

<b>Well Name:</b> JACKSON B	<b>Well Location:</b> T17S / R30E / SEC 1 / SWSW /	<b>County or Parish/State:</b> EDDY / NM
<b>Well Number:</b> 17	<b>Type of Well:</b> OIL WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b>	<b>Unit or CA Name:</b>	<b>Unit or CA Number:</b>
<b>US Well Number:</b> 300150403900X1	<b>Well Status:</b> Abandoned	<b>Operator:</b> EOG RESOURCES INCORPORATED

**Notice of Intent**

**Sundry ID:** 2645983

**Type of Submission:** Notice of Intent

**Type of Action:** Reclamation

**Date Sundry Submitted:** 11/29/2021

**Time Sundry Submitted:** 12:17

**Date proposed operation will begin:** 05/02/2022

**Procedure Description:** EOG Resources, Inc. respectfully requests extending Reclamation due to Historic Remediation needing to take place before Reclamation can be completed. Attached is the plan that was submitted to the NMOCD. Thank you.

**NOI Attachments**

**Procedure Description**

Jackson\_B\_17\_Wellhead\_Characterization\_Remediation\_Plan\_nAPP2111044488\_20211129121644.pdf

Jackson\_B\_17\_Flowline\_Area1\_Characterization\_Remediation\_Plan\_nAPP2110638995\_20211129121631.pdf

**Well Name:** JACKSON B

**Well Location:** T17S / R30E / SEC 1 / SWSW /

**County or Parish/State:** EDDY / NM

**Well Number:** 17

**Type of Well:** OIL WELL

**Allottee or Tribe Name:**

**Lease Number:**

**Unit or CA Name:**

**Unit or CA Number:**

**US Well Number:** 300150403900X1

**Well Status:** Abandoned

**Operator:** EOG RESOURCES INCORPORATED

**Operator Certification**

*I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.*

**Operator Electronic Signature:** TINA HUERTA

**Signed on:** NOV 29, 2021 12:17 PM

**Name:** EOG RESOURCES INCORPORATED

**Title:** Regulatory Specialist

**Street Address:** 104 SOUTH FOURTH STREET

**City:** Artesia

**State:** NM

**Phone:** (575) 748-4168

**Email address:** tina\_huerta@eogresources.com

**Field Representative**

**Representative Name:**

**Street Address:**

**City:**

**State:**

**Zip:**

**Phone:**

**Email address:**

**BLM Point of Contact**

**BLM POC Name:** JAMES A AMOS

**BLM POC Title:** Acting Assistant Field Manager

**BLM POC Phone:** 5752345927

**BLM POC Email Address:** jamos@blm.gov

**Disposition:** Approved

**Disposition Date:** 03/09/2022

**Signature:** James A. Amos

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

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

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

Incident ID	nAPP2110638995
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party EOG Resources, Inc.	OGRID 7377
Contact Name Chase Settle	Contact Telephone 575-748-1471
Contact email Chase_Settle@eogresources.com	Incident # (assigned by OCD) nAPP2110638995
Contact mailing address 104 S. 4th Street, Artesia, NM 88210	

### Location of Release Source

Latitude 32.85828 Longitude -103.92643  
*(NAD 83 in decimal degrees to 5 decimal places)*

Site Name Jackson B #17	Site Type Flow Line
Date Release Discovered 04/12/2021	API# (if applicable) 30-015-04039

Unit Letter	Section	Township	Range	County
M	1	17S	30E	Eddy

Surface Owner:  State  Federal  Tribal  Private (Name: \_\_\_\_\_)

### Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) Unknown	Volume Recovered (bbls) 0
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Historical impacts discovered along the flow line during the well P&A process. Release volume and date are unknown.

State of New Mexico  
Oil Conservation Division

Incident ID	nAPP2110638995
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

### Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why:
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name: <u>Chase Settle</u> Title: <u>Rep Safety &amp; Environmental Sr</u> Signature: <u></u> Date: <u>04/16/2021</u> email: <u>Chase_Settle@eogresources.com</u> Telephone: <u>575-748-1471</u>
<b><u>OCD Only</u></b> Received by: _____ Date: _____

Incident ID	nAPP2110638995
District RP	
Facility ID	
Application ID	

## Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>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 type="checkbox"/> Yes <input checked="" 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	nAPP2110638995
District RP	
Facility ID	
Application ID	

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

Printed Name: Chase Settle Title: Rep Safety & Environmental Sr  
 Signature:  Date: 08/31/2021  
 email: Chase\_Settle@eogresources.com Telephone: 575-748-1471

**OCD Only**

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

Incident ID	nAPP2110638995
District RP	
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: Chase Settle Title: Rep Safety & Environmental Sr  
 Signature:  Date: 08/31/2021  
 email: Chase\_Settle@eogresources.com Telephone: 575-748-1471

**OCD Only**

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

- Approved       Approved with Attached Conditions of Approval       Denied       Deferral Approved

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

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

Our ref: 11228312

August 31, 2021

New Mexico Oil Conservation Division  
District 2  
811 South First Street  
Artesia, New Mexico 88210

Re: **Site Characterization and Remediation Work Plan  
Jackson B #17 Flowline Area #1 Release Site  
EOG Resources Inc.  
Incident ID: nAPP2110638995  
M-01-17S-30E, Eddy County, New Mexico**

To Whom It May Concern:

## 1. Introduction

GHD Services, Inc. (GHD), on behalf of EOG Resources (EOG), submits this Site Characterization and Remediation Work Plan to the New Mexico Oil Conservation Division (NMOCD) District 2 Office. This Report provides documentation of delineation, sampling, and analyses in the affected area at the EOG Jackson B #17 Flowline Area #1 Release Site (Site). The Site is located in Unit Letter M Section 01 of Township 17 South and Range 30 East in Eddy County, New Mexico. The GPS coordinates for the release site are 32.85828 N latitude and 103.92643 W longitude. The release occurred on land managed by the Bureau of Land Management (BLM). Figure 1 depicts the Site location. The EOG production facility and other site details are depicted on Figure 2.

## 2. Background Information

A C-141 initial report for this release was submitted to the NMOCD on April 16, 2021. The C-141 stated that no known volume or date could be assigned to this historical release. The potential release area was discovered during EOG well plugging and flowline removal associated with this location. Soils within the former flowline area appeared to be discolored and after discussions between field personnel and environmental staff – EOG made the decision to go ahead and file a C-141 for this suspect release location.

The Initial Form C-141, Site Assessment/Characterization and Remediation Plan portions of Form C-141 for Incident Number nAPP2110638995 are attached to the front of this report.

### 3. Groundwater and Site Characterization

GHD characterized the Site according to Table 1, 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). The release falls under the jurisdiction of the NMOCD District 2 in Artesia, New Mexico.

On May 18, 2021, Talon LPE (Talon) installed a temporary well, Jackson B #59 Temp Well, at the following GPS Coordinates, 32.85697 N latitude and 103.92703 W longitude to approximately 125 feet below ground surface (bgs.) which is located approximately 0.5 miles from the Site. The Jackson B #59 Temp Well was left open for 72 hours and a water level meter was utilized to determine the presence or absence of groundwater. No groundwater was detected, and the temporary well was plugged and abandoned. Depth to groundwater for this Site is greater than one hundred (100) feet bgs. No other receptors (karst potential areas, water wells, playas, wetlands, waterways, lakebeds or ordinance boundaries) were located within each specific boundaries or distance from the Site. According to the Site characterization evaluation and 19.15.29.12.C(4)(a)(i) the Site is located within an area with depth to groundwater greater than one hundred (100) feet and meets the closure criteria for depth to groundwater greater than one hundred (100) feet in Table 1 in NMAC 19.15.29.12. The Site characterization documentation (Talon’s Temporary Well Log, Karst Potential, FEMA, Points of Diversion and Wetlands maps) are provided in Attachment A. The soil and closure criteria are listed below:

*General Site Characterization and Groundwater:*

Site Characterization	Average Groundwater Depth (ft.)
No Receptors Found	>100'

Table 3.1 Closure Criteria for Soils Impacted by a Release (NMAC 19.15.29.12)

Constituent	Limits
Chloride	20,000 mg/kg
TPH (GRO+DRO+MRO)	2,500 mg/kg
TPH (GRO+DRO)	1,000 mg/kg
Benzene	10mg/kg
BTEX	50 mg/kg

### 4. Initial Soil Delineation Assessment Summary and Findings

On April 20, 2021, an EOG representative, installed three (3) hand borings, A1-1, A1-2, and A1-3, within the suspected impacted area. Soil samples were collected at depths ranging from one (1) to ten (10) feet bgs. All soil samples were analyzed for BTEX by EPA Method 8021B, TPH by Method 8015B Modified, and chloride by EPA Method 300 by Hall Environmental Analysis Laboratory (HEAL) in Albuquerque, New Mexico. Analytical results indicated BTEX concentrations above 50 mg/kg in soil samples A1-1 6’ and A1-1 8’ and TPH concentrations above 2,500 mg/kg in soil samples A1-1 Surface through A1-8’, A1-2 Surface, A1-2 3’, and A1-3 2’. None of the samples exhibited chloride concentrations above Table 1 closure criteria.

On May 25, 2021, GHD Services Inc. (GHD) and EOG’s contractor BDS Enterprises, LLC (BDS), on behalf of EOG, installed test pits in the areas of A1-1 through A1-3 to obtain deeper samples and assess the horizontal extent of impacts in seven additional test pits, TP-1 through TP-7 within and around the suspected



impacted area. The test pit locations were excavated to depths ranging from surface to approximately twenty (20) feet bgs. Soil samples were collected from varying depths of the test pits and field screened for chloride and hydrocarbons. Select samples were submitted to HEAL in Albuquerque, New Mexico and analyzed for BTEX by EPA Method 8021B, TPH by 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 1 closure criteria.

On July 22, 2021, GHD and Talon returned to the site to install a soil boring near A1-1 to fully delineate the release to less than 600 mg/kg for chloride concentrations. The soil boring was installed to a depth of thirty-five (35) feet bgs. Samples were collected in approximately five (5) foot intervals beginning at twenty-five (25) feet bgs. Soil samples were submitted to HEAL in Albuquerque, New Mexico and analyzed for BTEX by EPA Method 8021B, TPH by 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 1 closure criteria. The A1-1 Soil Boring Log is provided as Attachment B.

Figure 2, Site Assessment: Soil Analytical Results Map, depicts the locations of the initial delineation samples and analytical concentrations. Analytical results are provided in Table 1, on Figure 2, and in the Laboratory Analytical Reports provided in Attachment C.

## 5. nAPP2110638995 Proposed Work Plan

GHD, on behalf of EOG, proposes to excavate the A1-1 area eight (8) to ten (10) feet bgs or until the Total TPH concentrations are less than 2,500 mg/kg. Areas A1-2 and A1-3 will be excavated to a depth where Total TPH concentrations are less than 2,500 mg/kg or four (4) feet bgs. Soils containing Total TPH concentrations over 100 mg/kg and chloride concentrations over 600 mg/kg within the top four feet of the impacted area will be excavated as well.

Composite confirmation samples will be collected from the sidewalls of the excavation from areas representing area no larger than two hundred (200) square feet. Discrete soil samples will be collected from the sidewalls if any staining is observed. No confirmation samples will be collected from the bottom of the excavation as the site is already vertically delineated. All confirmation samples will be taken to a certified laboratory and analyzed for BTEX by EPA Method 8021B, TPH by Method 8015B Modified, and chloride by EPA Method 300.

Excavated soils will be transported to a NMOCD approved disposal facility for disposal. The anticipated volume of soil to be disposed of is approximately 335 cubic yards. The excavation will be backfilled with non-impacted soil transported to the site. The remediation will be performed within 90 days after the work plan has been approved. A closure report will be prepared to document remediation activities and submitted to the NMOCD when remediation activities have been completed.

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

Sincerely,

GHD



Becky Haskell  
Senior Project Manager



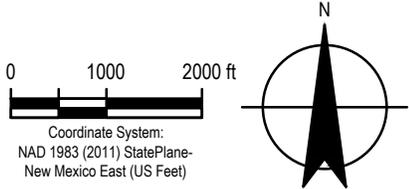
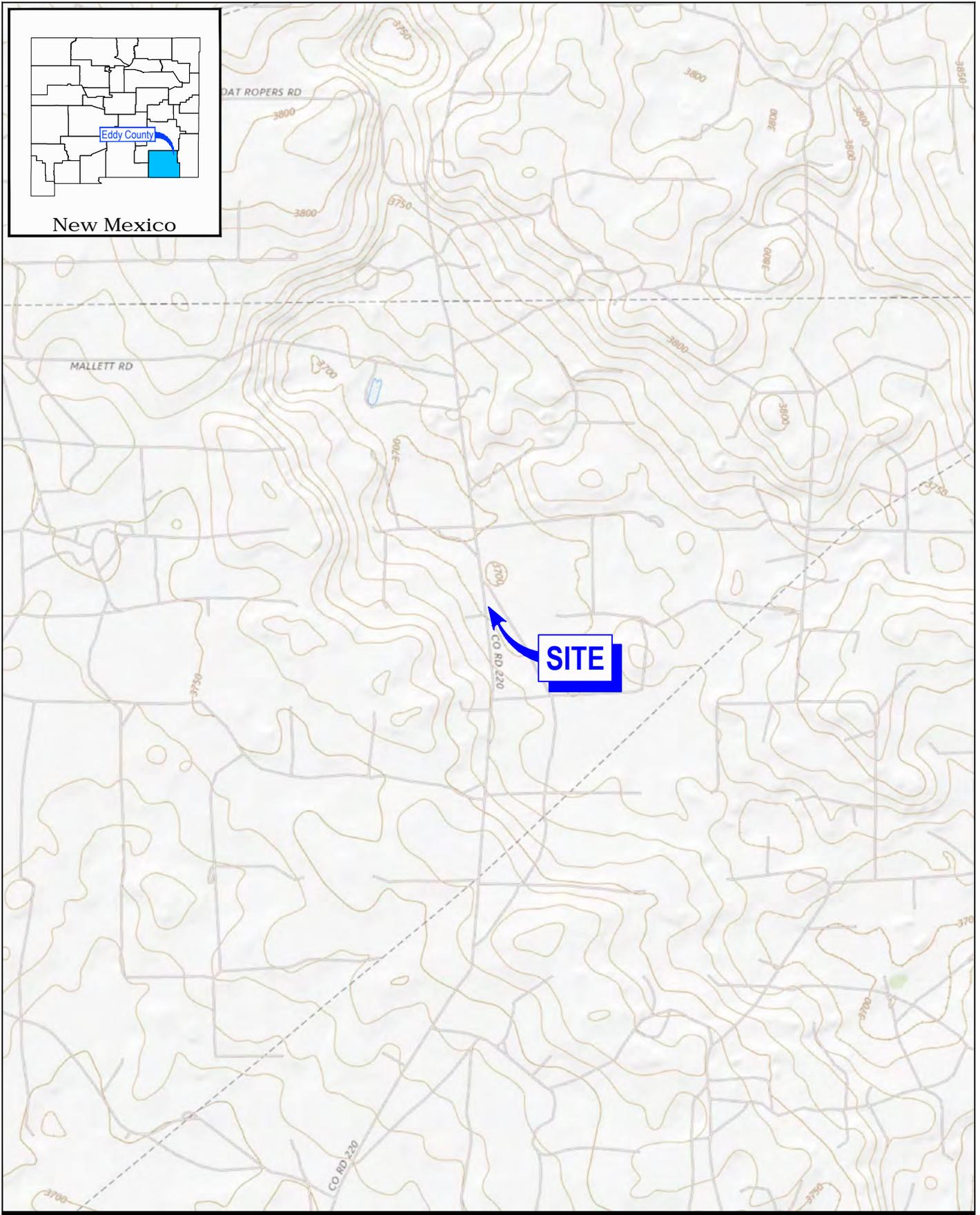
Thomas C. Larson, M.S.  
Midland Operation Manager

BH/tl/1

- Encl. Figure 1 – Site Location Map  
Figure 2 – Site Assessment Soil Analytical Results Map  
Table 1 – Summary of Soil Analytical Data  
Attachment A – Site Characterization Documentation  
Attachment B – A1-1 Soil Boring Log  
Attachment C – Laboratory Analytical Reports and Chain-of-Custody Documentation

cc: Chase Settle

# Figures

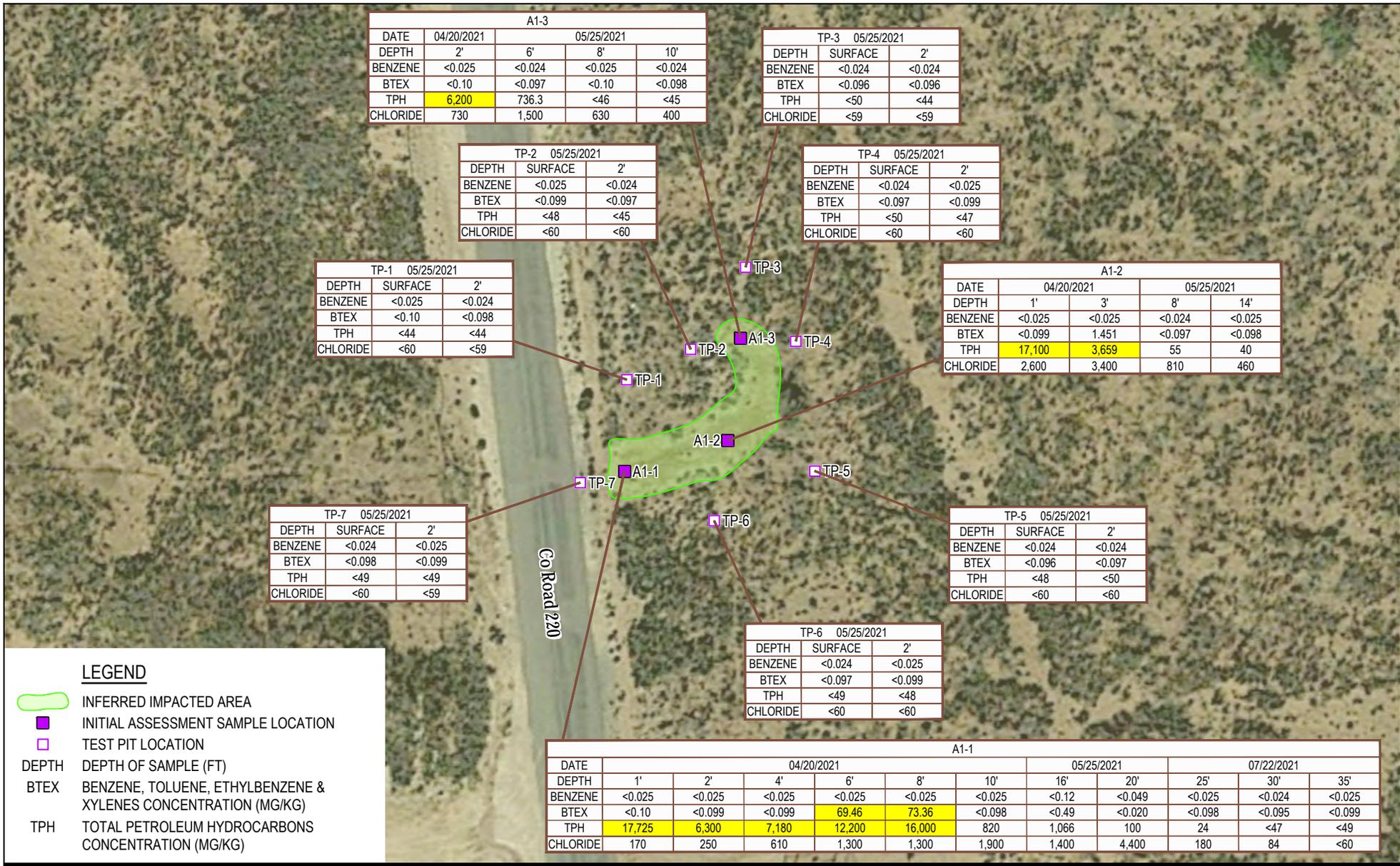


EOG RESOURCES  
EDDY COUNTY, NEW MEXICO  
JACKSON B #17 FLOWLINE AREA #1

Project No. 11228312  
Date August 2021

SITE LOCATION MAP

FIGURE 1



**NOTES:**

- RESULTS IN MILLIGRAMS PER KILOGRAM (MG/KG).
- SEE TABLE 1 FOR FULL ANALYTICAL RESULTS/DETAILS.
- YELLOW SHADED CELLS INDICATE EXCEEDANCE.



