOP	117	21-129		%Rec	1	11/18/2022 4:24:43 PM	71566
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	11/18/2022 7:02:00 PM	71522
Surr: BFB	103	37.7-212		%Rec	1	11/18/2022 7:02:00 PM	71522
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.023		mg/Kg	1	11/18/2022 7:02:00 PM	71522
Toluene	ND	0.046		mg/Kg	1	11/18/2022 7:02:00 PM	71522
Ethylbenzene	ND	0.046		mg/Kg	1	11/18/2022 7:02:00 PM	71522
Xylenes, Total	ND	0.093		mg/Kg	1	11/18/2022 7:02:00 PM	71522
Surr: 4-Bromofluorobenzene	124	70-130		%Rec	1	11/18/2022 7:02:00 PM	71522

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

## Analytical Report

Lab Order 2211799

Date Reported: 11/30/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH9A

Project: Hunt APO State 1

Collection Date: 11/11/2022 11:30:00 AM

Lab ID: 2211799-007

Matrix: SOIL

Received Date: 11/15/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	1600	60		mg/Kg	20	11/19/2022 3:31:45 PM	71602
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	11/18/2022 4:35:17 PM	71566
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	11/18/2022 4:35:17 PM	71566
Surr: DNOP	114	21-129		%Rec	1	11/18/2022 4:35:17 PM	71566
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/18/2022 7:21:00 PM	71522
Surr: BFB	107	37.7-212		%Rec	1	11/18/2022 7:21:00 PM	71522
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	11/18/2022 7:21:00 PM	71522
Toluene	ND	0.050		mg/Kg	1	11/18/2022 7:21:00 PM	71522
Ethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 7:21:00 PM	71522
Xylenes, Total	ND	0.10		mg/Kg	1	11/18/2022 7:21:00 PM	71522
Surr: 4-Bromofluorobenzene	130	70-130	S	%Rec	1	11/18/2022 7:21:00 PM	71522

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 7 of 24

## Analytical Report

Lab Order 2211799

Date Reported: 11/30/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH10A

Project: Hunt APO State 1

Collection Date: 11/11/2022 11:35:00 AM

Lab ID: 2211799-008

Matrix: SOIL

Received Date: 11/15/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	1500	59		mg/Kg	20	11/19/2022 3:44:09 PM	71602
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	11/18/2022 4:45:49 PM	71566
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	11/18/2022 4:45:49 PM	71566
Surr: DNOP	118	21-129		%Rec	1	11/18/2022 4:45:49 PM	71566
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/18/2022 7:41:00 PM	71522
Surr: BFB	105	37.7-212		%Rec	1	11/18/2022 7:41:00 PM	71522
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	11/18/2022 7:41:00 PM	71522
Toluene	ND	0.050		mg/Kg	1	11/18/2022 7:41:00 PM	71522
Ethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 7:41:00 PM	71522
Xylenes, Total	ND	0.099		mg/Kg	1	11/18/2022 7:41:00 PM	71522
Surr: 4-Bromofluorobenzene	123	70-130		%Rec	1	11/18/2022 7:41:00 PM	71522

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

## Analytical Report

Lab Order 2211799

Date Reported: 11/30/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH11A

Project: Hunt APO State 1

Collection Date: 11/11/2022 11:40:00 AM

Lab ID: 2211799-009

Matrix: SOIL

Received Date: 11/15/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	1600	61		mg/Kg	20	11/21/2022 11:46:50 AM	71616
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	11/17/2022 1:25:52 PM	71554
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/17/2022 1:25:52 PM	71554
Surr: DNOP	102	21-129		%Rec	1	11/17/2022 1:25:52 PM	71554
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/18/2022 9:40:00 PM	71544
Surr: BFB	105	37.7-212		%Rec	1	11/18/2022 9:40:00 PM	71544
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	11/18/2022 9:40:00 PM	71544
Toluene	ND	0.048		mg/Kg	1	11/18/2022 9:40:00 PM	71544
Ethylbenzene	ND	0.048		mg/Kg	1	11/18/2022 9:40:00 PM	71544
Xylenes, Total	ND	0.095		mg/Kg	1	11/18/2022 9:40:00 PM	71544
Surr: 4-Bromofluorobenzene	128	70-130		%Rec	1	11/18/2022 9:40:00 PM	71544

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

## Analytical Report

Lab Order 2211799

Date Reported: 11/30/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH12A

Project: Hunt APO State 1

Collection Date: 11/11/2022 11:45:00 AM

Lab ID: 2211799-010

Matrix: SOIL

Received Date: 11/15/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	2200	150		mg/Kg	50	11/22/2022 2:29:10 PM	71616
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	11/17/2022 1:58:04 PM	71554
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	11/17/2022 1:58:04 PM	71554
Surr: DNOP	99.2	21-129		%Rec	1	11/17/2022 1:58:04 PM	71554
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/18/2022 10:39:00 PM	71544
Surr: BFB	104	37.7-212		%Rec	1	11/18/2022 10:39:00 PM	71544
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.023		mg/Kg	1	11/18/2022 10:39:00 PM	71544
Toluene	ND	0.047		mg/Kg	1	11/18/2022 10:39:00 PM	71544
Ethylbenzene	ND	0.047		mg/Kg	1	11/18/2022 10:39:00 PM	71544
Xylenes, Total	ND	0.093		mg/Kg	1	11/18/2022 10:39:00 PM	71544
Surr: 4-Bromofluorobenzene	129	70-130		%Rec	1	11/18/2022 10:39:00 PM	71544

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2211799

Date Reported: 11/30/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH15A

Project: Hunt APO State 1

Collection Date: 11/11/2022 11:50:00 AM

Lab ID: 2211799-011

Matrix: SOIL

Received Date: 11/15/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	910	60		mg/Kg	20	11/21/2022 1:00:53 PM	71616
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	11/17/2022 2:08:45 PM	71554
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/17/2022 2:08:45 PM	71554
Surr: DNOP	138	21-129	S	%Rec	1	11/17/2022 2:08:45 PM	71554
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/18/2022 11:38:00 PM	71544
Surr: BFB	98.8	37.7-212		%Rec	1	11/18/2022 11:38:00 PM	71544
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	11/18/2022 11:38:00 PM	71544
Toluene	ND	0.049		mg/Kg	1	11/18/2022 11:38:00 PM	71544
Ethylbenzene	ND	0.049		mg/Kg	1	11/18/2022 11:38:00 PM	71544
Xylenes, Total	ND	0.098		mg/Kg	1	11/18/2022 11:38:00 PM	71544
Surr: 4-Bromofluorobenzene	123	70-130		%Rec	1	11/18/2022 11:38:00 PM	71544

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2211799

Date Reported: 11/30/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH16A

Project: Hunt APO State 1

Collection Date: 11/11/2022 11:55:00 AM

Lab ID: 2211799-012

Matrix: SOIL

Received Date: 11/15/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	900	60		mg/Kg	20	11/21/2022 1:13:13 PM	71616
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	11/17/2022 2:19:27 PM	71554
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/17/2022 2:19:27 PM	71554
Surr: DNOP	110	21-129		%Rec	1	11/17/2022 2:19:27 PM	71554
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	11/18/2022 11:58:00 PM	71544
Surr: BFB	101	37.7-212		%Rec	1	11/18/2022 11:58:00 PM	71544
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.023		mg/Kg	1	11/18/2022 11:58:00 PM	71544
Toluene	ND	0.046		mg/Kg	1	11/18/2022 11:58:00 PM	71544
Ethylbenzene	ND	0.046		mg/Kg	1	11/18/2022 11:58:00 PM	71544
Xylenes, Total	ND	0.093		mg/Kg	1	11/18/2022 11:58:00 PM	71544
Surr: 4-Bromofluorobenzene	126	70-130		%Rec	1	11/18/2022 11:58:00 PM	71544

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2211799

Date Reported: 11/30/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH24A

Project: Hunt APO State 1

Collection Date: 11/11/2022 12:00:00 PM

Lab ID: 2211799-013

Matrix: SOIL

Received Date: 11/15/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	870	60		mg/Kg	20	11/21/2022 1:25:34 PM	71616
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	11/17/2022 2:30:09 PM	71554
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/17/2022 2:30:09 PM	71554
Surr: DNOP	101	21-129		%Rec	1	11/17/2022 2:30:09 PM	71554
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/19/2022 12:18:00 AM	71544
Surr: BFB	109	37.7-212		%Rec	1	11/19/2022 12:18:00 AM	71544
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	11/19/2022 12:18:00 AM	71544
Toluene	ND	0.049		mg/Kg	1	11/19/2022 12:18:00 AM	71544
Ethylbenzene	ND	0.049		mg/Kg	1	11/19/2022 12:18:00 AM	71544
Xylenes, Total	ND	0.098		mg/Kg	1	11/19/2022 12:18:00 AM	71544
Surr: 4-Bromofluorobenzene	125	70-130		%Rec	1	11/19/2022 12:18:00 AM	71544