**EOG RESOURCES**  
**EDDY COUNTY, NEW MEXICO**  
**JACKSON B #17 FLOWLINE AREA #1**

Project No. **11228312**  
 Date **August 2021**

**SITE ASSESSMENT:**  
**SOIL ANALYTICAL RESULTS MAP**

**FIGURE 2**

# Tables

**Table 1  
Summary of Soil Analytical Data  
Jackson B #17 Flowline Area 1  
EOG Resources  
Eddy County, New Mexico**

Sample ID	Sample Date	Depth (feet bgs)	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	TPH				Chloride
			(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	GRO (C6-C10)	DRO (C10-C28)	MRO (C28-C35)	Total GRO/DRO/MRO	
			(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	
<b>Table I Closure Criteria for Soils &lt;50 feet Depth to Groundwater 19.15.29 NMAC</b>												
			10 mg/Kg	---	---	---	50 mg/Kg	1,000 mg/Kg		---	2,500 mg/Kg	20,000 mg/Kg
<b>Initial Assessment Samples</b>												
A1-1 Sur	4/20/21	1'	<0.025	<0.050	<0.050	<0.10	<0.10	25	8,400	9,300	17,725	170
A1-1 2'	4/20/21	2'	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	2,700	3,600	6,300	250
A1-1 4'	4/20/21	4'	<0.025	<0.050	<0.050	<0.099	<0.099	180	4,500	2,500	7,180	610
A1-1 6'	4/20/21	6'	<0.025	0.16	2.3	67	69.46	1,200	7,600	3,400	12,200	1,300
A1-1 8'	4/20/21	8'	<0.025	0.16	1.2	72	73.36	1,400	9,900	4,700	16,000	1,300
A1-1 10'	4/20/21	10'	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	300	520	820	1,900
A1-1 16'	5/25/21	16'	<0.12	<0.24	<0.24	<0.49	<0.49	66	590	410	1,066	1,400
A1-1 20'	5/25/21	20'	<0.049	<0.098	<0.098	<0.020	<0.020	<9.8	100	<50	100	4,400
A1-1 25'	7/22/21	25'	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	24	<49	24	180
A1-1 30'	7/22/21	30'	<0.024	<0.047	<0.047	<0.095	<0.095	<4.7	<9.4	<47	<47	84
A1-1 35'	7/22/21	35'	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<9.8	<49	<49	<60
A1-2 Sur	4/20/21	1'	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	9,500	7,600	17,100	2,600
A1-2 3'	4/20/21	3'	<0.025	<0.049	0.051	1.4	1.451	59	2,300	1,300	3,659	3,400
A1-2 8'	5/25/21	8'	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	55	<49	55	810
A1-2 14'	5/25/21	14'	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	40	<48	40	460
A1-3 2'	4/20/21	2'	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	3,000	3,200	6,200	730
A1-3 6'	5/25/21	6'	<0.024	<0.049	<0.049	<0.097	<0.097	6.3	340	390	736.3	1,500
A1-3 8'	5/25/21	8'	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<9.2	<46	<46	630
A1-3 10'	5/25/21	10'	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	<9.0	<45	<45	400
TP1-S	5/25/21	Surface	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<8.8	<44	<44	<60
TP1-2	5/25/21	2'	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	<8.8	<44	<44	<59
TP2-S	5/25/21	Surface	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<9.6	<48	<48	<60
TP2-2	5/25/21	2'	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<8.9	<45	<45	<60
TP3-S	5/25/21	Surface	<0.024	<0.048	<0.048	<0.096	<0.096	<4.9	<9.9	<50	<50	<59
TP3-2	5/25/21	2'	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<8.8	<44	<44	<59
TP4-S	5/25/21	Surface	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<10	<50	<50	<60
TP4-2	5/25/21	2'	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<9.5	<47	<47	<60
TP5-S	5/25/21	Surface	<0.024	<0.049	<0.049	<0.096	<0.096	<4.8	<9.7	<48	<48	<60
TP5-2	5/25/21	2'	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<9.9	<50	<50	<60
TP6-S	5/25/21	Surface	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<9.9	<49	<49	<60
TP6-2	5/25/21	2'	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<9.6	<48	<48	<60

**Table 1  
Summary of Soil Analytical Data  
Jackson B #17 Flowline Area 1  
EOG Resources  
Eddy County, New Mexico**

Sample ID	Sample Date	Depth (feet bgs)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylenes (mg/Kg)	BTEX (mg/Kg)	TPH				Chloride (mg/Kg)
								GRO (C6-C10) (mg/Kg)	DRO (C10-C28) (mg/Kg)	MRO (C28-C35) (mg/Kg)	Total GRO/DRO/MRO (mg/Kg)	
								Table I Closure Criteria for Soils <50 feet Depth to Groundwater 19.15.29 NMAC				
			10 mg/Kg	---	---	---	50 mg/Kg	1,000 mg/Kg		---	2,500 mg/Kg	20,000 mg/Kg
TP7-S	5/25/21	Surface	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	<9.8	<49	<49	<60
TP7-2	5/25/21	2'	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<9.8	<49	<49	<59

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 exceeded the NMOC 19.15.29.12 Table 1 Closure Criteria for the site.
8. J - the target analytes was positively identified below the quantitation limit and above the detection limit.

 B-BH-2 Sample Point Excavated

# Attachment A Site Characterization Documentation

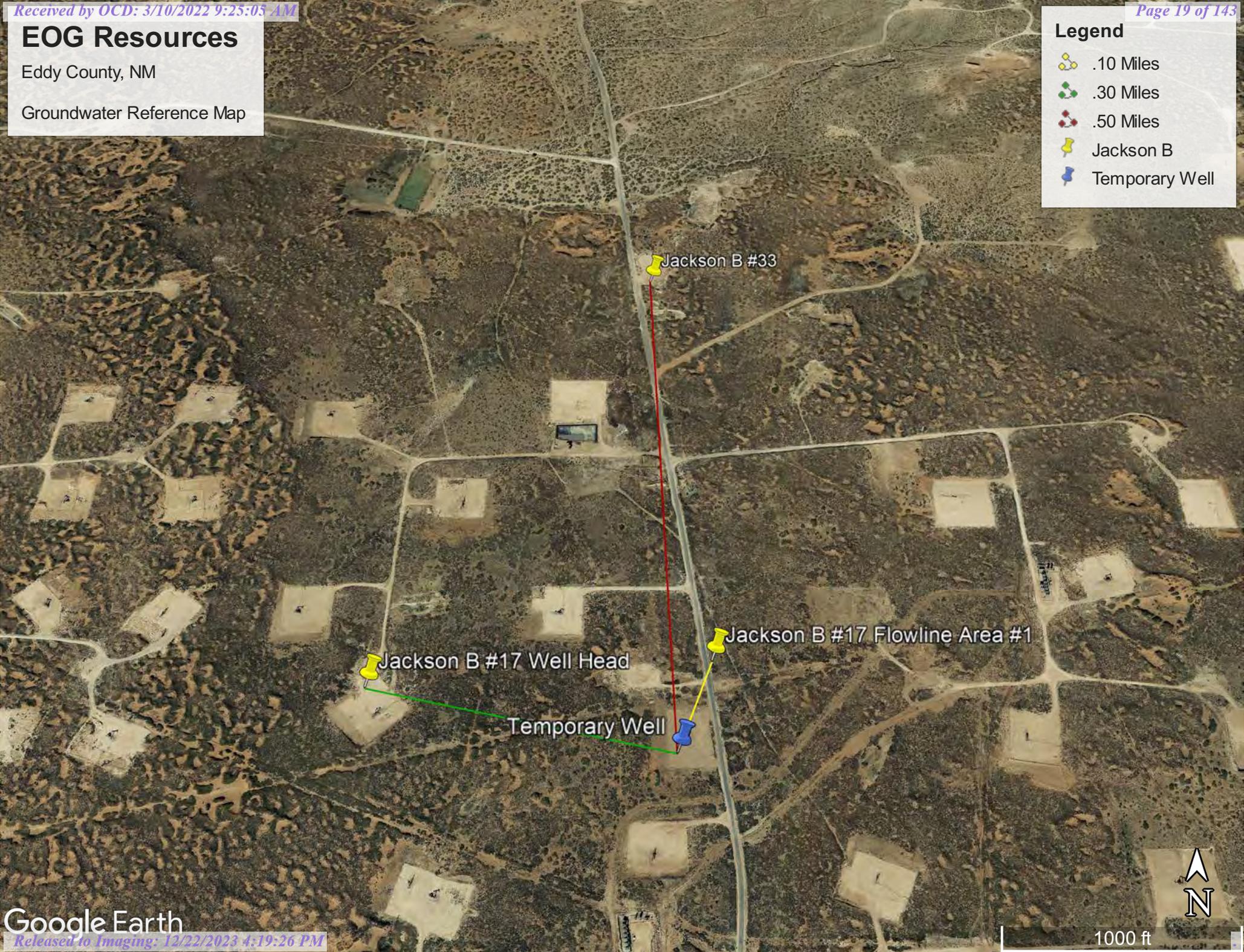
# EOG Resources

Eddy County, NM

Groundwater Reference Map

## Legend

-  .10 Miles
-  .30 Miles
-  .50 Miles
-  Jackson B
-  Temporary Well



# EOG Jackson B#59

Eddy County, New Mexico

## Legend

 32.85697,-103.92703

32.85697,-103.92703

 Jackson B#59 Temp Well

Square Lake Rd  
220

Google Earth



1000 ft



# BORING LOG

Project No.: 700438.238.01

Weather: Clear, Temp.: 75°F

Driller: D. Londagin

Site Name: Jackson B #59

Logger: D. Adkins

Rig Type: Reich Drill

Location: Eddy County, New Mexico

Field Instrument: NA

Bit Size: 5-7/8"

Date: 5/18/2021

Latitude: 32.85697 N

Drilling Method: Air Rotary

Boring Number: B-1

Longitude: -103.92703 W

Sample Retrieval Method: Drill Cuttings

Time	Lab Sample Collected	Sample Interval (ft)	Sample Recovery (ft)	USCS	Composition (%)	Sample Material/Comments Include composition, color, grain size, moisture, hardness, plasticity, density	Hydrocarbon Odor	PID (ppm)
	<input type="checkbox"/>	0-30'				Red/brown fine Sand (SP)	None Slight Mod. Strong	
	<input type="checkbox"/>	30-40'				Red/brown fine Sand (SP) with varying amounts of silt and caliche	None Slight Mod. Strong	
	<input type="checkbox"/>	40-80'				Dry, dark red/brown sandy Silts (SM)	None Slight Mod. Strong	
	<input type="checkbox"/>	80-125'				Red/brown fine Sand (SP)	None Slight Mod. Strong	
	<input type="checkbox"/>					__ TD 125' __	None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	

Surface Elevation: \_\_\_\_\_

Notes: Groundwater Not Encountered @ 125' BGS – 72 hr.

Logger Initials: DJA

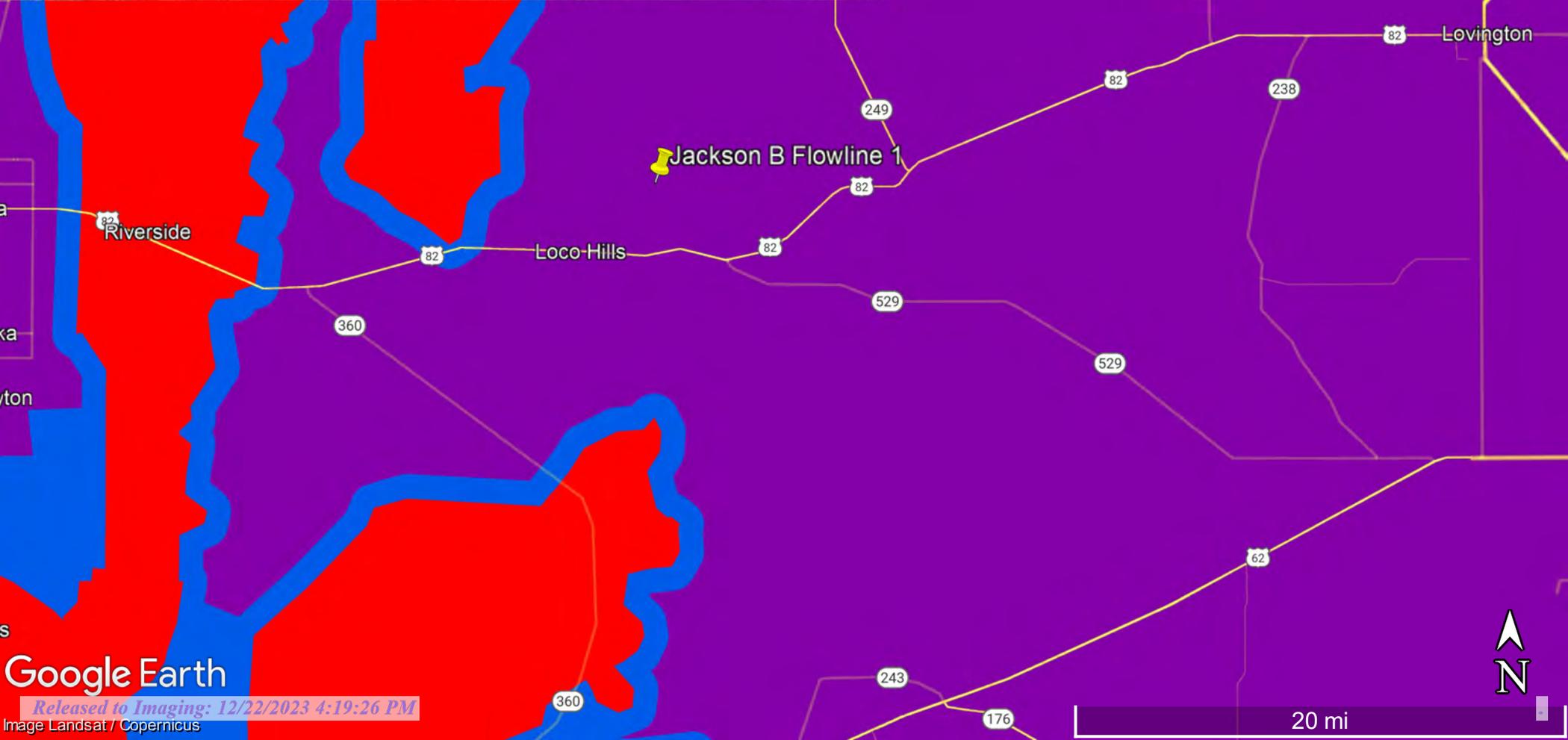


# Jackson B Flowline 1

KARST Potential Map

## Legend

-  1/2 Mile Radius
-  High
-  Jackson B Flowline 1
-  Low
-  Medium



Google Earth

# OSE PUBLIC PRINT



8/19/2021, 4:36:15 PM

GIS WATERS PODs

● Pending

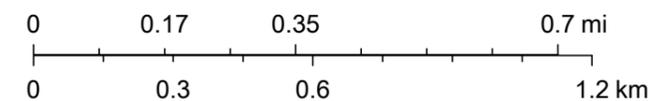
□ OSE District Boundary

New Mexico State Trust Lands

■ Both Estates

▤ Site Boundaries

1:18,056



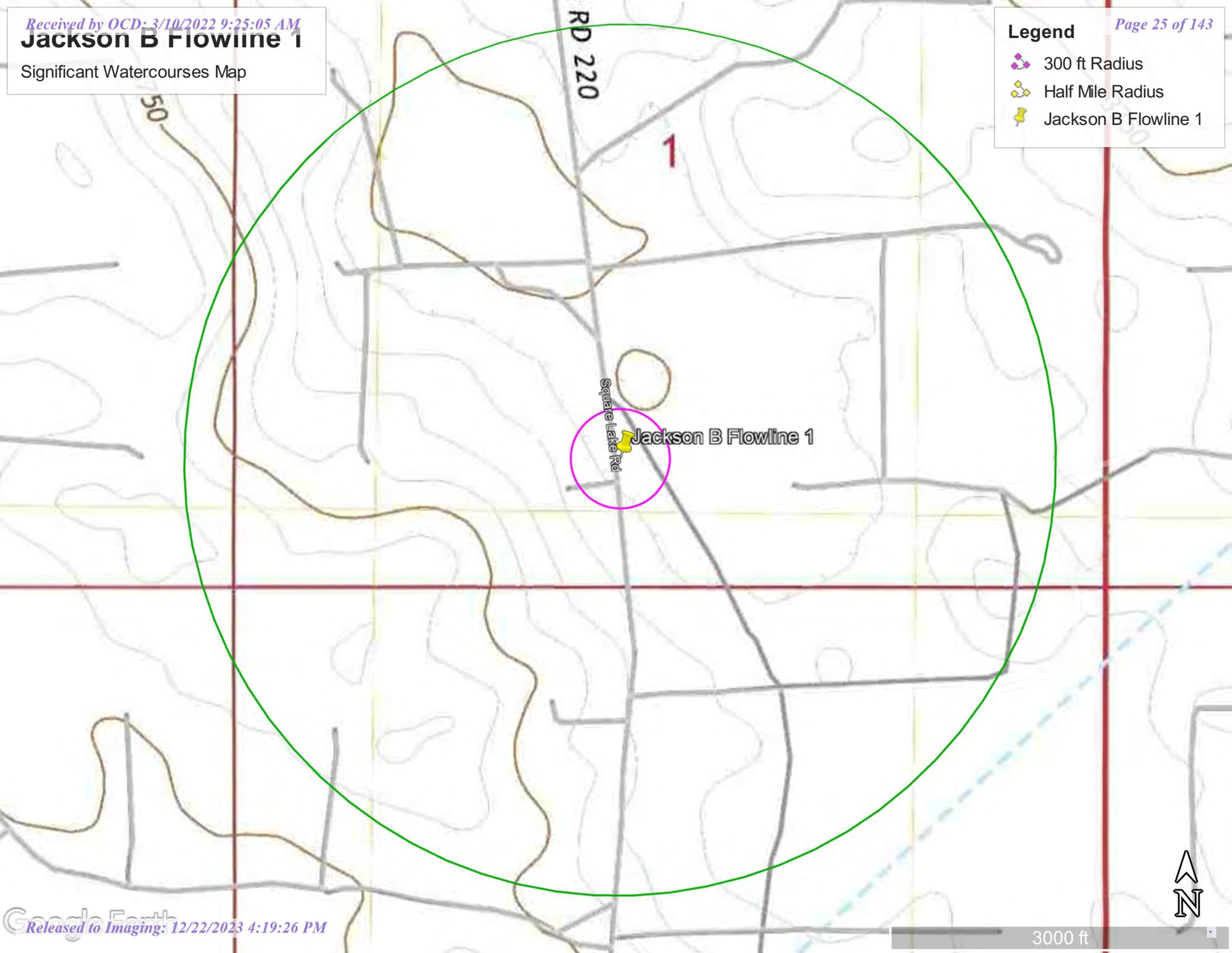
Esri, HERE, iPC, U.S. Department of Energy Office of Legacy Management, Esri, HERE, Garmin, iPC, Maxar

# Jackson B Flowline 1

Significant Watercourses Map

## Legend

-  300 ft Radius
-  Half Mile Radius
-  Jackson B Flowline 1



# EOG Jackson #17 Flowline Area #1



August 26, 2021

### Wetlands

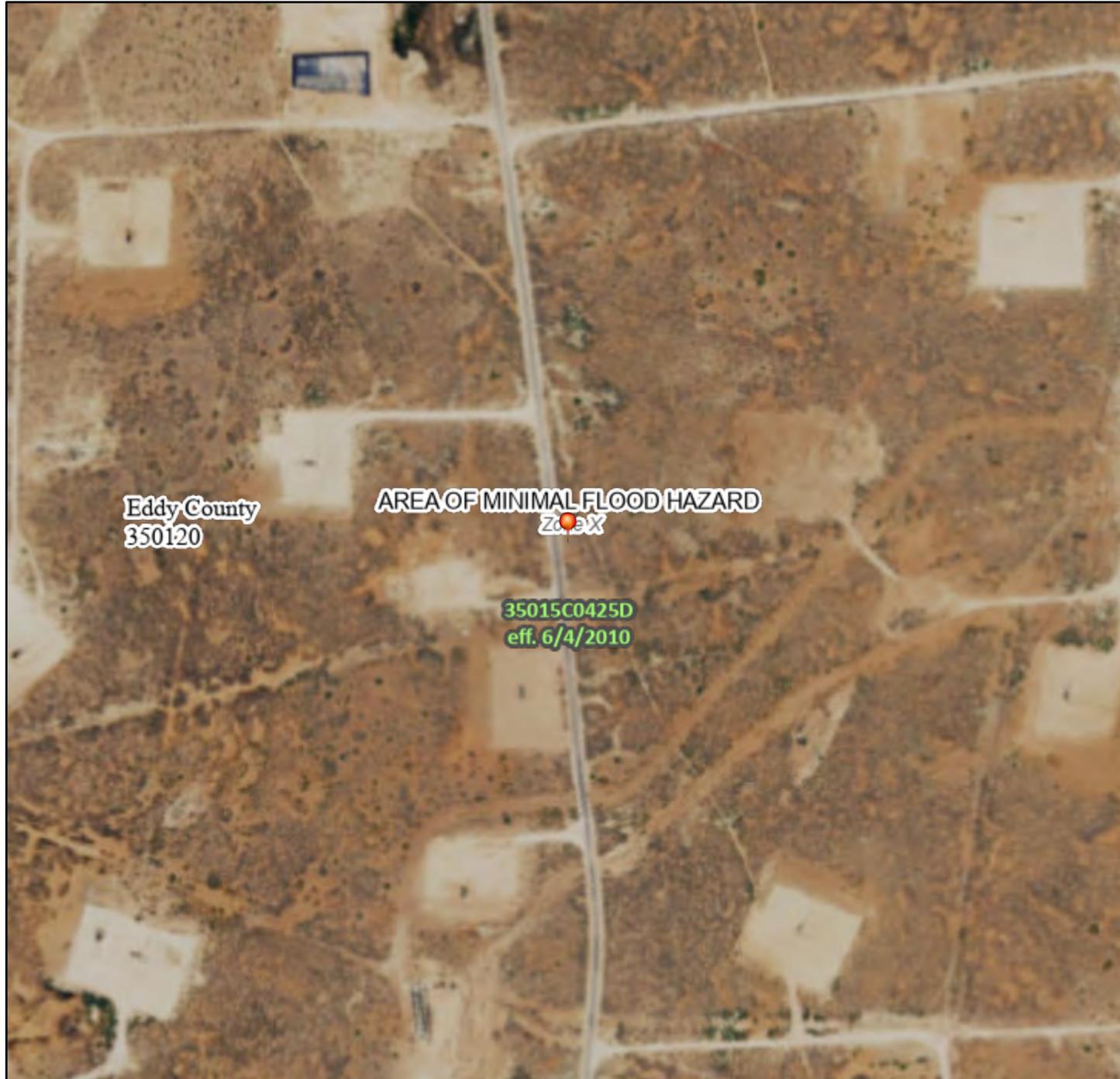
- |   |                                |   |                                   |   |          |
|---|--------------------------------|---|-----------------------------------|---|----------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland       |  | Lake     |
|  | Estuarine and Marine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



103°55'54"W 32°51'45"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**
  - 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
  - Hydrographic Feature
- 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 8/19/2021 at 6:39 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 LOG (OVERBURDEN)

PROJECT NAME: EOG/Jackson B #17 Flowline Area #1  
 PROJECT NUMBER: 11228312  
 CLIENT: EOG Resources. INC.  
 LOCATION: M-1-17S-30E; 32.858274, -103.926467

HOLE DESIGNATION: A1-1  
 DATE COMPLETED: 22 July 2021  
 DRILLING METHOD: Air Rotary  
 FIELD PERSONNEL: Lee M./Zach C.

File: \\GHDNET\GHD\USMIDLAND\PROJECTS\56211228312\FIELD NOTES\GINT LOGS\11228312 LOGS.GPJ Library File: 11228312 GHD\_ENVIRO\_V04.GLB Report: OVERBURDEN LOG Date: 26/7/21

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH m BGS	SAMPLE					
			NUMBER	INTERVAL	REC (%)	mS/cm	NaCl	
5	Start strat log @ 20ft							
10								
15								
20	SAND, fine/medium, red and brown, dry	20.00	20-25'		100	80	Non Detect	
25	CLAYEY SAND, red and brown, caliche interbedded throughout, dry	25.00	25-30'		100	120	Non Detect	
30	SAND, fine/medium, red and brown, dry	30.00	30-35'		100	80	Non Detect	
35	END OF BOREHOLE @ 35.00ft BGS	35.00						
40								
45								
50								
55								
60								
65								
70								
75								

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

CHEMICAL ANALYSIS

# 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: clients.hallenvironmental.com

April 29, 2021

Chase Settle

EOG

105 South Fourth Street

Artesia, NM 88210

TEL:

FAX

RE: Jackson B 17

OrderNo.: 2104970

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 9 sample(s) on 4/22/2021 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 in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

**Analytical Report**

Lab Order **2104970**

Date Reported: **4/29/2021**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** A1-1 Sur

**Project:** Jackson B 17

**Collection Date:** 4/20/2021 2:54:00 PM

**Lab ID:** 2104970-001

**Matrix:** SOIL

**Received Date:** 4/22/2021 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	170	60		mg/Kg	20	4/27/2021 1:07:56 AM	59643
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	8400	480		mg/Kg	50	4/23/2021 1:09:27 PM	59581
Motor Oil Range Organics (MRO)	9300	2400		mg/Kg	50	4/23/2021 1:09:27 PM	59581
Surr: DNOP	0	70-130	S	%Rec	50	4/23/2021 1:09:27 PM	59581
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	25	5.0		mg/Kg	1	4/24/2021 7:28:00 PM	59578
Surr: BFB	175	70-130	S	%Rec	1	4/24/2021 7:28:00 PM	59578
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.025		mg/Kg	1	4/24/2021 7:28:00 PM	59578
Toluene	ND	0.050		mg/Kg	1	4/24/2021 7:28:00 PM	59578
Ethylbenzene	ND	0.050		mg/Kg	1	4/24/2021 7:28:00 PM	59578
Xylenes, Total	ND	0.10		mg/Kg	1	4/24/2021 7:28:00 PM	59578
Surr: 4-Bromofluorobenzene	109	70-130		%Rec	1	4/24/2021 7:28:00 PM	59578

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order **2104970**

Date Reported: **4/29/2021**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** A1-1 2'

**Project:** Jackson B 17

**Collection Date:** 4/20/2021 2:56:00 PM

**Lab ID:** 2104970-002

**Matrix:** SOIL

**Received Date:** 4/22/2021 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	250	60		mg/Kg	20	4/27/2021 1:20:21 AM	59643
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>mb</b>
Diesel Range Organics (DRO)	2700	470		mg/Kg	50	4/25/2021 11:09:11 AM	59581
Motor Oil Range Organics (MRO)	3600	2400		mg/Kg	50	4/25/2021 11:09:11 AM	59581
Surr: DNOP	0	70-130	S	%Rec	50	4/25/2021 11:09:11 AM	59581
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/24/2021 7:47:00 PM	59578
Surr: BFB	122	70-130		%Rec	1	4/24/2021 7:47:00 PM	59578
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.025		mg/Kg	1	4/24/2021 7:47:00 PM	59578
Toluene	ND	0.050		mg/Kg	1	4/24/2021 7:47:00 PM	59578
Ethylbenzene	ND	0.050		mg/Kg	1	4/24/2021 7:47:00 PM	59578
Xylenes, Total	ND	0.099		mg/Kg	1	4/24/2021 7:47:00 PM	59578
Surr: 4-Bromofluorobenzene	88.2	70-130		%Rec	1	4/24/2021 7:47:00 PM	59578

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order **2104970**

Date Reported: **4/29/2021**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** A1-1 4'

**Project:** Jackson B 17

**Collection Date:** 4/20/2021 2:58:00 PM

**Lab ID:** 2104970-003

**Matrix:** SOIL

**Received Date:** 4/22/2021 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	610	60		mg/Kg	20	4/27/2021 1:32:45 AM	59643
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>mb</b>
Diesel Range Organics (DRO)	4500	190		mg/Kg	20	4/25/2021 11:34:52 AM	59581
Motor Oil Range Organics (MRO)	2500	970		mg/Kg	20	4/25/2021 11:34:52 AM	59581
Surr: DNOP	0	70-130	S	%Rec	20	4/25/2021 11:34:52 AM	59581
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	180	5.0		mg/Kg	1	4/24/2021 8:07:00 PM	59578
Surr: BFB	305	70-130	S	%Rec	1	4/24/2021 8:07:00 PM	59578
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.025		mg/Kg	1	4/24/2021 8:07:00 PM	59578
Toluene	ND	0.050		mg/Kg	1	4/24/2021 8:07:00 PM	59578
Ethylbenzene	0.084	0.050		mg/Kg	1	4/24/2021 8:07:00 PM	59578
Xylenes, Total	1.3	0.099		mg/Kg	1	4/24/2021 8:07:00 PM	59578
Surr: 4-Bromofluorobenzene	124	70-130		%Rec	1	4/24/2021 8:07:00 PM	59578

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order **2104970**

Date Reported: **4/29/2021**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** A1-1 6'

**Project:** Jackson B 17

**Collection Date:** 4/20/2021 3:00:00 PM

**Lab ID:** 2104970-004

**Matrix:** SOIL

**Received Date:** 4/22/2021 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	1300	61		mg/Kg	20	4/27/2021 2:09:59 AM	59643
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>mb</b>
Diesel Range Organics (DRO)	7600	190		mg/Kg	20	4/25/2021 12:00:21 PM	59581
Motor Oil Range Organics (MRO)	3400	970		mg/Kg	20	4/25/2021 12:00:21 PM	59581
Surr: DNOP	0	70-130	S	%Rec	20	4/25/2021 12:00:21 PM	59581
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	1200	250		mg/Kg	50	4/27/2021 5:38:00 PM	59578
Surr: BFB	280	70-130	S	%Rec	50	4/27/2021 5:38:00 PM	59578
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.025		mg/Kg	1	4/24/2021 8:27:00 PM	59578
Toluene	0.16	0.050		mg/Kg	1	4/24/2021 8:27:00 PM	59578
Ethylbenzene	2.3	0.050		mg/Kg	1	4/24/2021 8:27:00 PM	59578
Xylenes, Total	67	5.0		mg/Kg	50	4/27/2021 5:38:00 PM	59578
Surr: 4-Bromofluorobenzene	552	70-130	S	%Rec	1	4/24/2021 8:27:00 PM	59578

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order **2104970**

Date Reported: **4/29/2021**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** A1-1 8'

**Project:** Jackson B 17

**Collection Date:** 4/20/2021 3:02:00 PM

**Lab ID:** 2104970-005

**Matrix:** SOIL

**Received Date:** 4/22/2021 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	1300	60		mg/Kg	20	4/27/2021 2:22:23 AM	59643
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>mb</b>
Diesel Range Organics (DRO)	9900	470		mg/Kg	50	4/25/2021 12:26:08 PM	59581
Motor Oil Range Organics (MRO)	4700	2400		mg/Kg	50	4/25/2021 12:26:08 PM	59581
Surr: DNOP	0	70-130	S	%Rec	50	4/25/2021 12:26:08 PM	59581
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	1400	250		mg/Kg	50	4/27/2021 6:18:00 PM	59578
Surr: BFB	275	70-130	S	%Rec	50	4/27/2021 6:18:00 PM	59578
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.025		mg/Kg	1	4/24/2021 8:47:00 PM	59578
Toluene	0.16	0.050		mg/Kg	1	4/24/2021 8:47:00 PM	59578
Ethylbenzene	1.2	0.050		mg/Kg	1	4/24/2021 8:47:00 PM	59578
Xylenes, Total	72	5.0		mg/Kg	50	4/27/2021 6:18:00 PM	59578
Surr: 4-Bromofluorobenzene	402	70-130	S	%Rec	1	4/24/2021 8:47:00 PM	59578

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order **2104970**

Date Reported: **4/29/2021**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** A1-1 10'

**Project:** Jackson B 17

**Collection Date:** 4/20/2021 3:05:00 PM

**Lab ID:** 2104970-006

**Matrix:** SOIL

**Received Date:** 4/22/2021 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	1900	59		mg/Kg	20	4/27/2021 2:34:47 AM	59643
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>mb</b>
Diesel Range Organics (DRO)	300	9.8		mg/Kg	1	4/26/2021 11:53:14 PM	59581
Motor Oil Range Organics (MRO)	520	49		mg/Kg	1	4/26/2021 11:53:14 PM	59581
Surr: DNOP	92.6	70-130		%Rec	1	4/26/2021 11:53:14 PM	59581
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/27/2021 6:58:00 PM	59578
Surr: BFB	111	70-130		%Rec	1	4/27/2021 6:58:00 PM	59578
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.025		mg/Kg	1	4/27/2021 6:58:00 PM	59578
Toluene	ND	0.049		mg/Kg	1	4/27/2021 6:58:00 PM	59578
Ethylbenzene	ND	0.049		mg/Kg	1	4/27/2021 6:58:00 PM	59578
Xylenes, Total	ND	0.098		mg/Kg	1	4/27/2021 6:58:00 PM	59578
Surr: 4-Bromofluorobenzene	90.3	70-130		%Rec	1	4/27/2021 6:58:00 PM	59578

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order **2104970**

Date Reported: **4/29/2021**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** A1-2 Sur

**Project:** Jackson B 17

**Collection Date:** 4/20/2021 3:08:00 PM

**Lab ID:** 2104970-007

**Matrix:** SOIL

**Received Date:** 4/22/2021 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	2600	150		mg/Kg	50	4/27/2021 8:43:07 AM	59643
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>mb</b>
Diesel Range Organics (DRO)	9500	490		mg/Kg	50	4/25/2021 1:17:56 PM	59581
Motor Oil Range Organics (MRO)	7600	2500		mg/Kg	50	4/25/2021 1:17:56 PM	59581
Surr: DNOP	0	70-130	S	%Rec	50	4/25/2021 1:17:56 PM	59581
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/27/2021 7:39:00 PM	59578
Surr: BFB	130	70-130		%Rec	1	4/27/2021 7:39:00 PM	59578
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.025		mg/Kg	1	4/27/2021 7:39:00 PM	59578
Toluene	ND	0.050		mg/Kg	1	4/27/2021 7:39:00 PM	59578
Ethylbenzene	ND	0.050		mg/Kg	1	4/27/2021 7:39:00 PM	59578
Xylenes, Total	ND	0.099		mg/Kg	1	4/27/2021 7:39:00 PM	59578
Surr: 4-Bromofluorobenzene	90.6	70-130		%Rec	1	4/27/2021 7:39:00 PM	59578

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order **2104970**

Date Reported: **4/29/2021**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** A1-2 3'

**Project:** Jackson B 17

**Collection Date:** 4/20/2021 3:11:00 PM

**Lab ID:** 2104970-008

**Matrix:** SOIL

**Received Date:** 4/22/2021 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	3400	150		mg/Kg	50	4/27/2021 8:55:31 AM	59643
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>mb</b>
Diesel Range Organics (DRO)	2300	200		mg/Kg	20	4/25/2021 1:43:54 PM	59581
Motor Oil Range Organics (MRO)	1300	1000		mg/Kg	20	4/25/2021 1:43:54 PM	59581
Surr: DNOP	0	70-130	S	%Rec	20	4/25/2021 1:43:54 PM	59581
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	59	4.9		mg/Kg	1	4/24/2021 9:47:00 PM	59578
Surr: BFB	236	70-130	S	%Rec	1	4/24/2021 9:47:00 PM	59578
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.025		mg/Kg	1	4/24/2021 9:47:00 PM	59578
Toluene	ND	0.049		mg/Kg	1	4/24/2021 9:47:00 PM	59578
Ethylbenzene	0.051	0.049		mg/Kg	1	4/24/2021 9:47:00 PM	59578
Xylenes, Total	1.4	0.099		mg/Kg	1	4/24/2021 9:47:00 PM	59578
Surr: 4-Bromofluorobenzene	138	70-130	S	%Rec	1	4/24/2021 9:47:00 PM	59578

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order **2104970**

Date Reported: **4/29/2021**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** A1-3 2'

**Project:** Jackson B 17

**Collection Date:** 4/20/2021 3:14:00 PM

**Lab ID:** 2104970-009

**Matrix:** SOIL

**Received Date:** 4/22/2021 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	730	60		mg/Kg	20	4/27/2021 3:12:00 AM	59643
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>mb</b>
Diesel Range Organics (DRO)	3000	480		mg/Kg	50	4/25/2021 2:09:59 PM	59581
Motor Oil Range Organics (MRO)	3200	2400		mg/Kg	50	4/25/2021 2:09:59 PM	59581
Surr: DNOP	0	70-130	S	%Rec	50	4/25/2021 2:09:59 PM	59581
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/24/2021 10:06:00 PM	59578
Surr: BFB	110	70-130		%Rec	1	4/24/2021 10:06:00 PM	59578
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.025		mg/Kg	1	4/24/2021 10:06:00 PM	59578
Toluene	ND	0.050		mg/Kg	1	4/24/2021 10:06:00 PM	59578
Ethylbenzene	ND	0.050		mg/Kg	1	4/24/2021 10:06:00 PM	59578
Xylenes, Total	ND	0.10		mg/Kg	1	4/24/2021 10:06:00 PM	59578
Surr: 4-Bromofluorobenzene	87.4	70-130		%Rec	1	4/24/2021 10:06:00 PM	59578

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2104970

29-Apr-21

**Client:** EOG  
**Project:** Jackson B 17

Sample ID: <b>MB-59643</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>59643</b>	RunNo: <b>76958</b>								
Prep Date: <b>4/26/2021</b>	Analysis Date: <b>4/26/2021</b>	SeqNo: <b>2727668</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-59643</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>59643</b>	RunNo: <b>76958</b>								
Prep Date: <b>4/26/2021</b>	Analysis Date: <b>4/26/2021</b>	SeqNo: <b>2727669</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	93.2	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 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 Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2104970

29-Apr-21

**Client:** EOG  
**Project:** Jackson B 17

Sample ID: <b>MB-59581</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>59581</b>	RunNo: <b>76896</b>								
Prep Date: <b>4/22/2021</b>	Analysis Date: <b>4/23/2021</b>	SeqNo: <b>2725255</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	13		10.00		129	70	130			

Sample ID: <b>LCS-59581</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>59581</b>	RunNo: <b>76896</b>								
Prep Date: <b>4/22/2021</b>	Analysis Date: <b>4/23/2021</b>	SeqNo: <b>2725258</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	62	10	50.00	0	124	68.9	141			
Surr: DNOP	6.6		5.000		131	70	130			S

Sample ID: <b>MB-59616</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>59616</b>	RunNo: <b>76932</b>								
Prep Date: <b>4/23/2021</b>	Analysis Date: <b>4/26/2021</b>	SeqNo: <b>2726483</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.7		10.00		86.8	70	130			

Sample ID: <b>LCS-59616</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>59616</b>	RunNo: <b>76932</b>								
Prep Date: <b>4/23/2021</b>	Analysis Date: <b>4/26/2021</b>	SeqNo: <b>2726484</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.000		88.9	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 Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2104970