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2211799

Date Reported: 11/30/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: SW5A

Project: Hunt APO State 1

Collection Date: 11/11/2022 12:05:00 PM

Lab ID: 2211799-014

Matrix: SOIL

Received Date: 11/15/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	1700	60		mg/Kg	20	11/21/2022 1:37:56 PM	71616
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	11/17/2022 2:40:49 PM	71554
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/17/2022 2:40:49 PM	71554
Surr: DNOP	107	21-129		%Rec	1	11/17/2022 2:40:49 PM	71554
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/19/2022 12:38:00 AM	71544
Surr: BFB	101	37.7-212		%Rec	1	11/19/2022 12:38:00 AM	71544
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	11/19/2022 12:38:00 AM	71544
Toluene	ND	0.047		mg/Kg	1	11/19/2022 12:38:00 AM	71544
Ethylbenzene	ND	0.047		mg/Kg	1	11/19/2022 12:38:00 AM	71544
Xylenes, Total	ND	0.095		mg/Kg	1	11/19/2022 12:38:00 AM	71544
Surr: 4-Bromofluorobenzene	124	70-130		%Rec	1	11/19/2022 12:38:00 AM	71544

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2211799

Date Reported: 11/30/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: SW7A

Project: Hunt APO State 1

Collection Date: 11/11/2022 12:10:00 PM

Lab ID: 2211799-015

Matrix: SOIL

Received Date: 11/15/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	430	60		mg/Kg	20	11/21/2022 1:50:16 PM	71616
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	11/17/2022 2:51:31 PM	71554
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/17/2022 2:51:31 PM	71554
Surr: DNOP	102	21-129		%Rec	1	11/17/2022 2:51:31 PM	71554
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/19/2022 12:57:00 AM	71544
Surr: BFB	106	37.7-212		%Rec	1	11/19/2022 12:57:00 AM	71544
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.023		mg/Kg	1	11/19/2022 12:57:00 AM	71544
Toluene	ND	0.047		mg/Kg	1	11/19/2022 12:57:00 AM	71544
Ethylbenzene	ND	0.047		mg/Kg	1	11/19/2022 12:57:00 AM	71544
Xylenes, Total	ND	0.093		mg/Kg	1	11/19/2022 12:57:00 AM	71544
Surr: 4-Bromofluorobenzene	128	70-130		%Rec	1	11/19/2022 12:57:00 AM	71544

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2211799

Date Reported: 11/30/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: SW8A

Project: Hunt APO State 1

Collection Date: 11/11/2022 12:15:00 PM

Lab ID: 2211799-016

Matrix: SOIL

Received Date: 11/15/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	450	60		mg/Kg	20	11/21/2022 2:02:36 PM	71616
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	11/17/2022 3:02:10 PM	71554
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/17/2022 3:02:10 PM	71554
Surr: DNOP	121	21-129		%Rec	1	11/17/2022 3:02:10 PM	71554
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/19/2022 1:17:00 AM	71544
Surr: BFB	110	37.7-212		%Rec	1	11/19/2022 1:17:00 AM	71544
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	11/19/2022 1:17:00 AM	71544
Toluene	ND	0.047		mg/Kg	1	11/19/2022 1:17:00 AM	71544
Ethylbenzene	ND	0.047		mg/Kg	1	11/19/2022 1:17:00 AM	71544
Xylenes, Total	ND	0.094		mg/Kg	1	11/19/2022 1:17:00 AM	71544
Surr: 4-Bromofluorobenzene	130	70-130		%Rec	1	11/19/2022 1:17:00 AM	71544

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2211799

Date Reported: 11/30/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: SW9A

Project: Hunt APO State 1

Collection Date: 11/11/2022 12:20:00 PM

Lab ID: 2211799-017

Matrix: SOIL

Received Date: 11/15/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	500	60		mg/Kg	20	11/21/2022 2:14:57 PM	71616
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	11/17/2022 3:23:16 PM	71554
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/17/2022 3:23:16 PM	71554
Surr: DNOP	102	21-129		%Rec	1	11/17/2022 3:23:16 PM	71554
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	11/19/2022 1:37:00 AM	71544
Surr: BFB	108	37.7-212		%Rec	1	11/19/2022 1:37:00 AM	71544
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.023		mg/Kg	1	11/19/2022 1:37:00 AM	71544
Toluene	ND	0.046		mg/Kg	1	11/19/2022 1:37:00 AM	71544
Ethylbenzene	ND	0.046		mg/Kg	1	11/19/2022 1:37:00 AM	71544
Xylenes, Total	ND	0.093		mg/Kg	1	11/19/2022 1:37:00 AM	71544
Surr: 4-Bromofluorobenzene	130	70-130		%Rec	1	11/19/2022 1:37:00 AM	71544

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2211799

30-Nov-22

**Client:** GHD Midland  
**Project:** Hunt APO State 1

Sample ID: <b>MB-71602</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>71602</b>	RunNo: <b>92733</b>								
Prep Date: <b>11/18/2022</b>	Analysis Date: <b>11/19/2022</b>	SeqNo: <b>3337377</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-71602</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>71602</b>	RunNo: <b>92733</b>								
Prep Date: <b>11/18/2022</b>	Analysis Date: <b>11/19/2022</b>	SeqNo: <b>3337378</b> Units: <b>mg/Kg</b>								
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			

Sample ID: <b>LCS-71616</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>71616</b>	RunNo: <b>92751</b>								
Prep Date: <b>11/21/2022</b>	Analysis Date: <b>11/21/2022</b>	SeqNo: <b>3338145</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.2	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 Quantitative 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#: 2211799

30-Nov-22

**Client:** GHD Midland  
**Project:** Hunt APO State 1

Sample ID: <b>2211799-009AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>BH11A</b>	Batch ID: <b>71554</b>	RunNo: <b>92653</b>								
Prep Date: <b>11/16/2022</b>	Analysis Date: <b>11/17/2022</b>	SeqNo: <b>3334646</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	15	49.50	0	102	36.1	154			
Surr: DNOP	5.4		4.950		108	21	129			

Sample ID: <b>2211799-009AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>BH11A</b>	Batch ID: <b>71554</b>	RunNo: <b>92653</b>								
Prep Date: <b>11/16/2022</b>	Analysis Date: <b>11/17/2022</b>	SeqNo: <b>3334647</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	14	47.44	0	120	36.1	154	12.4	33.9	
Surr: DNOP	6.0		4.744		127	21	129	0	0	

Sample ID: <b>LCS-71554</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>71554</b>	RunNo: <b>92653</b>								
Prep Date: <b>11/16/2022</b>	Analysis Date: <b>11/17/2022</b>	SeqNo: <b>3334669</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	55	15	50.00	0	109	64.4	127			
Surr: DNOP	5.4		5.000		108	21	129			

Sample ID: <b>MB-71554</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>71554</b>	RunNo: <b>92653</b>								
Prep Date: <b>11/16/2022</b>	Analysis Date: <b>11/17/2022</b>	SeqNo: <b>3334671</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		99.7	21	129			

Sample ID: <b>LCS-71566</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>71566</b>	RunNo: <b>92689</b>								
Prep Date: <b>11/17/2022</b>	Analysis Date: <b>11/18/2022</b>	SeqNo: <b>3337331</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	15	50.00	0	90.8	64.4	127			
Surr: DNOP	5.3		5.000		105	21	129			

**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 Quantitative 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#: 2211799  
30-Nov-22

Client: GHD Midland  
Project: Hunt APO State 1

Sample ID: MB-71566	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 71566	RunNo: 92689								
Prep Date: 11/17/2022	Analysis Date: 11/18/2022	SeqNo: 3337334		Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	16		10.00		156	21	129			S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative 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#: 2211799

30-Nov-22

**Client:** GHD Midland  
**Project:** Hunt APO State 1

Sample ID: <b>ics-71522</b>	SampType: <b>LCS</b>				TestCode: <b>EPA Method 8015D: Gasoline Range</b>					
Client ID: <b>LCSS</b>	Batch ID: <b>71522</b>				RunNo: <b>92710</b>					
Prep Date: <b>11/15/2022</b>	Analysis Date: <b>11/18/2022</b>				SeqNo: <b>3335910</b>		Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	106	72.3	137			
Surr: BFB	2400		1000		236	37.7	212			S

Sample ID: <b>mb-71522</b>	SampType: <b>MBLK</b>				TestCode: <b>EPA Method 8015D: Gasoline Range</b>					
Client ID: <b>PBS</b>	Batch ID: <b>71522</b>				RunNo: <b>92710</b>					
Prep Date: <b>11/15/2022</b>	Analysis Date: <b>11/18/2022</b>				SeqNo: <b>3335911</b>		Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		111	37.7	212			

Sample ID: <b>ics-71544</b>	SampType: <b>LCS</b>				TestCode: <b>EPA Method 8015D: Gasoline Range</b>					
Client ID: <b>LCSS</b>	Batch ID: <b>71544</b>				RunNo: <b>92710</b>					
Prep Date: <b>11/16/2022</b>	Analysis Date: <b>11/18/2022</b>				SeqNo: <b>3335934</b>		Units: <b>mg/Kg</b>			
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	72.3	137			
Surr: BFB	2300		1000		233	37.7	212			S