29-Apr-21

**Client:** EOG  
**Project:** Jackson B 17

Sample ID: <b>LCS-59578</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>59578</b>	RunNo: <b>76952</b>								
Prep Date: <b>4/22/2021</b>	Analysis Date: <b>4/24/2021</b>	SeqNo: <b>2727288</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	99.8	78.6	131			
Surr: BFB	1200		1000		115	70	130			

Sample ID: <b>MB-59578</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>59578</b>	RunNo: <b>76952</b>								
Prep Date: <b>4/22/2021</b>	Analysis Date: <b>4/24/2021</b>	SeqNo: <b>2727289</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		105	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 Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2104970

29-Apr-21

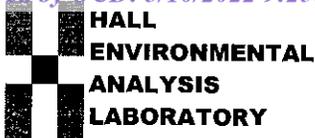
**Client:** EOG  
**Project:** Jackson B 17

Sample ID: <b>LCS-59578</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>59578</b>	RunNo: <b>76952</b>								
Prep Date: <b>4/22/2021</b>	Analysis Date: <b>4/24/2021</b>	SeqNo: <b>2727317</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	1.000	0	88.4	80	120			
Toluene	0.87	0.050	1.000	0	87.1	80	120			
Ethylbenzene	0.89	0.050	1.000	0	89.4	80	120			
Xylenes, Total	2.6	0.10	3.000	0	87.9	80	120			
Surr: 4-Bromofluorobenzene	0.88		1.000		87.9	70	130			

Sample ID: <b>MB-59578</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>59578</b>	RunNo: <b>76952</b>								
Prep Date: <b>4/22/2021</b>	Analysis Date: <b>4/24/2021</b>	SeqNo: <b>2727318</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	0.88		1.000		88.4	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 Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: EOG Work Order Number: 2104970 RcptNo: 1

Received By: Cheyenne Cason 4/22/2021 7:55:00 AM
Completed By: Desiree Dominguez 4/22/2021 8:13:30 AM
Reviewed By: JR 4/22/21

Chain of Custody

- 1. Is Chain of Custody complete? Yes [checked] No [ ] Not Present [ ]
2. How was the sample delivered? Courier

Log In

- 3. Was an attempt made to cool the samples? Yes [checked] No [ ] NA [ ]
4. Were all samples received at a temperature of >0° C to 6.0°C? Yes [checked] No [ ] NA [ ]
5. Sample(s) in proper container(s)? Yes [checked] No [ ]
6. Sufficient sample volume for indicated test(s)? Yes [checked] No [ ]
7. Are samples (except VOA and ONG) properly preserved? Yes [checked] No [ ]
8. Was preservative added to bottles? Yes [ ] No [checked] NA [ ]
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes [ ] No [ ] NA [checked]
10. Were any sample containers received broken? Yes [ ] No [checked]
11. Does paperwork match bottle labels? Yes [checked] No [ ]
12. Are matrices correctly identified on Chain of Custody? Yes [checked] No [ ]
13. Is it clear what analyses were requested? Yes [checked] No [ ]
14. Were all holding times able to be met? Yes [checked] No [ ]

# of preserved bottles checked for pH: 12/21/21
Adjusted?
Checked by:

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [ ] No [ ] NA [checked]

Person Notified:
By Whom:
Regarding:
Client Instructions:
Date:
Via: [ ] eMail [ ] Phone [ ] Fax [ ] In Person

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 0.7, Good, [ ], [ ], [ ], [ ]





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

June 10, 2021

Tom Larson  
GHD  
6121 Indian School Road, NE #200  
Albuquerque, NM 87110  
TEL: (505) 884-0672  
FAX

RE: Jackson B 17 Flowline 1

OrderNo.: 2105B47

Dear Tom Larson:

Hall Environmental Analysis Laboratory received 21 sample(s) on 5/27/2021 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 white background.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Analytical Report**

Lab Order: 2105B47

Date Reported: 6/10/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Flowline 1

**Lab Order:** 2105B47

**Lab ID:** 2105B47-001

**Collection Date:** 5/25/2021 9:25:00 AM

**Client Sample ID:** A1-1 16'

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	1400	60		mg/Kg	20	6/2/2021 1:30:13 PM	60384
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	66	24		mg/Kg	5	5/29/2021 10:28:00 AM	60310
Surr: BFB	104	70-130		%Rec	5	5/29/2021 10:28:00 AM	60310
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	590	43		mg/Kg	5	6/1/2021 4:24:15 PM	60311
Motor Oil Range Organics (MRO)	410	210		mg/Kg	5	6/1/2021 4:24:15 PM	60311
Surr: DNOP	102	70-130		%Rec	5	6/1/2021 4:24:15 PM	60311
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.12		mg/Kg	5	5/29/2021 10:28:00 AM	60310
Toluene	ND	0.24		mg/Kg	5	5/29/2021 10:28:00 AM	60310
Ethylbenzene	0.43	0.24		mg/Kg	5	5/29/2021 10:28:00 AM	60310
Xylenes, Total	1.5	0.49		mg/Kg	5	5/29/2021 10:28:00 AM	60310
Surr: 1,2-Dichloroethane-d4	84.1	70-130		%Rec	5	5/29/2021 10:28:00 AM	60310
Surr: 4-Bromofluorobenzene	84.0	70-130		%Rec	5	5/29/2021 10:28:00 AM	60310
Surr: Dibromofluoromethane	102	70-130		%Rec	5	5/29/2021 10:28:00 AM	60310
Surr: Toluene-d8	94.4	70-130		%Rec	5	5/29/2021 10:28:00 AM	60310

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105B47

Date Reported: 6/10/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Flowline 1

**Lab Order:** 2105B47

**Lab ID:** 2105B47-002

**Collection Date:** 5/25/2021 9:35:00 AM

**Client Sample ID:** A1-1 20'

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	4400	150		mg/Kg	50	6/4/2021 9:43:51 AM	60384
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	9.8		mg/Kg	2	5/29/2021 10:56:32 AM	60310
Surr: BFB	103	70-130		%Rec	2	5/29/2021 10:56:32 AM	60310
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	100	10		mg/Kg	1	5/29/2021 1:46:09 PM	60311
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/29/2021 1:46:09 PM	60311
Surr: DNOP	110	70-130		%Rec	1	5/29/2021 1:46:09 PM	60311
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.049		mg/Kg	2	5/29/2021 10:56:32 AM	60310
Toluene	ND	0.098		mg/Kg	2	5/29/2021 10:56:32 AM	60310
Ethylbenzene	ND	0.098		mg/Kg	2	5/29/2021 10:56:32 AM	60310
Xylenes, Total	ND	0.20		mg/Kg	2	5/29/2021 10:56:32 AM	60310
Surr: 1,2-Dichloroethane-d4	83.3	70-130		%Rec	2	5/29/2021 10:56:32 AM	60310
Surr: 4-Bromofluorobenzene	90.9	70-130		%Rec	2	5/29/2021 10:56:32 AM	60310
Surr: Dibromofluoromethane	104	70-130		%Rec	2	5/29/2021 10:56:32 AM	60310
Surr: Toluene-d8	96.3	70-130		%Rec	2	5/29/2021 10:56:32 AM	60310

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105B47

Date Reported: 6/10/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Flowline 1

**Lab Order:** 2105B47

**Lab ID:** 2105B47-003

**Collection Date:** 5/25/2021 10:00:00 AM

**Client Sample ID:** A1-2 8'

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	810	60		mg/Kg	20	6/2/2021 1:55:01 PM	60384
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/29/2021 11:25:06 AM	60310
Surr: BFB	102	70-130		%Rec	1	5/29/2021 11:25:06 AM	60310
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	55	9.8		mg/Kg	1	5/29/2021 1:56:26 PM	60311
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/29/2021 1:56:26 PM	60311
Surr: DNOP	114	70-130		%Rec	1	5/29/2021 1:56:26 PM	60311
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	5/29/2021 11:25:06 AM	60310
Toluene	ND	0.048		mg/Kg	1	5/29/2021 11:25:06 AM	60310
Ethylbenzene	ND	0.048		mg/Kg	1	5/29/2021 11:25:06 AM	60310
Xylenes, Total	ND	0.097		mg/Kg	1	5/29/2021 11:25:06 AM	60310
Surr: 1,2-Dichloroethane-d4	87.0	70-130		%Rec	1	5/29/2021 11:25:06 AM	60310
Surr: 4-Bromofluorobenzene	88.0	70-130		%Rec	1	5/29/2021 11:25:06 AM	60310
Surr: Dibromofluoromethane	106	70-130		%Rec	1	5/29/2021 11:25:06 AM	60310
Surr: Toluene-d8	97.8	70-130		%Rec	1	5/29/2021 11:25:06 AM	60310

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105B47

Date Reported: 6/10/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Flowline 1

**Lab Order:** 2105B47

**Lab ID:** 2105B47-004

**Collection Date:** 5/25/2021 10:10:00 AM

**Client Sample ID:** A1-2 14'

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	460	60		mg/Kg	20	6/2/2021 2:07:26 PM	60384
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/29/2021 11:53:41 AM	60316
Surr: BFB	104	70-130		%Rec	1	5/29/2021 11:53:41 AM	60316
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	40	9.7		mg/Kg	1	6/1/2021 10:58:11 AM	60318
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/1/2021 10:58:11 AM	60318
Surr: DNOP	127	70-130		%Rec	1	6/1/2021 10:58:11 AM	60318
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.025		mg/Kg	1	5/29/2021 11:53:41 AM	60316
Toluene	ND	0.049		mg/Kg	1	5/29/2021 11:53:41 AM	60316
Ethylbenzene	ND	0.049		mg/Kg	1	5/29/2021 11:53:41 AM	60316
Xylenes, Total	ND	0.098		mg/Kg	1	5/29/2021 11:53:41 AM	60316
Surr: 1,2-Dichloroethane-d4	88.6	70-130		%Rec	1	5/29/2021 11:53:41 AM	60316
Surr: 4-Bromofluorobenzene	95.8	70-130		%Rec	1	5/29/2021 11:53:41 AM	60316
Surr: Dibromofluoromethane	108	70-130		%Rec	1	5/29/2021 11:53:41 AM	60316
Surr: Toluene-d8	96.8	70-130		%Rec	1	5/29/2021 11:53:41 AM	60316

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105B47

Date Reported: 6/10/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Flowline 1

**Lab Order:** 2105B47

**Lab ID:** 2105B47-005

**Collection Date:** 5/25/2021 10:20:00 AM

**Client Sample ID:** A1-3 6'

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	1500	60		mg/Kg	20	6/2/2021 2:19:50 PM	60384
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	6.3	4.9		mg/Kg	1	5/29/2021 3:13:57 PM	60316
Surr: BFB	107	70-130		%Rec	1	5/29/2021 3:13:57 PM	60316
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	340	19		mg/Kg	2	6/2/2021 4:11:46 PM	60318
Motor Oil Range Organics (MRO)	390	96		mg/Kg	2	6/2/2021 4:11:46 PM	60318
Surr: DNOP	96.3	70-130		%Rec	2	6/2/2021 4:11:46 PM	60318
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	5/29/2021 3:13:57 PM	60316
Toluene	ND	0.049		mg/Kg	1	5/29/2021 3:13:57 PM	60316
Ethylbenzene	ND	0.049		mg/Kg	1	5/29/2021 3:13:57 PM	60316
Xylenes, Total	0.14	0.097		mg/Kg	1	5/29/2021 3:13:57 PM	60316
Surr: 1,2-Dichloroethane-d4	88.2	70-130		%Rec	1	5/29/2021 3:13:57 PM	60316
Surr: 4-Bromofluorobenzene	88.7	70-130		%Rec	1	5/29/2021 3:13:57 PM	60316
Surr: Dibromofluoromethane	107	70-130		%Rec	1	5/29/2021 3:13:57 PM	60316
Surr: Toluene-d8	94.7	70-130		%Rec	1	5/29/2021 3:13:57 PM	60316

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105B47

Date Reported: 6/10/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Flowline 1

**Lab Order:** 2105B47

**Lab ID:** 2105B47-006

**Collection Date:** 5/25/2021 10:25:00 AM

**Client Sample ID:** A1-3 8'

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	630	60		mg/Kg	20	6/2/2021 2:32:15 PM	60384
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/29/2021 4:39:44 PM	60316
Surr: BFB	103	70-130		%Rec	1	5/29/2021 4:39:44 PM	60316
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	6/1/2021 11:36:54 AM	60318
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/1/2021 11:36:54 AM	60318
Surr: DNOP	126	70-130		%Rec	1	6/1/2021 11:36:54 AM	60318
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.025		mg/Kg	1	5/29/2021 4:39:44 PM	60316
Toluene	ND	0.050		mg/Kg	1	5/29/2021 4:39:44 PM	60316
Ethylbenzene	ND	0.050		mg/Kg	1	5/29/2021 4:39:44 PM	60316
Xylenes, Total	ND	0.10		mg/Kg	1	5/29/2021 4:39:44 PM	60316
Surr: 1,2-Dichloroethane-d4	85.5	70-130		%Rec	1	5/29/2021 4:39:44 PM	60316
Surr: 4-Bromofluorobenzene	95.1	70-130		%Rec	1	5/29/2021 4:39:44 PM	60316
Surr: Dibromofluoromethane	101	70-130		%Rec	1	5/29/2021 4:39:44 PM	60316
Surr: Toluene-d8	96.3	70-130		%Rec	1	5/29/2021 4:39:44 PM	60316

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105B47

Date Reported: 6/10/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Flowline 1

**Lab Order:** 2105B47

**Lab ID:** 2105B47-007

**Collection Date:** 5/25/2021 10:30:00 AM

**Client Sample ID:** A1-3 10'

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	400	60		mg/Kg	20	6/2/2021 3:09:28 PM	60384
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/29/2021 5:08:20 PM	60316
Surr: BFB	100	70-130		%Rec	1	5/29/2021 5:08:20 PM	60316
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	6/1/2021 11:46:35 AM	60318
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	6/1/2021 11:46:35 AM	60318
Surr: DNOP	126	70-130		%Rec	1	6/1/2021 11:46:35 AM	60318
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	5/29/2021 5:08:20 PM	60316
Toluene	ND	0.049		mg/Kg	1	5/29/2021 5:08:20 PM	60316
Ethylbenzene	ND	0.049		mg/Kg	1	5/29/2021 5:08:20 PM	60316
Xylenes, Total	ND	0.098		mg/Kg	1	5/29/2021 5:08:20 PM	60316
Surr: 1,2-Dichloroethane-d4	80.2	70-130		%Rec	1	5/29/2021 5:08:20 PM	60316
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	5/29/2021 5:08:20 PM	60316
Surr: Dibromofluoromethane	102	70-130		%Rec	1	5/29/2021 5:08:20 PM	60316
Surr: Toluene-d8	94.7	70-130		%Rec	1	5/29/2021 5:08:20 PM	60316

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105B47

Date Reported: 6/10/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Flowline 1

**Lab Order:** 2105B47

**Lab ID:** 2105B47-008

**Collection Date:** 5/25/2021 10:45:00 AM

**Client Sample ID:** TP1-S

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	ND	60		mg/Kg	20	6/2/2021 3:21:53 PM	60384
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/29/2021 5:36:54 PM	60316
Surr: BFB	105	70-130		%Rec	1	5/29/2021 5:36:54 PM	60316
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	6/1/2021 11:56:18 AM	60318
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	6/1/2021 11:56:18 AM	60318
Surr: DNOP	103	70-130		%Rec	1	6/1/2021 11:56:18 AM	60318
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.025		mg/Kg	1	5/29/2021 5:36:54 PM	60316
Toluene	ND	0.050		mg/Kg	1	5/29/2021 5:36:54 PM	60316
Ethylbenzene	ND	0.050		mg/Kg	1	5/29/2021 5:36:54 PM	60316
Xylenes, Total	ND	0.10		mg/Kg	1	5/29/2021 5:36:54 PM	60316
Surr: 1,2-Dichloroethane-d4	87.6	70-130		%Rec	1	5/29/2021 5:36:54 PM	60316
Surr: 4-Bromofluorobenzene	96.5	70-130		%Rec	1	5/29/2021 5:36:54 PM	60316
Surr: Dibromofluoromethane	102	70-130		%Rec	1	5/29/2021 5:36:54 PM	60316
Surr: Toluene-d8	99.8	70-130		%Rec	1	5/29/2021 5:36:54 PM	60316

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105B47

Date Reported: 6/10/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Flowline 1

**Lab Order:** 2105B47

**Lab ID:** 2105B47-009

**Collection Date:** 5/25/2021 10:50:00 AM

**Client Sample ID:** TP1-2

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	ND	59		mg/Kg	20	6/2/2021 3:34:18 PM	60384
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/29/2021 6:05:29 PM	60316
Surr: BFB	105	70-130		%Rec	1	5/29/2021 6:05:29 PM	60316
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	6/1/2021 12:06:01 PM	60318
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	6/1/2021 12:06:01 PM	60318
Surr: DNOP	106	70-130		%Rec	1	6/1/2021 12:06:01 PM	60318
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	5/29/2021 6:05:29 PM	60316
Toluene	ND	0.049		mg/Kg	1	5/29/2021 6:05:29 PM	60316
Ethylbenzene	ND	0.049		mg/Kg	1	5/29/2021 6:05:29 PM	60316
Xylenes, Total	ND	0.098		mg/Kg	1	5/29/2021 6:05:29 PM	60316
Surr: 1,2-Dichloroethane-d4	84.5	70-130		%Rec	1	5/29/2021 6:05:29 PM	60316
Surr: 4-Bromofluorobenzene	96.7	70-130		%Rec	1	5/29/2021 6:05:29 PM	60316
Surr: Dibromofluoromethane	102	70-130		%Rec	1	5/29/2021 6:05:29 PM	60316
Surr: Toluene-d8	97.9	70-130		%Rec	1	5/29/2021 6:05:29 PM	60316

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105B47

Date Reported: 6/10/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Flowline 1

**Lab Order:** 2105B47

**Lab ID:** 2105B47-010

**Collection Date:** 5/25/2021 11:00:00 AM

**Client Sample ID:** TP2-S

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	ND	60		mg/Kg	20	6/2/2021 3:46:42 PM	60384
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/29/2021 6:34:02 PM	60316
Surr: BFB	103	70-130		%Rec	1	5/29/2021 6:34:02 PM	60316
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/3/2021 6:40:03 PM	60318
Motor Oil Range Organics (MRO)	52	48		mg/Kg	1	6/3/2021 6:40:03 PM	60318
Surr: DNOP	113	70-130		%Rec	1	6/3/2021 6:40:03 PM	60318
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.025		mg/Kg	1	5/29/2021 6:34:02 PM	60316
Toluene	ND	0.050		mg/Kg	1	5/29/2021 6:34:02 PM	60316
Ethylbenzene	ND	0.050		mg/Kg	1	5/29/2021 6:34:02 PM	60316
Xylenes, Total	ND	0.099		mg/Kg	1	5/29/2021 6:34:02 PM	60316
Surr: 1,2-Dichloroethane-d4	85.8	70-130		%Rec	1	5/29/2021 6:34:02 PM	60316
Surr: 4-Bromofluorobenzene	96.5	70-130		%Rec	1	5/29/2021 6:34:02 PM	60316
Surr: Dibromofluoromethane	98.8	70-130		%Rec	1	5/29/2021 6:34:02 PM	60316
Surr: Toluene-d8	96.8	70-130		%Rec	1	5/29/2021 6:34:02 PM	60316

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105B47

Date Reported: 6/10/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Flowline 1