Sample ID: <b>mb-71544</b>	SampType: <b>MBLK</b>				TestCode: <b>EPA Method 8015D: Gasoline Range</b>					
Client ID: <b>PBS</b>	Batch ID: <b>71544</b>				RunNo: <b>92710</b>					
Prep Date: <b>11/16/2022</b>	Analysis Date: <b>11/18/2022</b>				SeqNo: <b>3335935</b>		Units: <b>mg/Kg</b>			
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	37.7	212			

Sample ID: <b>2211799-009ams</b>	SampType: <b>MS</b>				TestCode: <b>EPA Method 8015D: Gasoline Range</b>					
Client ID: <b>BH11A</b>	Batch ID: <b>71544</b>				RunNo: <b>92710</b>					
Prep Date: <b>11/16/2022</b>	Analysis Date: <b>11/18/2022</b>				SeqNo: <b>3335937</b>		Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.7	23.63	0	93.3	70	130			
Surr: BFB	2100		945.2		226	37.7	212			S

Sample ID: <b>2211799-009amsd</b>	SampType: <b>MSD</b>				TestCode: <b>EPA Method 8015D: Gasoline Range</b>					
Client ID: <b>BH11A</b>	Batch ID: <b>71544</b>				RunNo: <b>92710</b>					
Prep Date: <b>11/16/2022</b>	Analysis Date: <b>11/18/2022</b>				SeqNo: <b>3335938</b>		Units: <b>mg/Kg</b>			
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 Quantitative 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#: 2211799  
30-Nov-22

Client: GHD Midland  
Project: Hunt APO State 1

Sample ID: 2211799-009amsd		SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BH11A		Batch ID: 71544		RunNo: 92710							
Prep Date: 11/16/2022		Analysis Date: 11/18/2022		SeqNo: 3335938		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	21	4.7	23.47	0	91.1	70	130	3.00	20		
Surr: BFB	2100		939.0		223	37.7	212	0	0	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 Quantitative 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#: 2211799

30-Nov-22

**Client:** GHD Midland  
**Project:** Hunt APO State 1

Sample ID: <b>ics-71522</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>71522</b>			RunNo: <b>92710</b>						
Prep Date: <b>11/15/2022</b>	Analysis Date: <b>11/18/2022</b>			SeqNo: <b>3336222</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.025	1.000	0	122	80	120			S
Toluene	1.3	0.050	1.000	0	125	80	120			S
Ethylbenzene	1.3	0.050	1.000	0	126	80	120			S
Xylenes, Total	3.8	0.10	3.000	0	126	80	120			S
Surr: 4-Bromofluorobenzene	1.3		1.000		131	70	130			S

Sample ID: <b>mb-71522</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>PBS</b>	Batch ID: <b>71522</b>			RunNo: <b>92710</b>						
Prep Date: <b>11/15/2022</b>	Analysis Date: <b>11/18/2022</b>			SeqNo: <b>3336223</b>		Units: <b>mg/Kg</b>				
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	1.3		1.000		130	70	130			

Sample ID: <b>ics-71544</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>71544</b>			RunNo: <b>92710</b>						
Prep Date: <b>11/16/2022</b>	Analysis Date: <b>11/18/2022</b>			SeqNo: <b>3336246</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.025	1.000	0	124	80	120			S
Toluene	1.3	0.050	1.000	0	125	80	120			S
Ethylbenzene	1.3	0.050	1.000	0	127	80	120			S
Xylenes, Total	3.8	0.10	3.000	0	126	80	120			S
Surr: 4-Bromofluorobenzene	1.3		1.000		127	70	130			

Sample ID: <b>mb-71544</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>PBS</b>	Batch ID: <b>71544</b>			RunNo: <b>92710</b>						
Prep Date: <b>11/16/2022</b>	Analysis Date: <b>11/18/2022</b>			SeqNo: <b>3336247</b>		Units: <b>mg/Kg</b>				
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	1.2		1.000		123	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 Quantitative 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#: 2211799

30-Nov-22

**Client:** GHD Midland  
**Project:** Hunt APO State 1

Sample ID: <b>2211799-010ams</b>		SampType: <b>MS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>BH12A</b>		Batch ID: <b>71544</b>		RunNo: <b>92710</b>						
Prep Date: <b>11/16/2022</b>		Analysis Date: <b>11/18/2022</b>		SeqNo: <b>3336250</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.023	0.9217	0	125	68.8	120			S
Toluene	1.2	0.046	0.9217	0	128	73.6	124			S
Ethylbenzene	1.2	0.046	0.9217	0	128	72.7	129			
Xylenes, Total	3.5	0.092	2.765	0	128	75.7	126			S
Surr: 4-Bromofluorobenzene	1.2		0.9217		129	70	130			

Sample ID: <b>2211799-010amsd</b>		SampType: <b>MSD</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>BH12A</b>		Batch ID: <b>71544</b>		RunNo: <b>92710</b>						
Prep Date: <b>11/16/2022</b>		Analysis Date: <b>11/18/2022</b>		SeqNo: <b>3336251</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.024	0.9488	0	120	68.8	120	0.923	20	
Toluene	1.2	0.047	0.9488	0	121	73.6	124	2.29	20	
Ethylbenzene	1.2	0.047	0.9488	0	125	72.7	129	0.214	20	
Xylenes, Total	3.5	0.095	2.846	0	124	75.7	126	0.603	20	
Surr: 4-Bromofluorobenzene	1.2		0.9488		126	70	130	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 Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		



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 Midland

Work Order Number: 2211799

RcptNo: 1

Received By: Juan Rojas 11/15/2022 7:30:00 AM

Completed By: Sean Livingston 11/15/2022 8:25:03 AM

Reviewed By: KPL

11-15-22

*[Signature]*

*[Signature]*

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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: JN 11/15/22

### 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.3	Good				





## Chain-of-Custody Record

Client: GHD

Turn-Around Time: ☒ Standard ☐ Rush 5 day

Project Name: Hunt APO State #1

Project #: 11224665

Project Manager: Nate Reece

Sampler: Liam Giersdorf

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp (including cap): 0.3 - 0.3 °C

Container Type and # 5a Preservative Type Ice HEAL No. 013

Date 11/11/200 Time 1200 Matrix Soil Sample Name BH24A

Date 11/12/200 Time 1205 Matrix SW Sample Name 5A

Date 11/12/200 Time 1210 Matrix SW Sample Name 7A

Date 11/12/200 Time 1215 Matrix SW Sample Name 8A

Date 11/12/200 Time 1220 Matrix SW Sample Name 9A



# 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.	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 <sub>2</sub> , NO <sub>3</sub> , PO <sub>4</sub> , SO <sub>4</sub>	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
11/11/200	1200	Soil	BH24A	5a	Ice	013	X	X					X	mod	mod	mod
11/12/200	1205	SW	5A			014										
11/12/200	1210	SW	7A			015										
11/12/200	1215	SW	8A			016										
11/12/200	1220	SW	9A			017										

Relinquished by: Liam Giersdorf Date: 11/14/200 Time: 0800

Relinquished by: AMMUNO Date: 11/15/200 Time: 1130

Remarks: Please email James Kennedy at [reagresources.com](mailto:reagresources.com); nate.reece@ghd.com; j.t.murray@ghd.com; liam.giersdorf@ghd.com. Bill to James Kennedy, EOG



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

December 22, 2022

Nate Reece  
GHD Midland  
2135 S Loop 250 W  
Midland, TX 79703  
TEL: (432) 686-0086  
FAX:

RE: Hunt APO State 1

OrderNo.: 2212A78

Dear Nate Reece:

Hall Environmental Analysis Laboratory received 4 sample(s) on 12/17/2022 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued December 21, 2022.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order 2212A78

Date Reported: 12/22/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: SW10

Project: Hunt APO State 1

Collection Date: 12/15/2022 12:00:00 PM

Lab ID: 2212A78-001

Matrix: MEOH (SOIL)

Received Date: 12/17/2022 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	470	60		mg/Kg	20	12/20/2022 3:19:09 AM	72198
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/20/2022 12:33:15 PM	72211
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/20/2022 12:33:15 PM	72211
Surr: DNOP	113	21-129		%Rec	1	12/20/2022 12:33:15 PM	72211
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	12/18/2022 9:07:54 PM	B93375
Surr: BFB	87.7	37.7-212		%Rec	1	12/18/2022 9:07:54 PM	B93375
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.016		mg/Kg	1	12/18/2022 9:07:54 PM	D93375
Toluene	ND	0.033		mg/Kg	1	12/18/2022 9:07:54 PM	D93375
Ethylbenzene	ND	0.033		mg/Kg	1	12/18/2022 9:07:54 PM	D93375
Xylenes, Total	ND	0.065		mg/Kg	1	12/18/2022 9:07:54 PM	D93375
Surr: 4-Bromofluorobenzene	87.9	70-130		%Rec	1	12/18/2022 9:07:54 PM	D93375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

## Analytical Report

Lab Order 2212A78

Date Reported: 12/22/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH2B

Project: Hunt APO State 1

Collection Date: 12/15/2022 12:05:00 PM

Lab ID: 2212A78-002

Matrix: MEOH (SOIL)