**Lab Order:** 2105B47

**Lab ID:** 2105B47-011

**Collection Date:** 5/25/2021 11:05:00 AM

**Client Sample ID:** TP2-2

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	ND	60		mg/Kg	20	6/2/2021 3:59:07 PM	60384
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/29/2021 7:02:50 PM	60316
Surr: BFB	106	70-130		%Rec	1	5/29/2021 7:02:50 PM	60316
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	6/1/2021 12:25:28 PM	60318
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	6/1/2021 12:25:28 PM	60318
Surr: DNOP	117	70-130		%Rec	1	6/1/2021 12:25:28 PM	60318
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	5/29/2021 7:02:50 PM	60316
Toluene	ND	0.048		mg/Kg	1	5/29/2021 7:02:50 PM	60316
Ethylbenzene	ND	0.048		mg/Kg	1	5/29/2021 7:02:50 PM	60316
Xylenes, Total	ND	0.097		mg/Kg	1	5/29/2021 7:02:50 PM	60316
Surr: 1,2-Dichloroethane-d4	85.8	70-130		%Rec	1	5/29/2021 7:02:50 PM	60316
Surr: 4-Bromofluorobenzene	98.4	70-130		%Rec	1	5/29/2021 7:02:50 PM	60316
Surr: Dibromofluoromethane	100	70-130		%Rec	1	5/29/2021 7:02:50 PM	60316
Surr: Toluene-d8	99.0	70-130		%Rec	1	5/29/2021 7:02:50 PM	60316

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105B47

Date Reported: 6/10/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Flowline 1

**Lab Order:** 2105B47

**Lab ID:** 2105B47-012

**Collection Date:** 5/25/2021 11:10:00 AM

**Client Sample ID:** TP3-S

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	ND	59		mg/Kg	20	6/2/2021 4:36:21 PM	60394
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/29/2021 7:31:26 PM	60316
Surr: BFB	106	70-130		%Rec	1	5/29/2021 7:31:26 PM	60316
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/1/2021 12:35:13 PM	60318
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/1/2021 12:35:13 PM	60318
Surr: DNOP	116	70-130		%Rec	1	6/1/2021 12:35:13 PM	60318
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	5/29/2021 7:31:26 PM	60316
Toluene	ND	0.049		mg/Kg	1	5/29/2021 7:31:26 PM	60316
Ethylbenzene	ND	0.049		mg/Kg	1	5/29/2021 7:31:26 PM	60316
Xylenes, Total	ND	0.098		mg/Kg	1	5/29/2021 7:31:26 PM	60316
Surr: 1,2-Dichloroethane-d4	89.7	70-130		%Rec	1	5/29/2021 7:31:26 PM	60316
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	5/29/2021 7:31:26 PM	60316
Surr: Dibromofluoromethane	106	70-130		%Rec	1	5/29/2021 7:31:26 PM	60316
Surr: Toluene-d8	97.8	70-130		%Rec	1	5/29/2021 7:31:26 PM	60316

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105B47

Date Reported: 6/10/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Flowline 1

**Lab Order:** 2105B47

**Lab ID:** 2105B47-013

**Collection Date:** 5/25/2021 11:15:00 AM

**Client Sample ID:** TP3-2

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	ND	59		mg/Kg	20	6/2/2021 4:48:45 PM	60394
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/29/2021 7:59:58 PM	60316
Surr: BFB	108	70-130		%Rec	1	5/29/2021 7:59:58 PM	60316
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	6/1/2021 12:44:58 PM	60318
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	6/1/2021 12:44:58 PM	60318
Surr: DNOP	100	70-130		%Rec	1	6/1/2021 12:44:58 PM	60318
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	5/29/2021 7:59:58 PM	60316
Toluene	ND	0.048		mg/Kg	1	5/29/2021 7:59:58 PM	60316
Ethylbenzene	ND	0.048		mg/Kg	1	5/29/2021 7:59:58 PM	60316
Xylenes, Total	ND	0.096		mg/Kg	1	5/29/2021 7:59:58 PM	60316
Surr: 1,2-Dichloroethane-d4	87.4	70-130		%Rec	1	5/29/2021 7:59:58 PM	60316
Surr: 4-Bromofluorobenzene	99.6	70-130		%Rec	1	5/29/2021 7:59:58 PM	60316
Surr: Dibromofluoromethane	103	70-130		%Rec	1	5/29/2021 7:59:58 PM	60316
Surr: Toluene-d8	100	70-130		%Rec	1	5/29/2021 7:59:58 PM	60316

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105B47

Date Reported: 6/10/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Flowline 1

**Lab Order:** 2105B47

**Lab ID:** 2105B47-014

**Collection Date:** 5/25/2021 11:20:00 AM

**Client Sample ID:** TP4-S

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	ND	60		mg/Kg	20	6/2/2021 5:01:09 PM	60394
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/29/2021 8:28:35 PM	60316
Surr: BFB	106	70-130		%Rec	1	5/29/2021 8:28:35 PM	60316
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/1/2021 12:54:43 PM	60318
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/1/2021 12:54:43 PM	60318
Surr: DNOP	109	70-130		%Rec	1	6/1/2021 12:54:43 PM	60318
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	5/29/2021 8:28:35 PM	60316
Toluene	ND	0.049		mg/Kg	1	5/29/2021 8:28:35 PM	60316
Ethylbenzene	ND	0.049		mg/Kg	1	5/29/2021 8:28:35 PM	60316
Xylenes, Total	ND	0.097		mg/Kg	1	5/29/2021 8:28:35 PM	60316
Surr: 1,2-Dichloroethane-d4	87.2	70-130		%Rec	1	5/29/2021 8:28:35 PM	60316
Surr: 4-Bromofluorobenzene	95.7	70-130		%Rec	1	5/29/2021 8:28:35 PM	60316
Surr: Dibromofluoromethane	99.8	70-130		%Rec	1	5/29/2021 8:28:35 PM	60316
Surr: Toluene-d8	95.5	70-130		%Rec	1	5/29/2021 8:28:35 PM	60316

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105B47

Date Reported: 6/10/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Flowline 1

**Lab Order:** 2105B47

**Lab ID:** 2105B47-015

**Collection Date:** 5/25/2021 11:25:00 AM

**Client Sample ID:** TP4-2

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	ND	60		mg/Kg	20	6/4/2021 9:56:13 AM	60394
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/29/2021 8:57:13 PM	60316
Surr: BFB	104	70-130		%Rec	1	5/29/2021 8:57:13 PM	60316
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	6/1/2021 1:04:31 PM	60318
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/1/2021 1:04:31 PM	60318
Surr: DNOP	129	70-130		%Rec	1	6/1/2021 1:04:31 PM	60318
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.025		mg/Kg	1	5/29/2021 8:57:13 PM	60316
Toluene	ND	0.050		mg/Kg	1	5/29/2021 8:57:13 PM	60316
Ethylbenzene	ND	0.050		mg/Kg	1	5/29/2021 8:57:13 PM	60316
Xylenes, Total	ND	0.099		mg/Kg	1	5/29/2021 8:57:13 PM	60316
Surr: 1,2-Dichloroethane-d4	87.4	70-130		%Rec	1	5/29/2021 8:57:13 PM	60316
Surr: 4-Bromofluorobenzene	97.8	70-130		%Rec	1	5/29/2021 8:57:13 PM	60316
Surr: Dibromofluoromethane	104	70-130		%Rec	1	5/29/2021 8:57:13 PM	60316
Surr: Toluene-d8	95.8	70-130		%Rec	1	5/29/2021 8:57:13 PM	60316

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105B47

Date Reported: 6/10/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Flowline 1

**Lab Order:** 2105B47

**Lab ID:** 2105B47-016

**Collection Date:** 5/25/2021 11:30:00 AM

**Client Sample ID:** TP5-S

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	ND	60		mg/Kg	20	6/2/2021 5:50:48 PM	60394
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/29/2021 9:25:56 PM	60316
Surr: BFB	100	70-130		%Rec	1	5/29/2021 9:25:56 PM	60316
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/1/2021 1:14:18 PM	60318
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/1/2021 1:14:18 PM	60318
Surr: DNOP	121	70-130		%Rec	1	6/1/2021 1:14:18 PM	60318
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	5/29/2021 9:25:56 PM	60316
Toluene	ND	0.048		mg/Kg	1	5/29/2021 9:25:56 PM	60316
Ethylbenzene	ND	0.048		mg/Kg	1	5/29/2021 9:25:56 PM	60316
Xylenes, Total	ND	0.096		mg/Kg	1	5/29/2021 9:25:56 PM	60316
Surr: 1,2-Dichloroethane-d4	88.7	70-130		%Rec	1	5/29/2021 9:25:56 PM	60316
Surr: 4-Bromofluorobenzene	92.6	70-130		%Rec	1	5/29/2021 9:25:56 PM	60316
Surr: Dibromofluoromethane	98.4	70-130		%Rec	1	5/29/2021 9:25:56 PM	60316
Surr: Toluene-d8	95.3	70-130		%Rec	1	5/29/2021 9:25:56 PM	60316

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105B47

Date Reported: 6/10/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Flowline 1

**Lab Order:** 2105B47

**Lab ID:** 2105B47-017

**Collection Date:** 5/25/2021 11:35:00 AM

**Client Sample ID:** TP5-2

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	ND	60		mg/Kg	20	6/2/2021 6:03:12 PM	60394
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/29/2021 9:54:27 PM	60316
Surr: BFB	102	70-130		%Rec	1	5/29/2021 9:54:27 PM	60316
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/1/2021 1:24:07 PM	60318
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/1/2021 1:24:07 PM	60318
Surr: DNOP	121	70-130		%Rec	1	6/1/2021 1:24:07 PM	60318
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	5/29/2021 9:54:27 PM	60316
Toluene	ND	0.049		mg/Kg	1	5/29/2021 9:54:27 PM	60316
Ethylbenzene	ND	0.049		mg/Kg	1	5/29/2021 9:54:27 PM	60316
Xylenes, Total	ND	0.097		mg/Kg	1	5/29/2021 9:54:27 PM	60316
Surr: 1,2-Dichloroethane-d4	80.9	70-130		%Rec	1	5/29/2021 9:54:27 PM	60316
Surr: 4-Bromofluorobenzene	97.8	70-130		%Rec	1	5/29/2021 9:54:27 PM	60316
Surr: Dibromofluoromethane	102	70-130		%Rec	1	5/29/2021 9:54:27 PM	60316
Surr: Toluene-d8	97.7	70-130		%Rec	1	5/29/2021 9:54:27 PM	60316

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105B47

Date Reported: 6/10/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Flowline 1

**Lab Order:** 2105B47

**Lab ID:** 2105B47-018

**Collection Date:** 5/25/2021 11:40:00 AM

**Client Sample ID:** TP6-S

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	ND	60		mg/Kg	20	6/2/2021 6:15:36 PM	60394
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/29/2021 10:22:57 PM	60316
Surr: BFB	103	70-130		%Rec	1	5/29/2021 10:22:57 PM	60316
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/1/2021 1:33:58 PM	60318
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/1/2021 1:33:58 PM	60318
Surr: DNOP	120	70-130		%Rec	1	6/1/2021 1:33:58 PM	60318
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	5/29/2021 10:22:57 PM	60316
Toluene	ND	0.049		mg/Kg	1	5/29/2021 10:22:57 PM	60316
Ethylbenzene	ND	0.049		mg/Kg	1	5/29/2021 10:22:57 PM	60316
Xylenes, Total	ND	0.097		mg/Kg	1	5/29/2021 10:22:57 PM	60316
Surr: 1,2-Dichloroethane-d4	85.7	70-130		%Rec	1	5/29/2021 10:22:57 PM	60316
Surr: 4-Bromofluorobenzene	96.1	70-130		%Rec	1	5/29/2021 10:22:57 PM	60316
Surr: Dibromofluoromethane	103	70-130		%Rec	1	5/29/2021 10:22:57 PM	60316
Surr: Toluene-d8	97.6	70-130		%Rec	1	5/29/2021 10:22:57 PM	60316

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105B47

Date Reported: 6/10/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Flowline 1

**Lab Order:** 2105B47

**Lab ID:** 2105B47-019

**Collection Date:** 5/25/2021 11:45:00 AM

**Client Sample ID:** TP6-2

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	ND	60		mg/Kg	20	6/2/2021 6:28:01 PM	60394
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/29/2021 10:51:28 PM	60316
Surr: BFB	102	70-130		%Rec	1	5/29/2021 10:51:28 PM	60316
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/1/2021 1:43:50 PM	60318
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/1/2021 1:43:50 PM	60318
Surr: DNOP	101	70-130		%Rec	1	6/1/2021 1:43:50 PM	60318
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.025		mg/Kg	1	5/29/2021 10:51:28 PM	60316
Toluene	ND	0.050		mg/Kg	1	5/29/2021 10:51:28 PM	60316
Ethylbenzene	ND	0.050		mg/Kg	1	5/29/2021 10:51:28 PM	60316
Xylenes, Total	ND	0.099		mg/Kg	1	5/29/2021 10:51:28 PM	60316
Surr: 1,2-Dichloroethane-d4	85.1	70-130		%Rec	1	5/29/2021 10:51:28 PM	60316
Surr: 4-Bromofluorobenzene	97.4	70-130		%Rec	1	5/29/2021 10:51:28 PM	60316
Surr: Dibromofluoromethane	100	70-130		%Rec	1	5/29/2021 10:51:28 PM	60316
Surr: Toluene-d8	96.6	70-130		%Rec	1	5/29/2021 10:51:28 PM	60316

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105B47

Date Reported: 6/10/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Flowline 1

**Lab Order:** 2105B47

**Lab ID:** 2105B47-020

**Collection Date:** 5/25/2021 11:50:00 AM

**Client Sample ID:** TP7-S

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	ND	60		mg/Kg	20	6/2/2021 6:40:25 PM	60394
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/29/2021 11:20:01 PM	60316
Surr: BFB	102	70-130		%Rec	1	5/29/2021 11:20:01 PM	60316
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/4/2021 1:07:50 PM	60318
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/4/2021 1:07:50 PM	60318
Surr: DNOP	83.0	70-130		%Rec	1	6/4/2021 1:07:50 PM	60318
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	5/29/2021 11:20:01 PM	60316
Toluene	ND	0.049		mg/Kg	1	5/29/2021 11:20:01 PM	60316
Ethylbenzene	ND	0.049		mg/Kg	1	5/29/2021 11:20:01 PM	60316
Xylenes, Total	ND	0.098		mg/Kg	1	5/29/2021 11:20:01 PM	60316
Surr: 1,2-Dichloroethane-d4	87.7	70-130		%Rec	1	5/29/2021 11:20:01 PM	60316
Surr: 4-Bromofluorobenzene	93.4	70-130		%Rec	1	5/29/2021 11:20:01 PM	60316
Surr: Dibromofluoromethane	101	70-130		%Rec	1	5/29/2021 11:20:01 PM	60316
Surr: Toluene-d8	94.5	70-130		%Rec	1	5/29/2021 11:20:01 PM	60316

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105B47

Date Reported: 6/10/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Flowline 1

**Lab Order:** 2105B47

**Lab ID:** 2105B47-021

**Collection Date:** 5/25/2021 11:55:00 AM

**Client Sample ID:** TP7-2

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	ND	59		mg/Kg	20	6/2/2021 6:52:50 PM	60394
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/29/2021 11:48:37 PM	60316
Surr: BFB	105	70-130		%Rec	1	5/29/2021 11:48:37 PM	60316
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/2/2021 1:24:14 PM	60318
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/2/2021 1:24:14 PM	60318
Surr: DNOP	92.2	70-130		%Rec	1	6/2/2021 1:24:14 PM	60318
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.025		mg/Kg	1	5/29/2021 11:48:37 PM	60316
Toluene	ND	0.050		mg/Kg	1	5/29/2021 11:48:37 PM	60316
Ethylbenzene	ND	0.050		mg/Kg	1	5/29/2021 11:48:37 PM	60316
Xylenes, Total	ND	0.099		mg/Kg	1	5/29/2021 11:48:37 PM	60316
Surr: 1,2-Dichloroethane-d4	85.5	70-130		%Rec	1	5/29/2021 11:48:37 PM	60316
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	5/29/2021 11:48:37 PM	60316
Surr: Dibromofluoromethane	98.7	70-130		%Rec	1	5/29/2021 11:48:37 PM	60316
Surr: Toluene-d8	98.0	70-130		%Rec	1	5/29/2021 11:48:37 PM	60316

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2105B47

10-Jun-21

**Client:** GHD  
**Project:** Jackson B 17 Flowline 1

Sample ID: <b>MB-60384</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>60384</b>	RunNo: <b>78792</b>								
Prep Date: <b>6/2/2021</b>	Analysis Date: <b>6/2/2021</b>	SeqNo: <b>2764168</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-60384</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>60384</b>	RunNo: <b>78792</b>								
Prep Date: <b>6/2/2021</b>	Analysis Date: <b>6/2/2021</b>	SeqNo: <b>2764169</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	94.8	90	110			

Sample ID: <b>MB-60394</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>60394</b>	RunNo: <b>78792</b>								
Prep Date: <b>6/2/2021</b>	Analysis Date: <b>6/2/2021</b>	SeqNo: <b>2764200</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-60394</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>60394</b>	RunNo: <b>78792</b>								
Prep Date: <b>6/2/2021</b>	Analysis Date: <b>6/2/2021</b>	SeqNo: <b>2764201</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	94.4	90	110			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical 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 Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2105B47

10-Jun-21

**Client:** GHD  
**Project:** Jackson B 17 Flowline 1

Sample ID: <b>LCS-60311</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>60311</b>	RunNo: <b>78762</b>								
Prep Date: <b>5/28/2021</b>	Analysis Date: <b>5/29/2021</b>	SeqNo: <b>2761235</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	64	10	50.00	0	128	68.9	141			
Surr: DNOP	6.2		5.000		124	70	130			

Sample ID: <b>MB-60311</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>60311</b>	RunNo: <b>78762</b>								
Prep Date: <b>5/28/2021</b>	Analysis Date: <b>5/29/2021</b>	SeqNo: <b>2761240</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	70	130			

Sample ID: <b>2105B47-004AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>A1-2 14'</b>	Batch ID: <b>60318</b>	RunNo: <b>78780</b>								
Prep Date: <b>5/28/2021</b>	Analysis Date: <b>6/1/2021</b>	SeqNo: <b>2762478</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	70	9.5	47.35	39.63	63.1	15	184			
Surr: DNOP	5.0		4.735		106	70	130			

Sample ID: <b>2105B47-004AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>A1-2 14'</b>	Batch ID: <b>60318</b>	RunNo: <b>78780</b>								
Prep Date: <b>5/28/2021</b>	Analysis Date: <b>6/1/2021</b>	SeqNo: <b>2762479</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	72	9.3	46.64	39.63	68.4	15	184	3.00	23.9	
Surr: DNOP	5.5		4.664		117	70	130	0	0	

Sample ID: <b>LCS-60318</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>60318</b>	RunNo: <b>78780</b>								
Prep Date: <b>5/28/2021</b>	Analysis Date: <b>6/1/2021</b>	SeqNo: <b>2762508</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	10	50.00	0	110	68.9	141			
Surr: DNOP	5.2		5.000		105	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 Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2105B47

10-Jun-21

**Client:** GHD  
**Project:** Jackson B 17 Flowline 1

Sample ID: <b>MB-60318</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>60318</b>	RunNo: <b>78780</b>								
Prep Date: <b>5/28/2021</b>	Analysis Date: <b>6/1/2021</b>	SeqNo: <b>2762510</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		113	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 Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2105B47

10-Jun-21

**Client:** GHD  
**Project:** Jackson B 17 Flowline 1

Sample ID: <b>ics-60310</b>	SampType: <b>LCS4</b>	TestCode: <b>EPA Method 8260B: Volatiles Short List</b>								
Client ID: <b>BatchQC</b>	Batch ID: <b>60310</b>	RunNo: <b>78775</b>								
Prep Date: <b>5/27/2021</b>	Analysis Date: <b>5/28/2021</b>	SeqNo: <b>2761812</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	109	80	120			
Toluene	0.98	0.050	1.000	0	97.6	80	120			
Ethylbenzene	1.0	0.050	1.000	0	99.7	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.3	80	120			
Surr: 1,2-Dichloroethane-d4	0.44		0.5000		88.5	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		95.1	70	130			
Surr: Dibromofluoromethane	0.52		0.5000		104	70	130			
Surr: Toluene-d8	0.49		0.5000		97.6	70	130			