Received Date: 12/17/2022 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	290	60		mg/Kg	20	12/20/2022 3:31:30 AM	72198
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/20/2022 12:43:54 PM	72211
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/20/2022 12:43:54 PM	72211
Surr: DNOP	110	21-129		%Rec	1	12/20/2022 12:43:54 PM	72211
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	2.7		mg/Kg	1	12/18/2022 10:17:49 PM	B93375
Surr: BFB	86.9	37.7-212		%Rec	1	12/18/2022 10:17:49 PM	B93375
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.013		mg/Kg	1	12/18/2022 10:17:49 PM	D93375
Toluene	ND	0.027		mg/Kg	1	12/18/2022 10:17:49 PM	D93375
Ethylbenzene	ND	0.027		mg/Kg	1	12/18/2022 10:17:49 PM	D93375
Xylenes, Total	ND	0.054		mg/Kg	1	12/18/2022 10:17:49 PM	D93375
Surr: 4-Bromofluorobenzene	87.5	70-130		%Rec	1	12/18/2022 10:17:49 PM	D93375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

## Analytical Report

Lab Order 2212A78

Date Reported: 12/22/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: BH26

Project: Hunt APO State 1

Collection Date: 12/15/2022 12:10:00 PM

Lab ID: 2212A78-003

Matrix: MEOH (SOIL)

Received Date: 12/17/2022 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	160	60		mg/Kg	20	12/20/2022 3:43:51 AM	72198
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/20/2022 12:54:32 PM	72211
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/20/2022 12:54:32 PM	72211
Surr: DNOP	112	21-129		%Rec	1	12/20/2022 12:54:32 PM	72211
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	12/18/2022 11:27:34 PM	B93375
Surr: BFB	86.7	37.7-212		%Rec	1	12/18/2022 11:27:34 PM	B93375
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.019		mg/Kg	1	12/18/2022 11:27:34 PM	D93375
Toluene	ND	0.037		mg/Kg	1	12/18/2022 11:27:34 PM	D93375
Ethylbenzene	ND	0.037		mg/Kg	1	12/18/2022 11:27:34 PM	D93375
Xylenes, Total	ND	0.075		mg/Kg	1	12/18/2022 11:27:34 PM	D93375
Surr: 4-Bromofluorobenzene	87.9	70-130		%Rec	1	12/18/2022 11:27:34 PM	D93375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2212A78

Date Reported: 12/22/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland

Client Sample ID: SW11

Project: Hunt APO State 1

Collection Date: 12/15/2022 2:30:00 PM

Lab ID: 2212A78-004

Matrix: MEOH (SOIL)

Received Date: 12/17/2022 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	530	60		mg/Kg	20	12/20/2022 3:56:12 AM	72198
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/20/2022 1:05:13 PM	72211
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/20/2022 1:05:13 PM	72211
Surr: DNOP	109	21-129		%Rec	1	12/20/2022 1:05:13 PM	72211
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	2.7		mg/Kg	1	12/18/2022 11:50:45 PM	B93375
Surr: BFB	83.5	37.7-212		%Rec	1	12/18/2022 11:50:45 PM	B93375
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.014		mg/Kg	1	12/18/2022 11:50:45 PM	D93375
Toluene	ND	0.027		mg/Kg	1	12/18/2022 11:50:45 PM	D93375
Ethylbenzene	ND	0.027		mg/Kg	1	12/18/2022 11:50:45 PM	D93375
Xylenes, Total	ND	0.054		mg/Kg	1	12/18/2022 11:50:45 PM	D93375
Surr: 4-Bromofluorobenzene	84.9	70-130		%Rec	1	12/18/2022 11:50:45 PM	D93375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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QC SUMMARY REPORT  
Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A78  
22-Dec-22

Client: GHD Midland  
Project: Hunt APO State 1

Sample ID: MB-72198	SampType: mblk	TestCode: EPA Method 300.0: Anions
Client ID: PBS	Batch ID: 72198	RunNo: 93415
Prep Date: 12/19/2022	Analysis Date: 12/20/2022	SeqNo: 3368975 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	ND	1.5

Sample ID: LCS-72198	SampType: lcs	TestCode: EPA Method 300.0: Anions
Client ID: LCSS	Batch ID: 72198	RunNo: 93415
Prep Date: 12/19/2022	Analysis Date: 12/20/2022	SeqNo: 3368976 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	15	1.5 15.00 0 97.6 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 Quantitative 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#: 2212A78

22-Dec-22

**Client:** GHD Midland  
**Project:** Hunt APO State 1

Sample ID: <b>LCS-72211</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>72211</b>			RunNo: <b>93423</b>						
Prep Date: <b>12/20/2022</b>	Analysis Date: <b>12/20/2022</b>			SeqNo: <b>3369401</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	15	50.00	0	83.4	64.4	127			
Surr: DNOP	5.5		5.000		110	21	129			

Sample ID: <b>MB-72211</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>						
Client ID: <b>PBS</b>	Batch ID: <b>72211</b>			RunNo: <b>93423</b>						
Prep Date: <b>12/20/2022</b>	Analysis Date: <b>12/20/2022</b>			SeqNo: <b>3369403</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		107	21	129			

Sample ID: <b>2212A78-001AMS</b>	SampType: <b>MS</b>			TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>						
Client ID: <b>SW10</b>	Batch ID: <b>72211</b>			RunNo: <b>93423</b>						
Prep Date: <b>12/20/2022</b>	Analysis Date: <b>12/20/2022</b>			SeqNo: <b>3369532</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38	14	48.12	0	79.5	36.1	154			
Surr: DNOP	5.5		4.812		115	21	129			

Sample ID: <b>2212A78-001AMSD</b>	SampType: <b>MSD</b>			TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>						
Client ID: <b>SW10</b>	Batch ID: <b>72211</b>			RunNo: <b>93423</b>						
Prep Date: <b>12/20/2022</b>	Analysis Date: <b>12/20/2022</b>			SeqNo: <b>3369533</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	14	48.08	0	84.8	36.1	154	6.44	33.9	
Surr: DNOP	5.6		4.808		116	21	129	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 Quantitative 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#: 2212A78

22-Dec-22

**Client:** GHD Midland  
**Project:** Hunt APO State 1

Sample ID: <b>mb-II</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>PBS</b>	Batch ID: <b>B93375</b>			RunNo: <b>93375</b>						
Prep Date:	Analysis Date: <b>12/18/2022</b>			SeqNo: <b>3367069</b>			Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	870		1000		87.4	37.7	212			

Sample ID: <b>2.5ug gro lcs-II</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>B93375</b>			RunNo: <b>93375</b>						
Prep Date:	Analysis Date: <b>12/18/2022</b>			SeqNo: <b>3367070</b>			Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	93.2	72.3	137			
Surr: BFB	1800		1000		180	37.7	212			

Sample ID: <b>2212a78-001ams</b>	SampType: <b>MS</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>SW10</b>	Batch ID: <b>B93375</b>			RunNo: <b>93375</b>						
Prep Date:	Analysis Date: <b>12/18/2022</b>			SeqNo: <b>3367076</b>			Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	15	3.3	16.36	0	94.3	70	130			
Surr: BFB	1200		654.5		181	37.7	212			

Sample ID: <b>2212a78-001amsd</b>	SampType: <b>MSD</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>SW10</b>	Batch ID: <b>B93375</b>			RunNo: <b>93375</b>						
Prep Date:	Analysis Date: <b>12/18/2022</b>			SeqNo: <b>3367077</b>			Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	16	3.3	16.36	0	95.2	70	130	0.971	20	
Surr: BFB	1200		654.5		183	37.7	212	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 Quantitative 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#: 2212A78

22-Dec-22

**Client:** GHD Midland  
**Project:** Hunt APO State 1

Sample ID: <b>mb-II</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>D93375</b>		RunNo: <b>93375</b>							
Prep Date:	Analysis Date: <b>12/18/2022</b>		SeqNo: <b>3367106</b>		Units: <b>mg/Kg</b>					
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	0.87		1.000		87.4	70	130			

Sample ID: <b>100ng btex lcs-II</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>D93375</b>		RunNo: <b>93375</b>							
Prep Date:	Analysis Date: <b>12/18/2022</b>		SeqNo: <b>3367107</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	90.4	80	120			
Toluene	0.91	0.050	1.000	0	91.4	80	120			
Ethylbenzene	0.91	0.050	1.000	0	91.4	80	120			
Xylenes, Total	2.8	0.10	3.000	0	91.9	80	120			
Surr: 4-Bromofluorobenzene	0.86		1.000		86.2	70	130			

Sample ID: <b>2212a78-002ams</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BH2B</b>	Batch ID: <b>D93375</b>		RunNo: <b>93375</b>							
Prep Date:	Analysis Date: <b>12/18/2022</b>		SeqNo: <b>3367113</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.49	0.013	0.5391	0	91.7	68.8	120			
Toluene	0.50	0.027	0.5391	0	93.2	73.6	124			
Ethylbenzene	0.50	0.027	0.5391	0	93.4	72.7	129			
Xylenes, Total	1.5	0.054	1.617	0.009973	91.5	75.7	126			
Surr: 4-Bromofluorobenzene	0.48		0.5391		88.8	70	130			

Sample ID: <b>2212a78-002amsd</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BH2B</b>	Batch ID: <b>D93375</b>		RunNo: <b>93375</b>							
Prep Date:	Analysis Date: <b>12/18/2022</b>		SeqNo: <b>3367114</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.49	0.013	0.5391	0	91.7	68.8	120	0.0327	20	
Toluene	0.49	0.027	0.5391	0	91.4	73.6	124	2.00	20	
Ethylbenzene	0.49	0.027	0.5391	0	91.7	72.7	129	1.88	20	
Xylenes, Total	1.5	0.054	1.617	0.009973	90.5	75.7	126	1.05	20	
Surr: 4-Bromofluorobenzene	0.47		0.5391		86.5	70	130	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 Quantitative 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



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 Midland

Work Order Number: 2212A78

RcptNo: 1

Received By: Desiree Dominguez 12/17/2022 10:00:00 AM

Completed By: Desiree Dominguez 12/17/2022 10:30:19 AM

Reviewed By: *CMC* 12/17/22

*D2*

*D2*

## 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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? Yes ☒ No ☐

(Note discrepancies on chain of custody)

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? Yes ☒ No ☐

(If no, notify customer for authorization.)