Sample ID: <b>ics-60316</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8260B: Volatiles Short List</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>60316</b>	RunNo: <b>78775</b>								
Prep Date: <b>5/27/2021</b>	Analysis Date: <b>5/29/2021</b>	SeqNo: <b>2761813</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	106	70	130			
Toluene	0.97	0.050	1.000	0	96.7	70	130			
Surr: 1,2-Dichloroethane-d4	0.40		0.5000		80.7	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		97.3	70	130			
Surr: Dibromofluoromethane	0.49		0.5000		98.0	70	130			
Surr: Toluene-d8	0.47		0.5000		93.0	70	130			

Sample ID: <b>mb-60310</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8260B: Volatiles Short List</b>								
Client ID: <b>PBS</b>	Batch ID: <b>60310</b>	RunNo: <b>78775</b>								
Prep Date: <b>5/27/2021</b>	Analysis Date: <b>5/28/2021</b>	SeqNo: <b>2761814</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: 1,2-Dichloroethane-d4	0.44		0.5000		88.8	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.0	70	130			
Surr: Dibromofluoromethane	0.51		0.5000		101	70	130			
Surr: Toluene-d8	0.48		0.5000		96.3	70	130			

Sample ID: <b>mb-60316</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8260B: Volatiles Short List</b>								
Client ID: <b>PBS</b>	Batch ID: <b>60316</b>	RunNo: <b>78775</b>								
Prep Date: <b>5/27/2021</b>	Analysis Date: <b>5/29/2021</b>	SeqNo: <b>2761815</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 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 Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2105B47

10-Jun-21

**Client:** GHD  
**Project:** Jackson B 17 Flowline 1

Sample ID: <b>mb-60316</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8260B: Volatiles Short List</b>								
Client ID: <b>PBS</b>	Batch ID: <b>60316</b>	RunNo: <b>78775</b>								
Prep Date: <b>5/27/2021</b>	Analysis Date: <b>5/29/2021</b>	SeqNo: <b>2761815</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: 1,2-Dichloroethane-d4	0.43		0.5000		86.3	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		95.3	70	130			
Surr: Dibromofluoromethane	0.52		0.5000		105	70	130			
Surr: Toluene-d8	0.48		0.5000		95.4	70	130			

Sample ID: <b>2105b47-005ams</b>	SampType: <b>MS4</b>	TestCode: <b>EPA Method 8260B: Volatiles Short List</b>								
Client ID: <b>A1-3 6'</b>	Batch ID: <b>60316</b>	RunNo: <b>78775</b>								
Prep Date: <b>5/27/2021</b>	Analysis Date: <b>5/29/2021</b>	SeqNo: <b>2761840</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	0.9775	0	112	73.5	138			
Toluene	1.1	0.049	0.9775	0	111	83	131			
Ethylbenzene	1.1	0.049	0.9775	0.03682	109	84.9	132			
Xylenes, Total	3.4	0.098	2.933	0.1351	112	79.6	144			
Surr: 1,2-Dichloroethane-d4	0.41		0.4888		84.6	70	130			
Surr: 4-Bromofluorobenzene	0.44		0.4888		90.5	70	130			
Surr: Dibromofluoromethane	0.49		0.4888		100	70	130			
Surr: Toluene-d8	0.47		0.4888		96.2	70	130			

Sample ID: <b>2105b47-005amsd</b>	SampType: <b>MSD4</b>	TestCode: <b>EPA Method 8260B: Volatiles Short List</b>								
Client ID: <b>A1-3 6'</b>	Batch ID: <b>60316</b>	RunNo: <b>78775</b>								
Prep Date: <b>5/27/2021</b>	Analysis Date: <b>5/29/2021</b>	SeqNo: <b>2761841</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	0.9891	0	117	73.5	138	5.94	20	
Toluene	1.1	0.049	0.9891	0	109	83	131	0.718	20	
Ethylbenzene	1.1	0.049	0.9891	0.03682	110	84.9	132	2.16	20	
Xylenes, Total	3.3	0.099	2.967	0.1351	105	79.6	144	5.00	20	
Surr: 1,2-Dichloroethane-d4	0.41		0.4946		83.8	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.46		0.4946		92.5	70	130	0	0	
Surr: Dibromofluoromethane	0.50		0.4946		102	70	130	0	0	
Surr: Toluene-d8	0.47		0.4946		94.6	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 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 Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2105B47

10-Jun-21

**Client:** GHD  
**Project:** Jackson B 17 Flowline 1

Sample ID: <b>ics-60310</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>60310</b>		RunNo: <b>78775</b>							
Prep Date: <b>5/27/2021</b>	Analysis Date: <b>5/28/2021</b>		SeqNo: <b>2761980</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	92.2	70	130			
Surr: BFB	500		500.0		101	70	130			

Sample ID: <b>ics-60316</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>60316</b>		RunNo: <b>78775</b>							
Prep Date: <b>5/27/2021</b>	Analysis Date: <b>5/29/2021</b>		SeqNo: <b>2761981</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	5.0	25.00	0	86.4	70	130			
Surr: BFB	500		500.0		101	70	130			

Sample ID: <b>mb-60310</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>60310</b>		RunNo: <b>78775</b>							
Prep Date: <b>5/27/2021</b>	Analysis Date: <b>5/28/2021</b>		SeqNo: <b>2761983</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	520		500.0		103	70	130			

Sample ID: <b>mb-60316</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>60316</b>		RunNo: <b>78775</b>							
Prep Date: <b>5/27/2021</b>	Analysis Date: <b>5/29/2021</b>		SeqNo: <b>2761984</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	500		500.0		99.6	70	130			

Sample ID: <b>2105b47-004ams</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>							
Client ID: <b>A1-2 14'</b>	Batch ID: <b>60316</b>		RunNo: <b>78775</b>							
Prep Date: <b>5/27/2021</b>	Analysis Date: <b>5/29/2021</b>		SeqNo: <b>2762003</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	4.9	24.56	0	91.8	64.4	124			
Surr: BFB	490		491.2		100	70	130			

Sample ID: <b>2105b47-004amsd</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>							
Client ID: <b>A1-2 14'</b>	Batch ID: <b>60316</b>		RunNo: <b>78775</b>							
Prep Date: <b>5/27/2021</b>	Analysis Date: <b>5/29/2021</b>		SeqNo: <b>2762004</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 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 Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2105B47

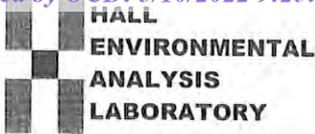
10-Jun-21

**Client:** GHD  
**Project:** Jackson B 17 Flowline 1

Sample ID: <b>2105b47-004amsd</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>								
Client ID: <b>A1-2 14'</b>	Batch ID: <b>60316</b>	RunNo: <b>78775</b>								
Prep Date: <b>5/27/2021</b>	Analysis Date: <b>5/29/2021</b>	SeqNo: <b>2762004</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	4.9	24.53	0	98.3	64.4	124	6.72	20	
Surr: BFB	510		490.7		105	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 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 Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: GHD Work Order Number: 2105B47 RcptNo: 1

Received By: Juan Rojas 5/27/2021 7:40:00 AM
Completed By: Cheyenne Cason 5/27/2021 8:35:30 AM
Reviewed By:

Chain of Custody

- 1. Is Chain of Custody complete? Yes [checked] No [ ] Not Present [ ]
2. How was the sample delivered? Courier

Log In

- 3. Was an attempt made to cool the samples? Yes [checked] No [ ] NA [ ]
4. Were all samples received at a temperature of >0° C to 6.0° C Yes [checked] No [ ] NA [ ]
5. Sample(s) in proper container(s)? Yes [checked] No [ ]
6. Sufficient sample volume for indicated test(s)? Yes [checked] No [ ]
7. Are samples (except VOA and ONG) properly preserved? Yes [checked] No [ ]
8. Was preservative added to bottles? Yes [ ] No [checked] NA [ ]
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes [ ] No [ ] NA [checked]
10. Were any sample containers received broken? Yes [ ] No [checked]
11. Does paperwork match bottle labels? Yes [checked] No [ ]
12. Are matrices correctly identified on Chain of Custody? Yes [checked] No [ ]
13. Is it clear what analyses were requested? Yes [checked] No [ ]
14. Were all holding times able to be met? Yes [checked] No [ ]

# of preserved bottles checked for pH: (<2 or >12 unless noted)
Adjusted?
Checked by: SPA 5.27.21

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [ ] No [ ] NA [checked]

Person Notified: [ ] Date: [ ]
By Whom: [ ] Via: [ ] eMail [ ] Phone [ ] Fax [ ] In Person [ ]
Regarding: [ ]
Client Instructions: [ ]

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Rows 1 and 2.

# Chain-of-Custody Record

Client: GHD  
 Mailing Address: 324 W Main St Suite 108 Artesia, NM 87210  
 Phone #: (505) 377-4218  
 email or Fax#: Becky.Haskell@GHD.com  
 QA/QC Package: Chase Suttle @ cagnosources.com  
 Standard  Level 4 (Full Validation)  
 Accreditation  
 NELAP  Other  
 EDD (Type)

Turn-Around Time: Standard  Rush 5 Day  
 Project Name: Jackson B #17 Flowline #1  
 Project #: 11225312  
 Project Manager: Tom Larson  
 Sampler: Zach Comino  
 On Ice:  Yes  No  
 Sample Temperature: 0.9-0.7-0.4  
 Container Type and # HEAL No. 2105B47

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
0925	0925	S	A1-1 16'	Jar		001
	0935		A1-1 20'			002
	1000		A1-2 8'			003
	1010		A1-2 14'			004
	1020		A1-3 6'			005
	1025		A1-3 8'			006
	1030		A1-3 10'			007
	1045		TP1-S			008
	1050		TP1-2			009
	1100		TP2-S			010
	1105		TP2-2			011
	1110		TP3-S			012

Date: 05/25/2021 Time: 1200 Relinquished by: Zach Comino  
 Date: 5/26/21 Time: 1900 Relinquished by: [Signature]

## Analysis Request

<input checked="" type="checkbox"/> BTEX + MTBE + TMB's (8021)	<input checked="" type="checkbox"/> BTEX + MTBE + TPH (Gas only)	<input checked="" type="checkbox"/> TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F <sup>-</sup> , Cl <sup>-</sup> , NO <sub>3</sub> <sup>-</sup> , NO <sub>2</sub> <sup>-</sup> , PO <sub>4</sub> <sup>-</sup> , SO <sub>4</sub> <sup>-</sup> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	<u>Chloride Method 300</u>
--	--	---	--------------------	--------------------	---------------------------	---------------	--	------------------------------	-------------	-----------------	----------------------------

Remarks: Please email Zach.comino@GHD.com along with others listed above  
Direct Bill to 806 Chase Suttle

# Chain-of-Custody Record

Client: GAD

Mailing Address:  
324 W. Main St Suite 108 Artesia, NM 87210  
 Phone #: (505) 377-4218  
 email or Fax#: Becky Hasbuck @ GAD.com  
 QA/QC Package: Chase Settle @ GAD.com  
Tom Larson @ GAD.com  
 Standard  Level 4 (Full Validation)  
 Accreditation  
 NELAP  Other  
 EDD (Type)

Turn-Around Time:  
 Standard  Rush 5-dy  
 Project Name:  
Jackson B #17 Flashline #1  
 Project #:  
11228312

Project Manager:  
Becky Hasbuck  
Tom Larson  
 Sampler: Zach Comino  
 On Ice:  Yes  No  
 Sample Temperature: 0.6-0.2 = 0.4

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
05252021	1155	S	TP3-2	Jar		013
	1120		TP4-5			014
	1125		TP4-2			015
	1130		TP5-5			016
	1135		TP5-2			017
	1140		TP6-5			018
	1145		TP6-2			019
	1150		TP7-8			020
	1155		TP7-2			021

Relinquished by: Zach Comino / JZM  
 Relinquished by: Chase Settle  
 Date: 0526021 1200  
 Date: 0526021 1900

**HALL ENVIRONMENTAL ANALYSIS LABORATORY**  
 www.hallenvironmental.com  
 4901 Hawkins NE - Albuquerque, NM 87109  
 Tel. 505-345-3975 Fax 505-345-4107

**Analysis Request**

Analysis Request	Analysis Request
BTEX + MTBE + TMBs (8021)	X
BTEX + MTBE + TPH (Gas only)	X
TPH 8015B (GRO / DRO / MRO)	X
TPH (Method 418.1)	
EDB (Method 504.1)	
PAH's (8310 or 8270 SIMS)	
RCRA 8 Metals	
Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	
8081 Pesticides / 8082 PCB's	
8260B (VOA)	
8270 (Semi-VOA)	X
Air Bubbles (Y or N)	

Remarks: Please email zach.comino @ GAD.com along with others listed above  
Direct Bill to EOG Chase Settle



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

August 04, 2021

Tom Larson  
GHD Midland  
2135 S Loop 250 W  
Midland, TX 79703  
TEL: (432) 686-0086  
FAX

RE: Jackson B 17 Flowline Area 1

OrderNo.: 2107C48

Dear Tom Larson:

Hall Environmental Analysis Laboratory received 3 sample(s) on 7/24/2021 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 **2107C48**

Date Reported: **8/4/2021**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD Midland

**Client Sample ID:** AI-1 25'

**Project:** Jackson B 17 Flowline Area 1

**Collection Date:** 7/22/2021 2:10:00 PM

**Lab ID:** 2107C48-001

**Matrix:** SOIL

**Received Date:** 7/24/2021 7:48:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	180	60		mg/Kg	20	7/30/2021 4:08:09 AM	61662
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	24	9.8		mg/Kg	1	7/27/2021 4:49:48 PM	61572
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/27/2021 4:49:48 PM	61572
Surr: DNOP	123	70-130		%Rec	1	7/27/2021 4:49:48 PM	61572
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/29/2021 10:55:09 AM	61570
Surr: BFB	107	70-130		%Rec	1	7/29/2021 10:55:09 AM	61570
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.025		mg/Kg	1	7/29/2021 10:55:09 AM	61570
Toluene	ND	0.049		mg/Kg	1	7/29/2021 10:55:09 AM	61570
Ethylbenzene	ND	0.049		mg/Kg	1	7/29/2021 10:55:09 AM	61570
Xylenes, Total	ND	0.098		mg/Kg	1	7/29/2021 10:55:09 AM	61570
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	7/29/2021 10:55:09 AM	61570

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order **2107C48**

Date Reported: **8/4/2021**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD Midland

**Client Sample ID:** AI-1 30'

**Project:** Jackson B 17 Flowline Area 1

**Collection Date:** 7/22/2021 2:20:00 PM

**Lab ID:** 2107C48-002

**Matrix:** SOIL

**Received Date:** 7/24/2021 7:48:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	84	61		mg/Kg	20	7/30/2021 4:20:33 AM	61662
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/27/2021 4:59:36 PM	61572
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/27/2021 4:59:36 PM	61572
Surr: DNOP	109	70-130		%Rec	1	7/27/2021 4:59:36 PM	61572
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/29/2021 11:18:40 AM	61570
Surr: BFB	108	70-130		%Rec	1	7/29/2021 11:18:40 AM	61570
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.024		mg/Kg	1	7/29/2021 11:18:40 AM	61570
Toluene	ND	0.047		mg/Kg	1	7/29/2021 11:18:40 AM	61570
Ethylbenzene	ND	0.047		mg/Kg	1	7/29/2021 11:18:40 AM	61570
Xylenes, Total	ND	0.095		mg/Kg	1	7/29/2021 11:18:40 AM	61570
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	7/29/2021 11:18:40 AM	61570

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order **2107C48**

Date Reported: **8/4/2021**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD Midland

**Client Sample ID:** AI-1 35'

**Project:** Jackson B 17 Flowline Area 1

**Collection Date:** 7/22/2021 2:40:00 PM

**Lab ID:** 2107C48-003

**Matrix:** SOIL

**Received Date:** 7/24/2021 7:48:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	ND	60		mg/Kg	20	7/30/2021 4:32:58 AM	61662
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/27/2021 5:09:22 PM	61572
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/27/2021 5:09:22 PM	61572
Surr: DNOP	122	70-130		%Rec	1	7/27/2021 5:09:22 PM	61572
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/29/2021 11:42:09 AM	61570
Surr: BFB	107	70-130		%Rec	1	7/29/2021 11:42:09 AM	61570
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.025		mg/Kg	1	7/29/2021 11:42:09 AM	61570
Toluene	ND	0.049		mg/Kg	1	7/29/2021 11:42:09 AM	61570
Ethylbenzene	ND	0.049		mg/Kg	1	7/29/2021 11:42:09 AM	61570
Xylenes, Total	ND	0.099		mg/Kg	1	7/29/2021 11:42:09 AM	61570
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	7/29/2021 11:42:09 AM	61570

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2107C48

04-Aug-21

**Client:** GHD Midland  
**Project:** Jackson B 17 Flowline Area 1

Sample ID: <b>MB-61662</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>61662</b>	RunNo: <b>80187</b>								
Prep Date: <b>7/29/2021</b>	Analysis Date: <b>7/30/2021</b>	SeqNo: <b>2823381</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-61662</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>61662</b>	RunNo: <b>80187</b>								
Prep Date: <b>7/29/2021</b>	Analysis Date: <b>7/30/2021</b>	SeqNo: <b>2823382</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	96.6	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 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 Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2107C48

04-Aug-21

**Client:** GHD Midland  
**Project:** Jackson B 17 Flowline Area 1

Sample ID: <b>MB-61572</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>61572</b>	RunNo: <b>80098</b>								
Prep Date: <b>7/26/2021</b>	Analysis Date: <b>7/27/2021</b>	SeqNo: <b>2820635</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	12		10.00		123	70	130			

Sample ID: <b>LCS-61572</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>61572</b>	RunNo: <b>80098</b>								
Prep Date: <b>7/26/2021</b>	Analysis Date: <b>7/27/2021</b>	SeqNo: <b>2820636</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	106	68.9	141			
Surr: DNOP	4.9		5.000		97.3	70	130			

Sample ID: <b>MB-61656</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>61656</b>	RunNo: <b>80208</b>								
Prep Date: <b>7/29/2021</b>	Analysis Date: <b>7/30/2021</b>	SeqNo: <b>2825038</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		102	70	130			

Sample ID: <b>LCS-61656</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>61656</b>	RunNo: <b>80208</b>								
Prep Date: <b>7/29/2021</b>	Analysis Date: <b>7/30/2021</b>	SeqNo: <b>2825039</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		5.000		100	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 Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2107C48

04-Aug-21

**Client:** GHD Midland  
**Project:** Jackson B 17 Flowline Area 1

Sample ID: <b>ics-61570</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>61570</b>	RunNo: <b>80156</b>								
Prep Date: <b>7/26/2021</b>	Analysis Date: <b>7/28/2021</b>	SeqNo: <b>2822398</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	78.6	131			
Surr: BFB	1200		1000		120	70	130			

Sample ID: <b>mb-61570</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>61570</b>	RunNo: <b>80156</b>								
Prep Date: <b>7/26/2021</b>	Analysis Date: <b>7/29/2021</b>	SeqNo: <b>2822400</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		106	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 Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2107C48

04-Aug-21

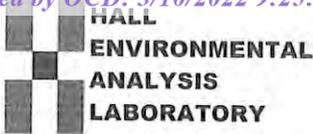
**Client:** GHD Midland  
**Project:** Jackson B 17 Flowline Area 1

Sample ID: <b>LCS-61570</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>61570</b>	RunNo: <b>80156</b>								
Prep Date: <b>7/26/2021</b>	Analysis Date: <b>7/28/2021</b>	SeqNo: <b>2822450</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	88.8	80	120			
Toluene	0.91	0.050	1.000	0	91.1	80	120			
Ethylbenzene	0.91	0.050	1.000	0	91.0	80	120			
Xylenes, Total	2.8	0.10	3.000	0	91.7	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	70	130			

Sample ID: <b>mb-61570</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>61570</b>	RunNo: <b>80156</b>								
Prep Date: <b>7/26/2021</b>	Analysis Date: <b>7/29/2021</b>	SeqNo: <b>2822452</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	1.0		1.000		101	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 Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: GHD Midland Work Order Number: 2107C48 RcptNo: 1