# of preserved  
bottles checked  
for pH:

( $<2$  or  $>12$  unless noted)

Adjusted? \_\_\_\_\_

Checked by: *DAD 12/17/22*

## 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.4	Good				







Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

January 17, 2023

Nate Reece

GHD

6121 Indian School Road, NE #200

Albuquerque, NM 87110

TEL: (505) 884-0672

FAX:

RE: EOG Hunt APO State 1

OrderNo.: 2301463

Dear Nate Reece:

Hall Environmental Analysis Laboratory received 9 sample(s) on 1/12/2023 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](http://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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



## Analytical Report

Lab Order 2301463

Date Reported: 1/17/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Client Sample ID: BH-24B

Project: EOG Hunt APO State 1

Collection Date: 1/10/2023 12:42:00 PM

Lab ID: 2301463-001

Matrix: SOIL

Received Date: 1/12/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	490	60		mg/Kg	20	1/13/2023 2:12:15 PM	72612
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	8.2		mg/Kg	1	1/13/2023 3:05:11 PM	72610
Motor Oil Range Organics (MRO)	ND	41		mg/Kg	1	1/13/2023 3:05:11 PM	72610
Surr: DNOP	100	69-147		%Rec	1	1/13/2023 3:05:11 PM	72610
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/13/2023 2:54:00 PM	72605
Surr: BFB	96.3	37.7-212		%Rec	1	1/13/2023 2:54:00 PM	72605
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	1/13/2023 2:54:00 PM	72605
Toluene	ND	0.048		mg/Kg	1	1/13/2023 2:54:00 PM	72605
Ethylbenzene	ND	0.048		mg/Kg	1	1/13/2023 2:54:00 PM	72605
Xylenes, Total	ND	0.097		mg/Kg	1	1/13/2023 2:54:00 PM	72605
Surr: 4-Bromofluorobenzene	116	70-130		%Rec	1	1/13/2023 2:54:00 PM	72605

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2301463

Date Reported: 1/17/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Client Sample ID: BH-12B

Project: EOG Hunt APO State 1

Collection Date: 1/10/2023 12:14:00 PM

Lab ID: 2301463-002

Matrix: SOIL

Received Date: 1/12/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	590	60		mg/Kg	20	1/13/2023 2:24:39 PM	72612
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	1/13/2023 3:26:28 PM	72610
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	1/13/2023 3:26:28 PM	72610
Surr: DNOP	103	69-147		%Rec	1	1/13/2023 3:26:28 PM	72610
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/13/2023 3:14:00 PM	72605
Surr: BFB	102	37.7-212		%Rec	1	1/13/2023 3:14:00 PM	72605
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	1/13/2023 3:14:00 PM	72605
Toluene	ND	0.049		mg/Kg	1	1/13/2023 3:14:00 PM	72605
Ethylbenzene	ND	0.049		mg/Kg	1	1/13/2023 3:14:00 PM	72605
Xylenes, Total	ND	0.097		mg/Kg	1	1/13/2023 3:14:00 PM	72605
Surr: 4-Bromofluorobenzene	120	70-130		%Rec	1	1/13/2023 3:14:00 PM	72605

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2301463

Date Reported: 1/17/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Client Sample ID: BH-11B

Project: EOG Hunt APO State 1

Collection Date: 1/10/2023 12:15:00 PM

Lab ID: 2301463-003

Matrix: SOIL

Received Date: 1/12/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	1000	59		mg/Kg	20	1/13/2023 2:37:03 PM	72612
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	8.5		mg/Kg	1	1/13/2023 3:37:14 PM	72610
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	1/13/2023 3:37:14 PM	72610
Surr: DNOP	102	69-147		%Rec	1	1/13/2023 3:37:14 PM	72610
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/13/2023 3:33:00 PM	72605
Surr: BFB	108	37.7-212		%Rec	1	1/13/2023 3:33:00 PM	72605
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	1/13/2023 3:33:00 PM	72605
Toluene	ND	0.050		mg/Kg	1	1/13/2023 3:33:00 PM	72605
Ethylbenzene	ND	0.050		mg/Kg	1	1/13/2023 3:33:00 PM	72605
Xylenes, Total	ND	0.099		mg/Kg	1	1/13/2023 3:33:00 PM	72605
Surr: 4-Bromofluorobenzene	122	70-130		%Rec	1	1/13/2023 3:33:00 PM	72605

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2301463

Date Reported: 1/17/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Client Sample ID: BH-10B

Project: EOG Hunt APO State 1

Collection Date: 1/10/2023 12:16:00 PM

Lab ID: 2301463-004

Matrix: SOIL

Received Date: 1/12/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	960	60		mg/Kg	20	1/13/2023 2:49:28 PM	72612
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	1/13/2023 3:47:59 PM	72610
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/13/2023 3:47:59 PM	72610
Surr: DNOP	95.9	69-147		%Rec	1	1/13/2023 3:47:59 PM	72610
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/13/2023 3:53:00 PM	72605
Surr: BFB	106	37.7-212		%Rec	1	1/13/2023 3:53:00 PM	72605
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	1/13/2023 3:53:00 PM	72605
Toluene	ND	0.050		mg/Kg	1	1/13/2023 3:53:00 PM	72605
Ethylbenzene	ND	0.050		mg/Kg	1	1/13/2023 3:53:00 PM	72605
Xylenes, Total	ND	0.10		mg/Kg	1	1/13/2023 3:53:00 PM	72605
Surr: 4-Bromofluorobenzene	122	70-130		%Rec	1	1/13/2023 3:53:00 PM	72605

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2301463

Date Reported: 1/17/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Client Sample ID: BH-9B

Project: EOG Hunt APO State 1

Collection Date: 1/10/2023 12:18:00 PM

Lab ID: 2301463-005

Matrix: SOIL

Received Date: 1/12/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	310	60		mg/Kg	20	1/13/2023 6:57:34 PM	72624
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	1/13/2023 3:58:43 PM	72610
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	1/13/2023 3:58:43 PM	72610
Surr: DNOP	103	69-147		%Rec	1	1/13/2023 3:58:43 PM	72610
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/13/2023 4:12:00 PM	72605
Surr: BFB	100	37.7-212		%Rec	1	1/13/2023 4:12:00 PM	72605
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	1/13/2023 4:12:00 PM	72605
Toluene	ND	0.048		mg/Kg	1	1/13/2023 4:12:00 PM	72605
Ethylbenzene	ND	0.048		mg/Kg	1	1/13/2023 4:12:00 PM	72605
Xylenes, Total	ND	0.097		mg/Kg	1	1/13/2023 4:12:00 PM	72605
Surr: 4-Bromofluorobenzene	120	70-130		%Rec	1	1/13/2023 4:12:00 PM	72605

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2301463

Date Reported: 1/17/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Client Sample ID: BH-8B

Project: EOG Hunt APO State 1

Collection Date: 1/10/2023 12:19:00 PM

Lab ID: 2301463-006

Matrix: SOIL

Received Date: 1/12/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	1300	60		mg/Kg	20	1/13/2023 7:09:58 PM	72624
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	8.5		mg/Kg	1	1/13/2023 4:09:28 PM	72610
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	1/13/2023 4:09:28 PM	72610
Surr: DNOP	109	69-147		%Rec	1	1/13/2023 4:09:28 PM	72610
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/13/2023 4:32:00 PM	72605
Surr: BFB	108	37.7-212		%Rec	1	1/13/2023 4:32:00 PM	72605
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	1/13/2023 4:32:00 PM	72605
Toluene	ND	0.049		mg/Kg	1	1/13/2023 4:32:00 PM	72605
Ethylbenzene	ND	0.049		mg/Kg	1	1/13/2023 4:32:00 PM	72605
Xylenes, Total	ND	0.098		mg/Kg	1	1/13/2023 4:32:00 PM	72605
Surr: 4-Bromofluorobenzene	117	70-130		%Rec	1	1/13/2023 4:32:00 PM	72605