Received By: Cheyenne Cason 7/24/2021 7:48:00 AM
Completed By: Cheyenne Cason 7/24/2021 8:16:30 AM
Reviewed By: SPA 7. 24. 21

Chain of Custody

- 1. Is Chain of Custody complete? Yes [checked] No [ ] Not Present [ ]
2. How was the sample delivered? Courier

Log In

- 3. Was an attempt made to cool the samples? Yes [checked] No [ ] NA [ ]
4. Were all samples received at a temperature of >0° C to 6.0°C Yes [checked] No [ ] NA [ ]
5. Sample(s) in proper container(s)? Yes [checked] No [ ]
6. Sufficient sample volume for indicated test(s)? Yes [checked] No [ ]
7. Are samples (except VOA and ONG) properly preserved? Yes [checked] No [ ]
8. Was preservative added to bottles? Yes [ ] No [checked] NA [ ]
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes [ ] No [ ] NA [checked]
10. Were any sample containers received broken? Yes [ ] No [checked]
11. Does paperwork match bottle labels? Yes [checked] No [ ]
12. Are matrices correctly identified on Chain of Custody? Yes [checked] No [ ]
13. Is it clear what analyses were requested? Yes [checked] No [ ]
14. Were all holding times able to be met? Yes [checked] No [ ]

# of preserved bottles checked for pH: (<2 or >12 unless noted) Adjusted? Checked by: CC 7/24/21

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [ ] No [ ] NA [checked]

Person Notified: [ ] Date: [ ]
By Whom: [ ] Via: [ ] eMail [ ] Phone [ ] Fax [ ] In Person [ ]
Regarding: [ ]
Client Instructions: [ ]

16. Additional remarks:

17. Cooler Information

Table with 6 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 2.4, Good, [ ], [ ], [ ]

### Chain-of-Custody Record

Client: GHD

Mailing Address:

324 W. Main St. Suite 108, Artesia NM 88210

Phone #: (505)377-4218

email or Fax#: [Becky.Haskell@ghd.com](mailto:Becky.Haskell@ghd.com)

QA/QC Package:

Standard  Level 4 (Full Validation)

Accreditation:  AZ Compliance

NELAC  Other

EDD (Type)

Turn-Around Time:

Standard  Rush 5-dy

Project Name:

Jackson B#12 Flowline Area #1

Project #:

1228312

Project Manager:

Becky Haskell

Tom Larson

Sampler: Zach Comino

On Ice:  Yes  No

# of Coolers: 1

Cooler Temp (including CF): 2.6-0.2 = 2.4

Container Type and # Jar Preservative Type HEAL No. 2107098

001

002

003

Date Time Matrix Sample Name

07221 1410 S AI-1 25'

↓ 1420 ↓ AI-1 30'

1440 AI-1 35'

Date: Time: Relinquished by:

07231 0800 Zach Comino

Date: Time: Relinquished by:

Received by: W. Comino Date: 7/23/21 0800

Received by: Chase Settle Date: 7/24/21 0748

### HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

#### Analysis Request

8081 Pesticides/8082 PCB's	
TPH:8015D(GRO / DRO / MRO)	
EDB (Method 504.1)	
PAHs by 8310 or 8270SIMS	
RCRA 8 Metals	
Cl, F, Br, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub>	
8260 (VOA)	
8270 (Semi-VOA)	
Total Coliform (Present/Absent)	<u>300</u>

Remarks: Please email: Chase\_Settle@eogresources.com;  
Tom.Larson@ghd.com; Zach.Comino@ghd.com  
Matthew.Laughlin@ghd.com; Along with Becky Haskell listed above.

Direct Bill to EOG Chase Settle

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

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

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

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

Incident ID	nAPP2111044488
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party EOG Resources, Inc.	OGRID 7377
Contact Name Chase Settle	Contact Telephone 575-748-1471
Contact email Chase_Settle@eogresources.com	Incident # (assigned by OCD)
Contact mailing address 104 S. 4th Street, Artesia, NM 88210	

### Location of Release Source

Latitude 32.85807 Longitude -103.93198  
*(NAD 83 in decimal degrees to 5 decimal places)*

Site Name Jackson B #17	Site Type Well
Date Release Discovered 04/19/2021	API# (if applicable) 30-015-04039

Unit Letter	Section	Township	Range	County
M	1	17S	30E	Eddy

Surface Owner:  State  Federal  Tribal  Private (Name: \_\_\_\_\_)

### Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) Unknown	Volume Recovered (bbls) 0
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Historical impacts discovered during the P&A of the well. Release volume and date are unknown.

State of New Mexico  
Oil Conservation Division

Page 2

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?  
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?  	

### Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why:  
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name: <u>Chase Settle</u> Title: <u>Rep Safety &amp; Environmental Sr</u> Signature: <u></u> Date: <u>04/19/2021</u> email: <u>Chase_Settle@eogresources.com</u> Telephone: <u>575-748-1471</u>
<b><u>OCD Only</u></b>  Received by: _____ Date: _____

Incident ID	nAPP211104488
District RP	
Facility ID	
Application ID	

## Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>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 type="checkbox"/> Yes <input checked="" 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	nAPP2111044488
District RP	
Facility ID	
Application ID	

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

Printed Name: Chase Settle Title: Rep Safety & Environmental Sr  
 Signature:  Date: 08/31/2021  
 email: Chase\_Settle@eogresources.com Telephone: 575-748-1471

**OCD Only**

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

Incident ID	nAPP211104488
District RP	
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: Chase Settle Title: Rep Safety & Environmental Sr  
 Signature:  Date: 08/31/2021  
 email: Chase\_Settle@eogresources.com Telephone: 575-748-1471

**OCD Only**

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

- Approved       Approved with Attached Conditions of Approval       Denied       Deferral Approved

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

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

Our ref: 11228313

August 27, 2021

New Mexico Oil Conservation Division  
District 2  
811 South First Street  
Artesia, New Mexico 88210

Re: **Site Characterization and Remediation Work Plan  
Jackson B #17 Wellhead Release Site  
EOG Resources Inc.  
Incident ID: nAPP2111044488  
M-01-17S-30E, Eddy County, New Mexico**

To Whom It May Concern:

## 1. Introduction

GHD Services, Inc. (GHD), on behalf of EOG Resources (EOG), submits this Site Characterization and Remediation Work Plan to the New Mexico Oil Conservation Division (NMOCD) District 2 Office. This Report provides documentation of delineation, sampling, and analyses in the affected area at the EOG Jackson B #17 Wellhead Release Site (Site). The Site is located in Unit Letter M Section 01 of Township 17 South and Range 30 East in Eddy County, New Mexico. The GPS coordinates for the release site are 32.85807 N latitude and 103.93198 W longitude. The release occurred on land managed by the Bureau of Land Management (BLM). Figure 1 depicts the Site location. The EOG production facility and other site details are depicted on Figure 2.

## 2. Background Information

A C-141 initial report for this release was submitted to the NMOCD on April 19, 2021. The C-141 stated that no known volume or date could be assigned to this historical release. The potential release area was discovered during EOG well plugging and site abandonment activities associated with this location. Soils within the former oil well appeared to be discolored and after discussions between field personnel and environmental staff – EOG made the decision to go ahead and file a C-141 for this suspect release location.

The Initial Form C-141, Site Assessment/Characterization and Remediation Plan portions of Form C-141 for Incident Number nAPP2111044488 are attached to the front of this report.

### 3. Groundwater and Site Characterization

GHD characterized the Site according to Table 1, 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). The release falls under the jurisdiction of the NMOCD District 2 in Artesia, New Mexico.

On May 18, 2021, Talon LPE (Talon) installed a temporary well, Jackson B #59, at GPS Coordinates, 32.85697 N latitude and 103.92703 W longitude to approximately 125 feet below ground surface (bgs.) which is located approximately 0.5 miles from the Site. The Jackson B #59 Temp Well was left open for 72 hours and a water level meter was utilized to determine the presence or absence of groundwater. No groundwater was detected, and the temporary well was plugged and abandoned. Depth to groundwater for this Site is greater than one hundred (100) feet bgs. No other receptors (karst potential areas, water wells, playas, wetlands, waterways, lakebeds or ordinance boundaries) were located within each specific boundaries or distance from the Site. According to the Site characterization evaluation and 19.15.29.12.C(4)(a)(i) the Site is located within an area with depth to groundwater greater than one hundred (100) feet and meets the closure criteria for depth to groundwater greater than one hundred (100) feet in Table 1 in NMAC 19.15.29.12. The Site characterization documentation (Talon’s Temporary Well Log, Karst Potential, FEMA, Points of Diversion and Wetlands maps) are provided in Attachment A. The soil and closure criteria are listed below:

*General Site Characterization and Groundwater:*

Site Characterization	Average Groundwater Depth (ft.)
No Receptors Found	>100'

Table 3.1 Closure Criteria for Soils Impacted by a Release (NMAC 19.15.29.12)

Constituent	Limits
Chloride	20,000 mg/kg
TPH (GRO+DRO+MRO)	2,500 mg/kg
TPH (GRO+DRO)	1,000 mg/kg
Benzene	10mg/kg
BTEX	50 mg/kg

### 4. Initial Soil Delineation Assessment Summary and Findings

On May 24 through 25, 2021, GHD Services Inc. (GHD) and EOG’s contractor BDS Enterprises, LLC (BDS), on behalf of EOG, installed five (5) test pits within the suspected impacted area. Soil samples were collected at eight (8) and twenty (20) feet bgs in test pit TP-1 and at the surface and two (2) feet bgs in TP-2 through TP-5. All soil samples were analyzed for BTEX by EPA Method 8021B, TPH by Method 8015B Modified, and chloride by EPA Method 300 by Hall Environmental Analysis Laboratory (HEAL) in Albuquerque, New Mexico. Analytical results indicated test pit TP-1 exhibited benzene, BTEX and Total TPH above Table 1 closure criteria at eight (8) feet and Total TPH at twenty (20) feet bgs. None of the other sample points exhibited benzene, BTEX, Total TPH or chloride concentrations above Table 1 closure criteria. Test pits TP-3 and TP-5 exhibited TPH and/or chloride concentrations above 100 mg/kg and 600 mg/kg, respectively, in the first four (4) feet bgs.



On July 22, 2021, GHD and Talon returned to the site to install a soil boring near TP1 to fully delineate the release to less than 100 mg/kg for TPH concentrations and 600 mg/kg for chloride concentrations. The soil boring was installed to a depth of seventy-five (75) feet bgs. Samples were collected in approximate five (5) foot intervals beginning at twenty-five 25 feet bgs. Select soil samples were submitted to HEAL in Albuquerque, New Mexico and analyzed for BTEX by EPA Method 8021B, TPH by Method 8015B Modified, and chloride by EPA Method 300. TPH concentrations were delineated to below 100 mg/kg at twenty-five (25) feet bgs. The TP-5 Soil Boring Log is provided as Attachment B.

Figure 2, Site Assessment: Soil Analytical Results Map, depicts the locations of the initial delineation samples and analytical concentrations. Analytical results are provided in Table 1, on Figure 2, and in the Laboratory Analytical Reports provided in Attachment C.

## 5. nAPP11104488 Proposed Work Plan

Test pit TP-1 exhibited benzene, BTEX and Total TPH above Table 1 closure criteria at eight (8) feet and Total TPH criteria was exceeded at twenty (20) feet bgs. None of the other samples submitted for analysis exhibited benzene, BTEX, Total TPH or chloride concentrations above Table 1 closure criteria. Test pits TP-3 and TP-5 exhibited TPH and/or chloride concentrations above 100 mg/kg and 600 mg/kg, respectively, in the first four (4) feet bgs.

GHD, on behalf of EOG, proposes to excavate soils containing Total TPH concentrations over 100 mg/kg and chloride concentrations over 600 mg/kg within the top four feet of the impacted area. Additionally, the TP-1 area will be excavated to nineteen and one-half (19.5) feet bgs or as deep as safely possible. The bottom of the excavation will be treated with a microbial strain to digest organics in the hydrocarbons. The excavation will be backfilled with non-impacted soil transported to the site. After ninety (90) days, or when a drilling rig is available, a drilling rig will be utilized to collect samples at twenty (20), twenty-three (23), twenty-five (25), and twenty-eight (28) feet bgs.

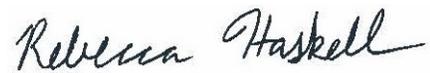
Composite confirmation samples will be collected from the sidewalls of the excavation from areas representing area no larger than two hundred (200) square feet. Discrete soil samples will be collected from the sidewalls if any staining is observed. No confirmation samples will be collected from the bottom of the excavation as the site is already vertically delineated. All confirmation samples will be taken to a certified laboratory and analyzed for BTEX by EPA Method 8021B, TPH by Method 8015B Modified, and chloride by EPA Method 300.

Excavated soils will be transported to a NMOCD approved disposal facility for disposal. The anticipated volume of soil to be disposed of is approximately 4,000 to 8,000 cubic yards depending on the final dimensions of the excavation based on the depth and site conditions encountered. The excavation will be backfilled with non-impacted soil transported to the site. The remediation will be performed within 180 days after the work plan has been approved. If a driller isn't available within that time frame a request for an extension will be submitted to the NMOCD. If the confirmation samples collected at twenty (20), twenty-three (23), twenty-five (25), and twenty-eight (28) feet bgs from the TP-1 excavation are below Table 1 closure criteria, a closure report will be prepared to document remediation activities and submitted to the NMOCD. If the samples exhibit Total TPH concentrations above Table 1 closure criteria a new work plan will be submitted to the NMOCD for approval.

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

Sincerely,

GHD



Becky Haskell  
Senior Project Manager



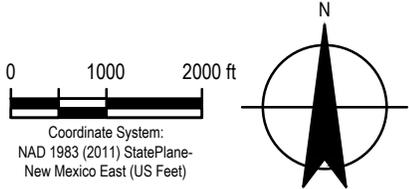
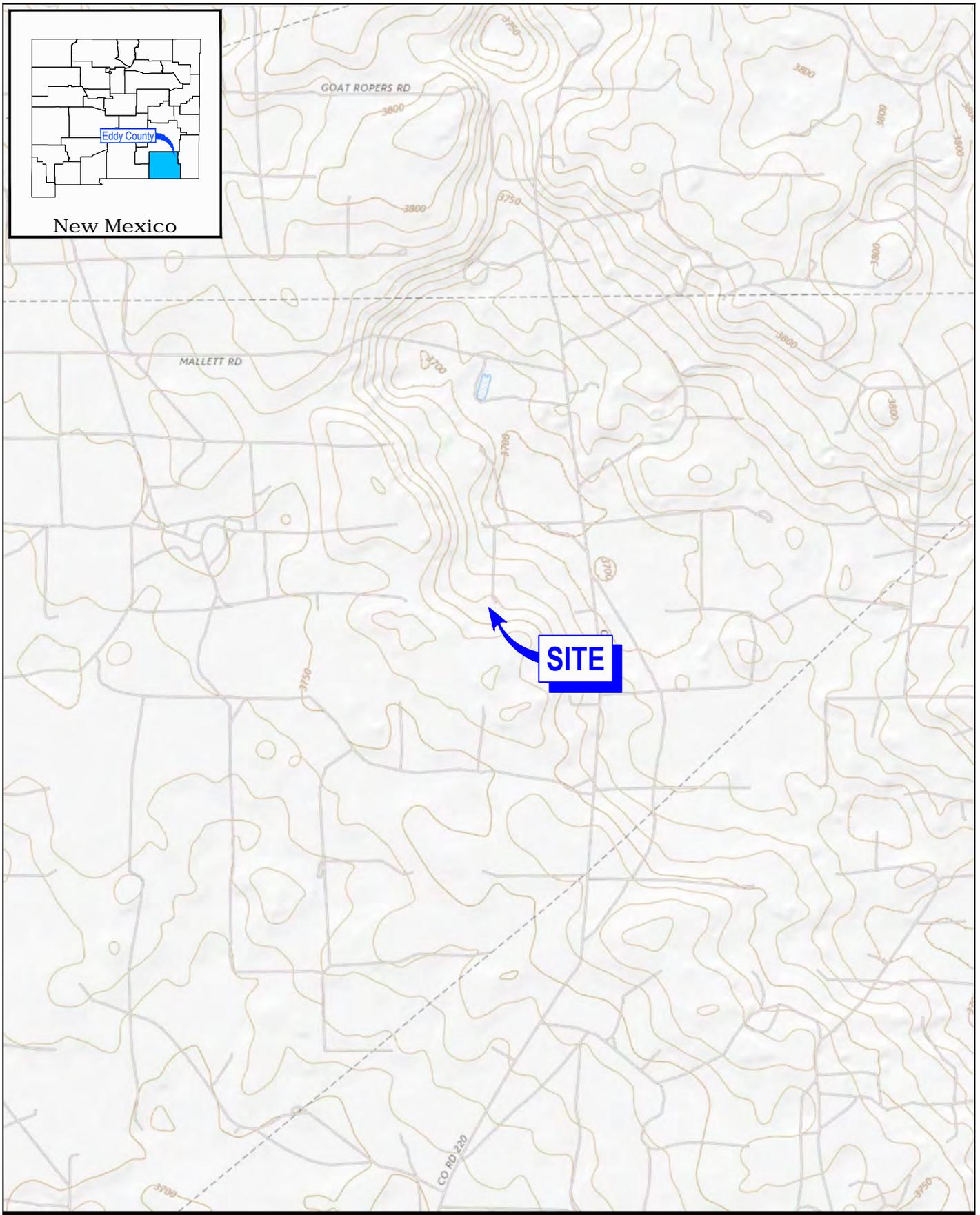
Thomas C. Larson, M.S.  
Midland Operation Manager

BH/tl/1

- Encl. Figure 1 – Site Location Map  
Figure 2 – Site Assessment Soil Analytical Results Map  
Table 1 – Summary of Soil Analytical Data  
Attachment A – Site Characterization Documentation  
Attachment B – TP-1 Soil Boring Log  
Attachment C – Laboratory Analytical Reports and Chain-of-Custody Documentation

cc: Chase Settle

# Figures



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



EOG RESOURCES  
 EDDY COUNTY, NEW MEXICO  
 JACKSON B #17 WELLHEAD

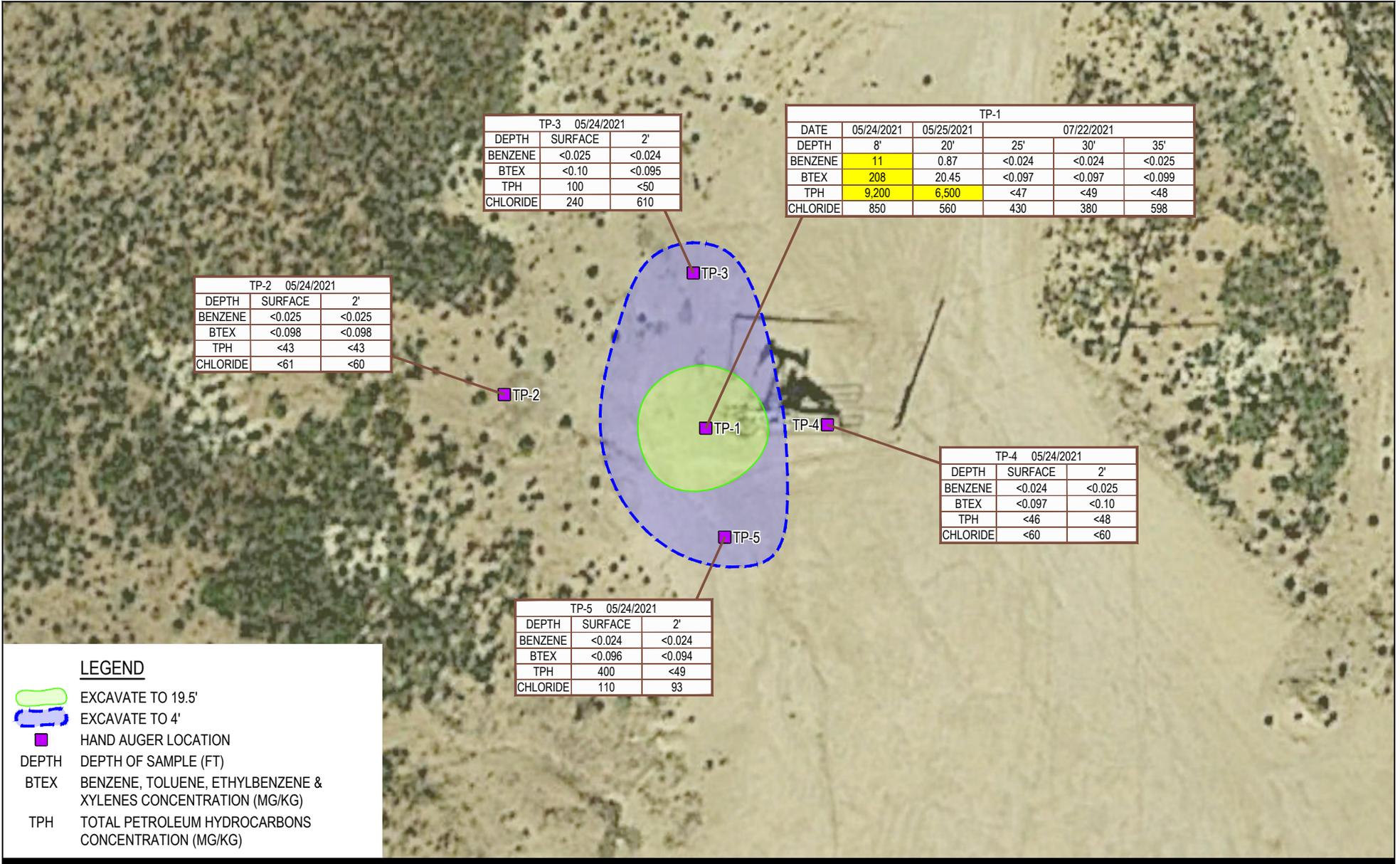
Project No. 11228313  
 Date August 2021