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2301463

Date Reported: 1/17/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Client Sample ID: BH-7B

Project: EOG Hunt APO State 1

Collection Date: 1/10/2023 12:20:00 PM

Lab ID: 2301463-007

Matrix: SOIL

Received Date: 1/12/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	610	61		mg/Kg	20	1/13/2023 7:22:23 PM	72624
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	1/13/2023 4:20:10 PM	72610
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	1/13/2023 4:20:10 PM	72610
Surr: DNOP	105	69-147		%Rec	1	1/13/2023 4:20:10 PM	72610
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/13/2023 4:52:00 PM	72605
Surr: BFB	104	37.7-212		%Rec	1	1/13/2023 4:52:00 PM	72605
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	1/13/2023 4:52:00 PM	72605
Toluene	ND	0.049		mg/Kg	1	1/13/2023 4:52:00 PM	72605
Ethylbenzene	ND	0.049		mg/Kg	1	1/13/2023 4:52:00 PM	72605
Xylenes, Total	ND	0.098		mg/Kg	1	1/13/2023 4:52:00 PM	72605
Surr: 4-Bromofluorobenzene	119	70-130		%Rec	1	1/13/2023 4:52:00 PM	72605

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2301463

Date Reported: 1/17/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Client Sample ID: BH-27

Project: EOG Hunt APO State 1

Collection Date: 1/10/2023 12:21:00 PM

Lab ID: 2301463-008

Matrix: SOIL

Received Date: 1/12/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	580	61		mg/Kg	20	1/13/2023 7:34:47 PM	72624
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	1/13/2023 4:31:02 PM	72610
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	1/13/2023 4:31:02 PM	72610
Surr: DNOP	102	69-147		%Rec	1	1/13/2023 4:31:02 PM	72610
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/13/2023 5:11:00 PM	72605
Surr: BFB	104	37.7-212		%Rec	1	1/13/2023 5:11:00 PM	72605
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	1/13/2023 5:11:00 PM	72605
Toluene	ND	0.048		mg/Kg	1	1/13/2023 5:11:00 PM	72605
Ethylbenzene	ND	0.048		mg/Kg	1	1/13/2023 5:11:00 PM	72605
Xylenes, Total	ND	0.096		mg/Kg	1	1/13/2023 5:11:00 PM	72605
Surr: 4-Bromofluorobenzene	124	70-130		%Rec	1	1/13/2023 5:11:00 PM	72605

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2301463

Date Reported: 1/17/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Client Sample ID: BH-28

Project: EOG Hunt APO State 1

Collection Date: 1/10/2023 12:22:00 PM

Lab ID: 2301463-009

Matrix: SOIL

Received Date: 1/12/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	760	60		mg/Kg	20	1/13/2023 7:47:11 PM	72624
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: DGH
Diesel Range Organics (DRO)	ND	8.4		mg/Kg	1	1/13/2023 4:44:02 PM	72610
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	1/13/2023 4:44:02 PM	72610
Surr: DNOP	103	69-147		%Rec	1	1/13/2023 4:44:02 PM	72610
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/13/2023 5:31:00 PM	72605
Surr: BFB	106	37.7-212		%Rec	1	1/13/2023 5:31:00 PM	72605
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	1/13/2023 5:31:00 PM	72605
Toluene	ND	0.050		mg/Kg	1	1/13/2023 5:31:00 PM	72605
Ethylbenzene	ND	0.050		mg/Kg	1	1/13/2023 5:31:00 PM	72605
Xylenes, Total	ND	0.10		mg/Kg	1	1/13/2023 5:31:00 PM	72605
Surr: 4-Bromofluorobenzene	124	70-130		%Rec	1	1/13/2023 5:31:00 PM	72605

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 9 of 13

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2301463

17-Jan-23

**Client:** GHD**Project:** EOG Hunt APO State 1

Sample ID: <b>MB-72612</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>72612</b>	RunNo: <b>93954</b>								
Prep Date: <b>1/13/2023</b>	Analysis Date: <b>1/13/2023</b>	SeqNo: <b>3392167</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-72612</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>72612</b>	RunNo: <b>93954</b>								
Prep Date: <b>1/13/2023</b>	Analysis Date: <b>1/13/2023</b>	SeqNo: <b>3392168</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.1	90	110			

Sample ID: <b>MB-72624</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>72624</b>	RunNo: <b>93954</b>								
Prep Date: <b>1/13/2023</b>	Analysis Date: <b>1/13/2023</b>	SeqNo: <b>3392199</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-72624</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>72624</b>	RunNo: <b>93954</b>								
Prep Date: <b>1/13/2023</b>	Analysis Date: <b>1/13/2023</b>	SeqNo: <b>3392200</b> Units: <b>mg/Kg</b>								
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 Quantitative 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#: 2301463

17-Jan-23

Client: GHD

Project: EOG Hunt APO State 1

Sample ID: <b>LCS-72610</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>72610</b>		RunNo: <b>93948</b>							
Prep Date: <b>1/13/2023</b>	Analysis Date: <b>1/13/2023</b>		SeqNo: <b>3392044</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	50.00	0	79.8	61.9	130			
Surr: DNOP	5.3		5.000		107	69	147			

Sample ID: <b>MB-72610</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>72610</b>		RunNo: <b>93948</b>							
Prep Date: <b>1/13/2023</b>	Analysis Date: <b>1/13/2023</b>		SeqNo: <b>3392046</b>		Units: <b>mg/Kg</b>					
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		107	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 Quantitative 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

Page 11 of 13

QC SUMMARY REPORT  
Hall Environmental Analysis Laboratory, Inc.

WO#: 2301463  
17-Jan-23

Client: GHD  
Project: EOG Hunt APO State 1

Sample ID: Ics-72605	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: 72605			RunNo: 93931						
Prep Date: 1/12/2023	Analysis Date: 1/13/2023			SeqNo: 3391419		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	104	72.3	137			
Surr: BFB	2300		1000		228	37.7	212			S

Sample ID: mb-72605	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: 72605			RunNo: 93931						
Prep Date: 1/12/2023	Analysis Date: 1/13/2023			SeqNo: 3391577		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	37.7	212			

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 Quantitative 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#: 2301463

17-Jan-23

**Client:** GHD**Project:** EOG Hunt APO State 1

Sample ID: <b>lcs-72605</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>72605</b>		RunNo: <b>93931</b>							
Prep Date: <b>1/12/2023</b>	Analysis Date: <b>1/13/2023</b>		SeqNo: <b>3391420</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	114	80	120			
Toluene	1.2	0.050	1.000	0	116	80	120			
Ethylbenzene	1.2	0.050	1.000	0	115	80	120			
Xylenes, Total	3.5	0.10	3.000	0	115	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		122	70	130			

Sample ID: <b>mb-72605</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>72605</b>		RunNo: <b>93931</b>							
Prep Date: <b>1/12/2023</b>	Analysis Date: <b>1/13/2023</b>		SeqNo: <b>3391578</b>		Units: <b>mg/Kg</b>					
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	1.2		1.000		122	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 Quantitative Limit  
S % Recovery outside of standard limits. If undiluted results may be estimated.

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J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit



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: 2301463

RcptNo: 1

Received By: Tracy Casarrubias 1/12/2023 7:35:00 AM

Completed By: Tracy Casarrubias 1/12/2023 8:35:54 AM

Reviewed By: *Jan 12/23*

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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: *KPG 1.12.23*

### 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: *Water has infiltrated samples 001, 007 - KPG 1.12.23*

### 17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.3	Good	Yes			





## **Appendix D**

# **NMOCD Correspondence**

**Jeffrey Walker**

---

**From:** Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>  
**Sent:** Tuesday, January 30, 2018 2:26 PM  
**To:** Naranjo, Mark; Alan Brandon  
**Cc:** Bernard Bockisch; Zane Kurtz; cctofiling@croworld.com  
**Subject:** RE: 088210-53 Hunt APO State No. 1 (1RP-4891) ~COR-088210-53~

Mr. Brandon:

Based on the information provided, NMOCD will agree that delineation has been completed for the area in the right-of-way (1RP-4891) and approves of the proposed remedial activity of 4 ft. excavation with a properly-keyed, minimum 20 mil liner at the base. Laboratory analyses of confirmation sidewall samples for TPH extended and chlorides are required before backfill approval is granted.

Additional vertical delineation within the berms, area around the tank battery, (1RP-4892) will continue, correct?

Thanks,  
Olivia

---

**From:** Naranjo, Mark [mailto:MNaranjo@slo.state.nm.us]  
**Sent:** Monday, January 29, 2018 1:28 PM  
**To:** 'Alan.Brandon@ghd.com' <Alan.Brandon@ghd.com>; Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>  
**Cc:** Bernard.Bockisch@ghd.com; Zane Kurtz <Zane\_Kurtz@eogresources.com>; cctofiling@croworld.com  
**Subject:** RE: 088210-53 Hunt APO State No. 1 (1RP-4891) ~COR-088210-53~

NMSLO approves backfill request, pending any other requirements Oliva may have.

Mark Naranjo  
Assistant Division Director  
Field Operations Division  
575.623.4979 Office  
575.626.2678 Cell  
575.623.9200 Fax  
New Mexico State Land Office  
1001 S. Atkinson  
Roswell, NM 88203  
[MNaranjo@slo.state.nm.us](mailto:MNaranjo@slo.state.nm.us)  
[NMStatelands.org](http://NMStatelands.org)

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**From:** [Alan.Brandon@ghd.com](mailto:Alan.Brandon@ghd.com) [<mailto:Alan.Brandon@ghd.com>]  
**Sent:** Wednesday, January 24, 2018 1:32 PM  
**To:** Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>; Naranjo, Mark <[MNaranjo@slo.state.nm.us](mailto:MNaranjo@slo.state.nm.us)>  
**Cc:** [Bernard.Bockisch@ghd.com](mailto:Bernard.Bockisch@ghd.com); Zane Kurtz <[Zane\\_Kurtz@eogresources.com](mailto:Zane_Kurtz@eogresources.com)>; [cctofiling@croworld.com](mailto:cctofiling@croworld.com)  
**Subject:** RE: 088210-53 Hunt APO State No. 1 (1RP-4891) ~COR-088210-53~

Olivia and Mark,

1. Attached is an updated drawing for the site. The dates for the TP-11 samples have been corrected.
2. The samples were split between field screening and the laboratory. The chloride field screening strips do not always coincide with the laboratory results due to many potential variances. The screening is only used as a guide in the field and that is why we rely on the laboratory analysis.
3. The reason another sample was not collected at a greater depth in TP-11 is that the extent of the excavator was reached. Due to the depth of water being approximately 90 feet below ground surface and the significant drop in chloride concentrations from 16 to 20 feet below ground surface we feel that it is unlikely that groundwater would be impacted.

We would like to excavate the chloride impacted soil in the right-of-way to four feet below ground surface and line the base of the excavation. The proposed excavation limits shown on the attached figure are only estimated at this time. Field screening will be performed to guide the excavation activities and confirmation soil samples will be collected for laboratory analysis once field screening indicates soil concentrations are below the RRALs. A final drawing will be provided showing the final excavation limits and confirmation soil sample locations and results. If the soil sample analytical results indicate impacted soils above the RRALs have been removed, we would request authorization to backfill and re-seed the area.

Thanks

---

**From:** Yu, Olivia, EMNRD [<mailto:Olivia.Yu@state.nm.us>]  
**Sent:** Thursday, January 18, 2018 12:23 PM  
**To:** Alan Brandon <[Alan.Brandon@ghd.com](mailto:Alan.Brandon@ghd.com)>; Naranjo, Mark <[mnaranjo@slo.state.nm.us](mailto:mnaranjo@slo.state.nm.us)>  
**Cc:** Bernard Bockisch <[Bernard.Bockisch@ghd.com](mailto:Bernard.Bockisch@ghd.com)>; Zane Kurtz <[Zane\\_Kurtz@eogresources.com](mailto:Zane_Kurtz@eogresources.com)>; [cctofiling@croworld.com](mailto:cctofiling@croworld.com)  
**Subject:** RE: 088210-53 Hunt APO State No. 1 (1RP-4891) ~COR-088210-53~

Mr. Brandon:

Several questions regarding the Figure submitted for 1RP-4891 and 1RP-4892 on January 9, 2018. In regards to delineation for 1RP-4891:

1. Why is the date for TP-11 FS one earlier than TP-11? Is this a typo?
2. Please explain the large difference between field chloride tests at 14 and 16 ft. bgs and laboratory analyses for TP-11? Were these not split samples?
3. The email dated from December 11, 2017 stated that complete vertical delineation required 2 depths with permissible chloride levels. Please provide a rationale for not collecting a sample further in depth beyond 20 ft. bgs at TP-11.

For like approval from NMSLO, please submit documents to Mark Naranjo in the interim.

Thanks,

Olivia Yu  
Environmental Specialist  
NMOCD, District I

[Olivia.yu@state.nm.us](mailto:Olivia.yu@state.nm.us)

575-393-6161 x113

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

---

**From:** [Alan.Brandon@ghd.com](mailto:Alan.Brandon@ghd.com) [<mailto:Alan.Brandon@ghd.com>]

**Sent:** Tuesday, January 9, 2018 10:11 AM

**To:** Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>; [agroves@slo.state.nm.us](mailto:agroves@slo.state.nm.us)

**Cc:** [Bernard.Bockisch@ghd.com](mailto:Bernard.Bockisch@ghd.com); Zane Kurtz <[Zane\\_Kurtz@eogresources.com](mailto:Zane_Kurtz@eogresources.com)>; [cctofiling@croworld.com](mailto:cctofiling@croworld.com)

**Subject:** 088210-53 Hunt APO State No. 1 (1RP-4891) ~COR-088210-53~

Olivia and Amber,

Please find attached a drawing for the Hunt APO State No. 1 site showing the recent additional assessment results for the RP-4891 release. The horizontal extent of chloride impacted soil has been delineated except the area near TP-3. We propose to excavate the area in the NMDOT right-of-way noted on the drawing to a depth of 4 feet below ground surface, line the bottom of the excavation, and then backfill it. We will collect sidewall samples for field screening to guide the excavation activities. Once field screening indicates that the impacted soil has been excavated, sidewall confirmation samples will be collected for laboratory analysis. Please let us know if you concur with our proposed actions.

Additional assessment will be performed within the berm area for the 1RP-4892 release.

Thank you

---

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## Jeffrey Walker

---

**From:** Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>  
**Sent:** Wednesday, February 28, 2018 3:47 PM  
**To:** Alan Brandon  
**Cc:** Bernard Bockisch; Zane Kurtz  
**Subject:** RE: Hunt APO State No. 1 (1RP-4891 and 4892)

Mr. Brandon:

Confirmed. Just make sure to outline the section excavated to 4 ft. bgs and the section 2 ft. bgs. on a map with GPS coordinates. North sidewall to be addressed with 1RP-4892 is noted.

Thanks,  
Olivia

---

**From:** Alan.Brandon@ghd.com [mailto:Alan.Brandon@ghd.com]  
**Sent:** Wednesday, February 28, 2018 3:36 PM  
**To:** Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>  
**Cc:** Bernard.Bockisch@ghd.com; Zane Kurtz <Zane\_Kurtz@eogresources.com>  
**Subject:** Re: Hunt APO State No. 1 (1RP-4891 and 4892)

Olivia,

After further discussions with Michael, he said that the 2' deep excavation extends past TP-13 to the east a little ways. The sample he collected with the 1,500 mg/kg was from west of TP-13. Based on this, we are good to the east. So we can line the whole excavation and backfill. We will remove the soil on the north side when we do the pad area. Are you OK with this?

Sent from my iPhone

On Feb 28, 2018, at 3:03 PM, Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)> wrote:

Mr. Brandon:

Thanks for the update for 1RP-4891. If backfill approval is granted, is it possible to remove this last strip between the current East sidewall and TP-13 to 2 ft. bgs during the backfill process? As much as possible in depth to promote vegetation?

Thanks,  
Olivia

---

**From:** [Alan.Brandon@ghd.com](mailto:Alan.Brandon@ghd.com) [mailto:[Alan.Brandon@ghd.com](mailto:Alan.Brandon@ghd.com)]  
**Sent:** Wednesday, February 28, 2018 1:43 PM  
**To:** Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>  
**Cc:** [Bernard.Bockisch@ghd.com](mailto:Bernard.Bockisch@ghd.com); Zane Kurtz <[Zane\\_Kurtz@eogresources.com](mailto:Zane_Kurtz@eogresources.com)>  
**Subject:** Hunt APO State No. 1 (1RP-4891 and 4892)

Olivia,



Here is a drawing showing the sidewall samples for Hunt. The chloride concentration on the west side exceeds the RRAL and there is an overhead power line preventing further excavation in that direction. The north sample was collected next to the berm and we can excavate that soil once the lines are moved and we start working in the pad area. The sample to the east is also above the RRAL but TP-13 just a little further east is below the RRAL. Since the caliche is so hard to excavate and they really couldn't go deeper than 2 feet in that area, can we leave that small amount of impacted soil in place? We would really like to line the excavation and backfill it as soon as possible since it is in the highway right-of-way which poses a danger. Please let me know what you think.

Thanks

**Alan Brandon**  
**Senior Project Manager**

**GHD**

T: +1 505 884 0672 | M: +1 505 697 2025 | VOIP Ext: 867318 | E: [Alan.Brandon@ghd.com](mailto:Alan.Brandon@ghd.com)  
6121 Indian School Rd. NE Albuquerque New Mexico 87110 | [www.ghd.com](http://www.ghd.com)

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**From:** [Nobui, Jennifer, EMNRD](#)  
**To:** [Nate Reece](#)  
**Cc:** [Bratcher, Michael, EMNRD](#)  
**Subject:** FW: [EXTERNAL] Sampling Notification  
**Date:** Monday, October 24, 2022 10:36:43 AM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[image005.png](#)

---

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Nate

Thank you for the notification. Please 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.

Thanks,  
Jennifer Nobui

---

**From:** Enviro, OCD, EMNRD <[OCD.Enviro@emnrd.nm.gov](mailto:OCD.Enviro@emnrd.nm.gov)>  
**Sent:** Wednesday, October 19, 2022 8:15 AM  
**To:** Bratcher, Michael, EMNRD <[mike.bratcher@emnrd.nm.gov](mailto:mike.bratcher@emnrd.nm.gov)>; Nobui, Jennifer, EMNRD <[Jennifer.Nobui@emnrd.nm.gov](mailto:Jennifer.Nobui@emnrd.nm.gov)>; Harimon, Jocelyn, EMNRD <[Jocelyn.Harimon@emnrd.nm.gov](mailto:Jocelyn.Harimon@emnrd.nm.gov)>; Hamlet, Robert, EMNRD <[Robert.Hamlet@emnrd.nm.gov](mailto:Robert.Hamlet@emnrd.nm.gov)>; Velez, Nelson, EMNRD <[Nelson.Velez@emnrd.nm.gov](mailto:Nelson.Velez@emnrd.nm.gov)>  
**Subject:** FW: [EXTERNAL] Sampling Notification

**Jocelyn Harimon** • Environmental Specialist  
Environmental Bureau  
EMNRD - Oil Conservation Division  
1220 South St. Francis Drive | Santa Fe, NM 87505  
(505)469-2821 | [Jocelyn.Harimon@state.nm.us](mailto:Jocelyn.Harimon@state.nm.us)  
[http:// www.emnrd.nm.gov](http://www.emnrd.nm.gov)



---

**From:** Nate Reece <[Nate.Reece@ghd.com](mailto:Nate.Reece@ghd.com)>  
**Sent:** Wednesday, October 19, 2022 7:53 AM  
**To:** Enviro, OCD, EMNRD <[OCD.Enviro@emnrd.nm.gov](mailto:OCD.Enviro@emnrd.nm.gov)>  
**Cc:** J.T. Murrey <[JT.Murrey@ghd.com](mailto:JT.Murrey@ghd.com)>; James Kennedy <[james\\_kennedy@eogresources.com](mailto:james_kennedy@eogresources.com)>; Liam Giersdorf <[Liam.Giersdorf@ghd.com](mailto:Liam.Giersdorf@ghd.com)>

**Subject:** [EXTERNAL] Sampling Notification

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To Whom it May Concern,

GHD on behalf of EOG Resources, respectfully submits notification of sampling to be conducted at the below locations:.

Hunt APO State #1  
L-4-21S-34E  
Lea County, NM  
1RP-4892

Livingston Ridge SWD System  
H-35-22S-31E  
Eddy County, NM  
2RP-3486

Sampling will begin at 7:00 a.m. on Monday, October 24 - October 28, 2022.

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](mailto:nate.reece@ghd.com)

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**Nate Reece**

---

**From:** Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>  
**Sent:** Wednesday, November 2, 2022 11:13 AM  
**To:** Nate Reece  
**Cc:** Bratcher, Michael, EMNRD  
**Subject:** FW: [EXTERNAL] Sampling Notification

You don't often get email from jennifer.nobui@emnrd.nm.gov. [Learn why this is important](#)

Nate

Thank you for the notification. Please 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.

Thanks,  
Jennifer Nobui

---

**From:** Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>  
**Sent:** Wednesday, November 2, 2022 9:20 AM  
**To:** Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>  
**Subject:** FW: [EXTERNAL] Sampling Notification

**Jocelyn Harimon** • Environmental Specialist  
Environmental Bureau  
EMNRD - Oil Conservation Division  
1220 South St. Francis Drive | Santa Fe, NM 87505  
(505)469-2821 | [Jocelyn.Harimon@state.nm.us](mailto:Jocelyn.Harimon@state.nm.us)  
<http://www.emnrd.nm.gov>



---

**From:** Nate Reece <[Nate.Reece@ghd.com](mailto:Nate.Reece@ghd.com)>  
**Sent:** Wednesday, November 2, 2022 8:38 AM  
**To:** Enviro, OCD, EMNRD <[OCD.Enviro@emnrd.nm.gov](mailto:OCD.Enviro@emnrd.nm.gov)>  
**Cc:** J.T. Murrey <[JT.Murrey@ghd.com](mailto:JT.Murrey@ghd.com)>; Liam Giersdorf <[Liam.Giersdorf@ghd.com](mailto:Liam.Giersdorf@ghd.com)>; James Plaster <[James.Plaster@ghd.com](mailto:James.Plaster@ghd.com)>  
**Subject:** [EXTERNAL] Sampling Notification

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To Whom it May Concern,

GHD on behalf of EOG Resources, respectfully submits notification of sampling to be conducted at the below locations:.

Hunt APO State #1  
L-4-21S-34E  
Lea County, NM  
1RP-4892

Livingston Ridge SWD System  
H-35-22S-31E  
Eddy County, NM  
2RP-3486

Sampling will begin at 7:00 a.m. on Monday, November 7 - November 11, 2022.

Thank You,

**Nate Reece**  
Environmental Scientist

**GHD**

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**Nate Reece**

---

**From:** Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>  
**Sent:** Wednesday, December 7, 2022 9:19 AM  
**To:** Nate Reece  
**Cc:** Bratcher, Michael, EMNRD; Billings, Bradford, EMNRD  
**Subject:** RE: [EXTERNAL] Sampling Notifications

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Thank you for the notification. Please 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.

**Jocelyn Harimon** • Environmental Specialist  
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1220 South St. Francis Drive | Santa Fe, NM 87505  
(505)469-2821 | [Jocelyn.Harimon@emnrd.nm.gov](mailto:Jocelyn.Harimon@emnrd.nm.gov)  
<http://www.emnrd.nm.gov>



---

**From:** Nate Reece <Nate.Reece@ghd.com>  
**Sent:** Wednesday, December 7, 2022 7:35 AM  
**To:** Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>  
**Cc:** J.T. Murrey <JT.Murrey@ghd.com>; Liam Giersdorf <Liam.Giersdorf@ghd.com>; James Kennedy <james\_kennedy@eogresources.com>  
**Subject:** [EXTERNAL] Sampling Notifications

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 EOG Resources, respectfully submits notification of tentative sampling to be conducted at the below locations:

Hunt APO State #1  
L-4-21S-34E  
Lea County, NM  
1RP-4892

Livingston Ridge SWD System  
H-35-22S-31E  
Eddy County, NM  
2RP-3486

Unocal AHU Federal #1  
J-1-22S-31E

Eddy County, NM  
2RP-321

Sampling will begin at 7:00 a.m. on Monday, December 12 – December 16, 2022.

Thank You,

**Nate Reece**  
Environmental Scientist

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**Nate Reece**

---

**From:** Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>  
**Sent:** Thursday, January 5, 2023 12:18 PM  
**To:** Nate Reece  
**Cc:** Bratcher, Michael, EMNRD  
**Subject:** RE: [EXTERNAL] Sampling Notifications

Nate,

Thank you for the notification. Please 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.

JH

**Jocelyn Harimon** • Environmental Specialist  
Environmental Bureau  
EMNRD - Oil Conservation Division  
1220 South St. Francis Drive | Santa Fe, NM 87505  
(505)469-2821 | [Jocelyn.Harimon@emnrd.nm.gov](mailto:Jocelyn.Harimon@emnrd.nm.gov)  
[http:// www.emnrd.nm.gov](http://www.emnrd.nm.gov)



---

**From:** Nate Reece <Nate.Reece@ghd.com>  
**Sent:** Thursday, January 5, 2023 8:44 AM  
**To:** Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>  
**Cc:** J.T. Murrey <JT.Murrey@ghd.com>; Daniel Sparks <Daniel.Sparks@ghd.com>  
**Subject:** [EXTERNAL] Sampling Notifications

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 EOG Resources, respectfully submits notification of tentative sampling to be conducted at the below locations:

Hunt APO State #1  
L-4-21S-34E  
Lea County, NM  
1RP-4892

Sampling will begin at 7:00 a.m. on Monday, January 9 – January 13, 2023.

Thank You,

**Nate Reece**  
Environmental Scientist

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## **Appendix E**

# **Photographic Log**

**Photographs of 2019 Excavation Activities (1RP-4891 and 1RP-4892):**

View of excavation of 1RP-4892 facing southeast.



View of liner in excavation of 1RP-4892 facing west.

**Site Photograph****EOG Hunt APO State #1 Release Site.**





View of excavation/lining of 1RP-4891 facing northeast.



## Site Photograph

**EOG Hunt APO State #1 Release Site.**

GHD | Report for EOG | 11224665



**Photographs of 2022 Outside of Berm Excavation Activities:**



View of excavation facing southeast.



View of southern end of excavation facing southwest.

**Site Photograph**

**EOG Hunt APO State #1 Release Site.**







View of excavation facing west.



View of excavation facing west.



## Site Photograph

**EOG Hunt APO State #1 Release Site.**

GHD | Report for EOG | 11224665



**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 224600

CONDITIONS

Operator: EOG RESOURCES INC P.O. Box 2267 Midland, TX 79702	OGRID: 7377
	Action Number: 224600
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	6/30/2023