SITE LOCATION MAP

FIGURE 1

Filename: \\ghdnet\c\p\USMidland\Projects\562\11228313\Digital\_Design\ACAD\Figures\RPT001\11228313-GHD-0000-RPT-EN-0101\_DL-001.dwg

Data Source: USGS 7.5 Minute Quad "Loco Hills and Henshaw Tank, New Mexico"  
 Lat/Long: 32.858019° North, 103.931812° West

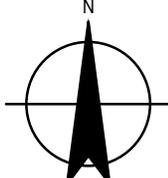


**LEGEND**

-  EXCAVATE TO 19.5'
-  EXCAVATE TO 4'
-  HAND AUGER LOCATION
- DEPTH DEPTH OF SAMPLE (FT)
- BTEX BENZENE, TOLUENE, ETHYLBENZENE & XYLENES CONCENTRATION (MG/KG)
- TPH TOTAL PETROLEUM HYDROCARBONS CONCENTRATION (MG/KG)

0 15 30 ft

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



- NOTES:**
- RESULTS IN MILLIGRAMS PER KILOGRAM (MG/KG).
  - SEE TABLE 1 FOR FULL ANALYTICAL RESULTS/DETAILS.
  - YELLOW SHADED CELLS INDICATE EXCEEDANCE.



**EOG RESOURCES**  
EDDY COUNTY, NEW MEXICO  
JACKSON B #17 WELLHEAD

**SITE ASSESSMENT:**  
**SOIL ANALYTICAL RESULTS MAP**

Project No. 11228313  
Date August 2021

**FIGURE 2**

# Tables

**Table 1  
Summary of Soil Analytical Data  
Jackson B #17 Wellhead  
EOG Resources  
Eddy County, New Mexico**

Sample ID	Sample Date	Depth (feet bgs)	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	TPH				Chloride
			(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	GRO (C6-C10)	DRO (C10-C28)	MRO (C28-C35)	Total GRO/DRO/MRO	
			(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	
Table I Closure Criteria for Soils <50 feet Depth to Groundwater 19.15.29 NMAC												
			10 mg/Kg	---	---	---	50 mg/Kg	1,000 mg/Kg	---	2,500 mg/Kg	20,000 mg/Kg	
<b>Initial Assessment Samples</b>												
TP1-8	5/24/21	8	<b>11</b>	<b>58</b>	<b>63</b>	<b>76</b>	<b>208</b>	<b>1,600</b>	<b>3,200</b>	<b>4,400</b>	<b>9,200</b>	<b>850</b>
TP1-20	5/25/21	20	<b>0.87</b>	<b>0.38</b>	<b>10</b>	<b>9.2</b>	<b>20.45</b>	<b>570</b>	<b>3,500</b>	<b>2,500</b>	<b>6,500</b>	<b>560</b>
TP1-25	7/22/21	25	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<9.4	<47	<47	<b>430</b>
TP1-30	7/22/21	30	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<9.8	<49	<49	<b>380</b>
TP1-35	7/22/21	35	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<9.7	<48	<48	<b>598</b>
TP2-S	5/24/21	Surface	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<8.5	<43	<43	<61
TP2-2	5/24/21	2	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<8.6	<43	<43	<60
TP3-S	5/24/21	Surface	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<8.6	<b>100</b>	<b>100</b>	<b>240</b>
TP3-2	5/24/21	2	<0.024	<0.048	<0.048	<0.095	<0.095	<4.8	<10	<50	<50	<b>610</b>
TP4-S	5/24/21	Surface	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<9.2	<46	<46	<60
TP4-2	5/24/21	2	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<9.7	<48	<48	<60
TP5-S	5/24/21	Surface	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<b>170</b>	<b>230</b>	<b>400</b>	<b>110</b>
TP5-2	5/24/21	2	<0.024	<0.047	<0.047	<0.094	<0.094	<4.7	<9.7	<49	<49	<b>93</b>

- 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 Closure Criteria for the site.
  8. J - the target analytes was positively identified below the quantitation limit and above the detection limit

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

# Attachment A Site Characterization Documentation

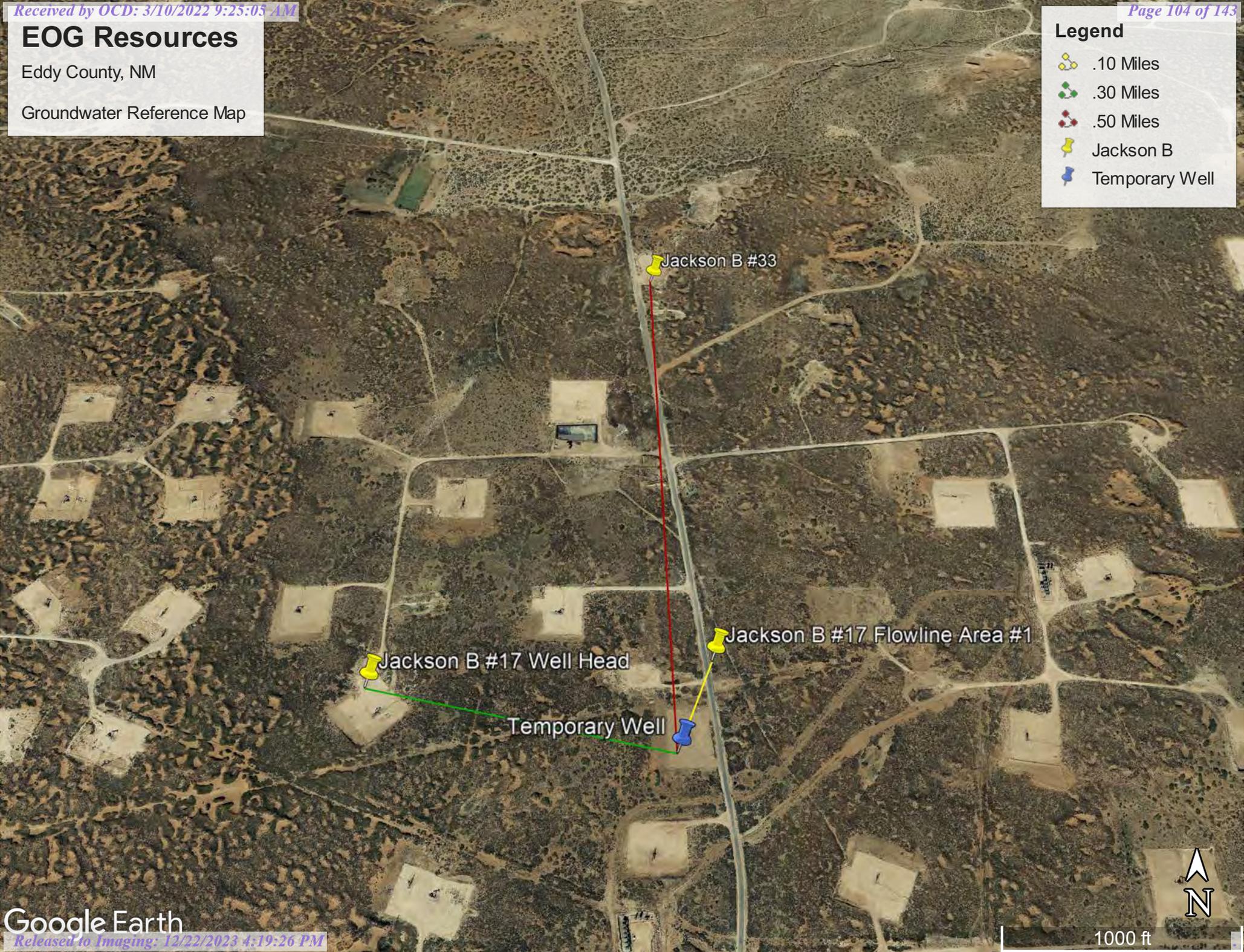
# EOG Resources

Eddy County, NM

Groundwater Reference Map

## Legend

-  .10 Miles
-  .30 Miles
-  .50 Miles
-  Jackson B
-  Temporary Well



# EOG Jackson B#59

Eddy County, New Mexico

## Legend

 32.85697,-103.92703

32.85697,-103.92703

 Jackson B#59 Temp Well

Square Lake Rd

220

Google Earth



1000 ft



# BORING LOG

Project No.: 700438.238.01

Weather: Clear, Temp.: 75°F

Driller: D. Londagin

Site Name: Jackson B #59

Logger: D. Adkins

Rig Type: Reich Drill

Location: Eddy County, New Mexico

Field Instrument: NA

Bit Size: 5-7/8"

Date: 5/18/2021

Latitude: 32.85697 N

Drilling Method: Air Rotary

Boring Number: B-1

Longitude: -103.92703 W

Sample Retrieval Method: Drill Cuttings

Time	Lab Sample Collected	Sample Interval (ft)	Sample Recovery (ft)	USCS	Composition (%)	Sample Material/Comments Include composition, color, grain size, moisture, hardness, plasticity, density	Hydrocarbon Odor	PID (ppm)
	<input type="checkbox"/>	0-30'				Red/brown fine Sand (SP)	None Slight Mod. Strong	
	<input type="checkbox"/>	30-40'				Red/brown fine Sand (SP) with varying amounts of silt and caliche	None Slight Mod. Strong	
	<input type="checkbox"/>	40-80'				Dry, dark red/brown sandy Silts (SM)	None Slight Mod. Strong	
	<input type="checkbox"/>	80-125'				Red/brown fine Sand (SP)	None Slight Mod. Strong	
	<input type="checkbox"/>					__ TD 125' __	None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	

Surface Elevation: \_\_\_\_\_

Notes: Groundwater Not Encountered @ 125' BGS – 72 hr.

Logger Initials: DJA



# EOG Jackson B #17 Wellhead

Karst Potential Map

## Legend

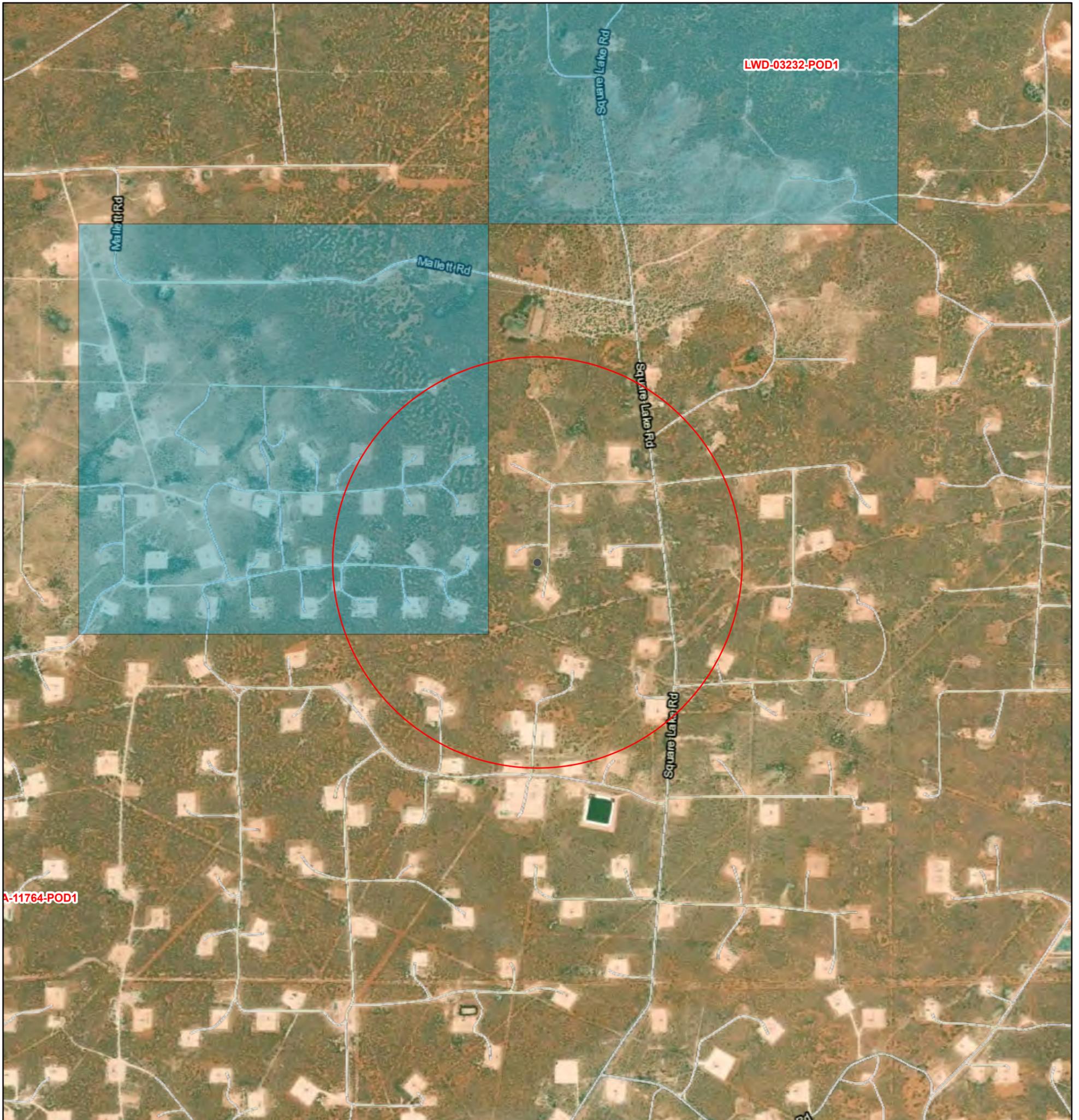
-  EOG Jackson B #17 Wellhead
-  High
-  Low
-  Medium

 EOG Jackson B #17 Wellhead



3000 ft

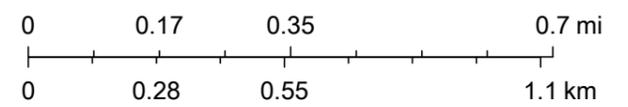
# OSE PUBLIC PRINT



8/19/2021, 2:53:19 PM

1:18,056

- OSE District Boundary
- New Mexico State Trust Lands
- Both Estates
- Site Boundaries

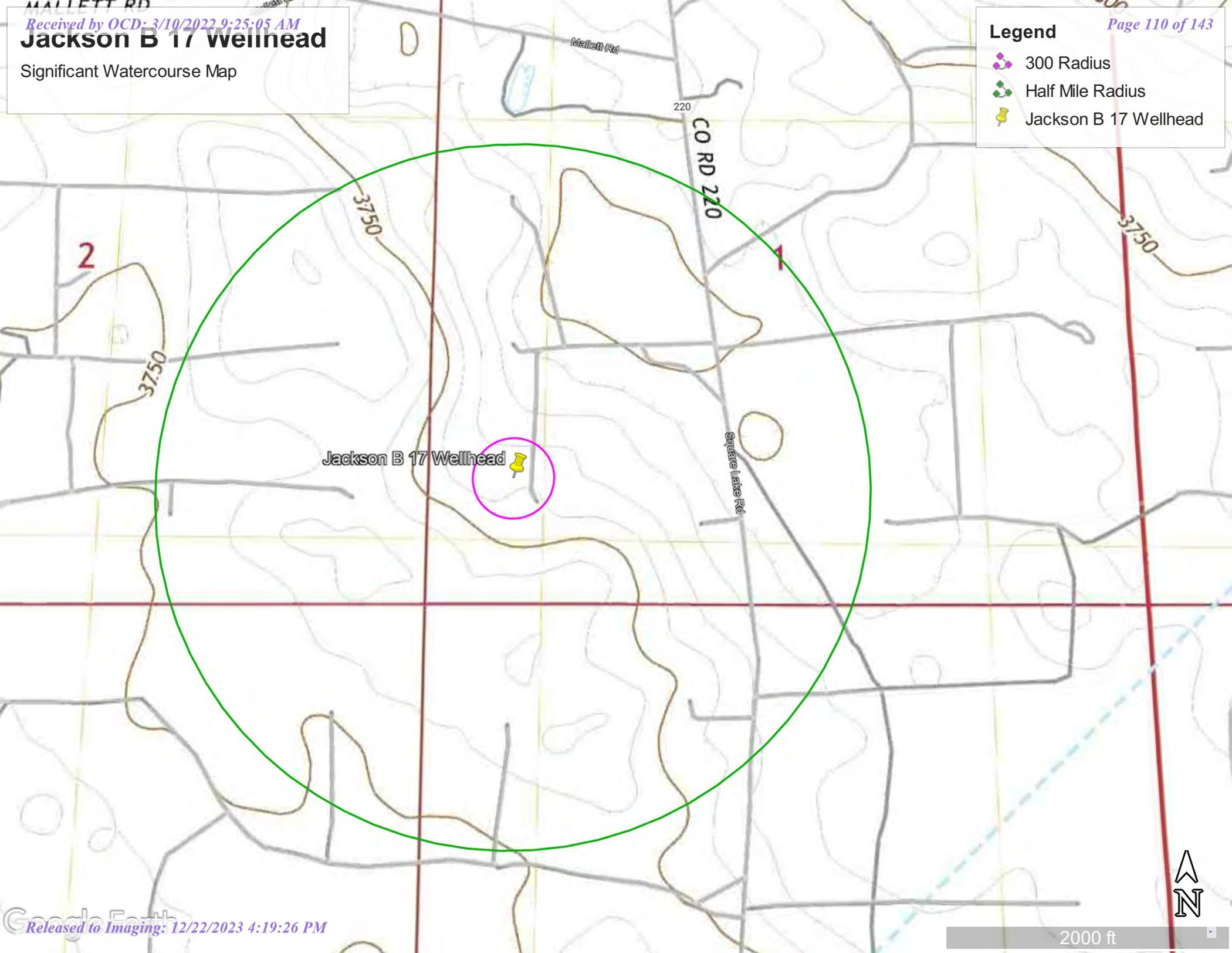


Esri, HERE, iPC, U.S. Department of Energy Office of Legacy Management, Esri, HERE, Garmin, iPC, Maxar

Significant Watercourse Map

**Legend**

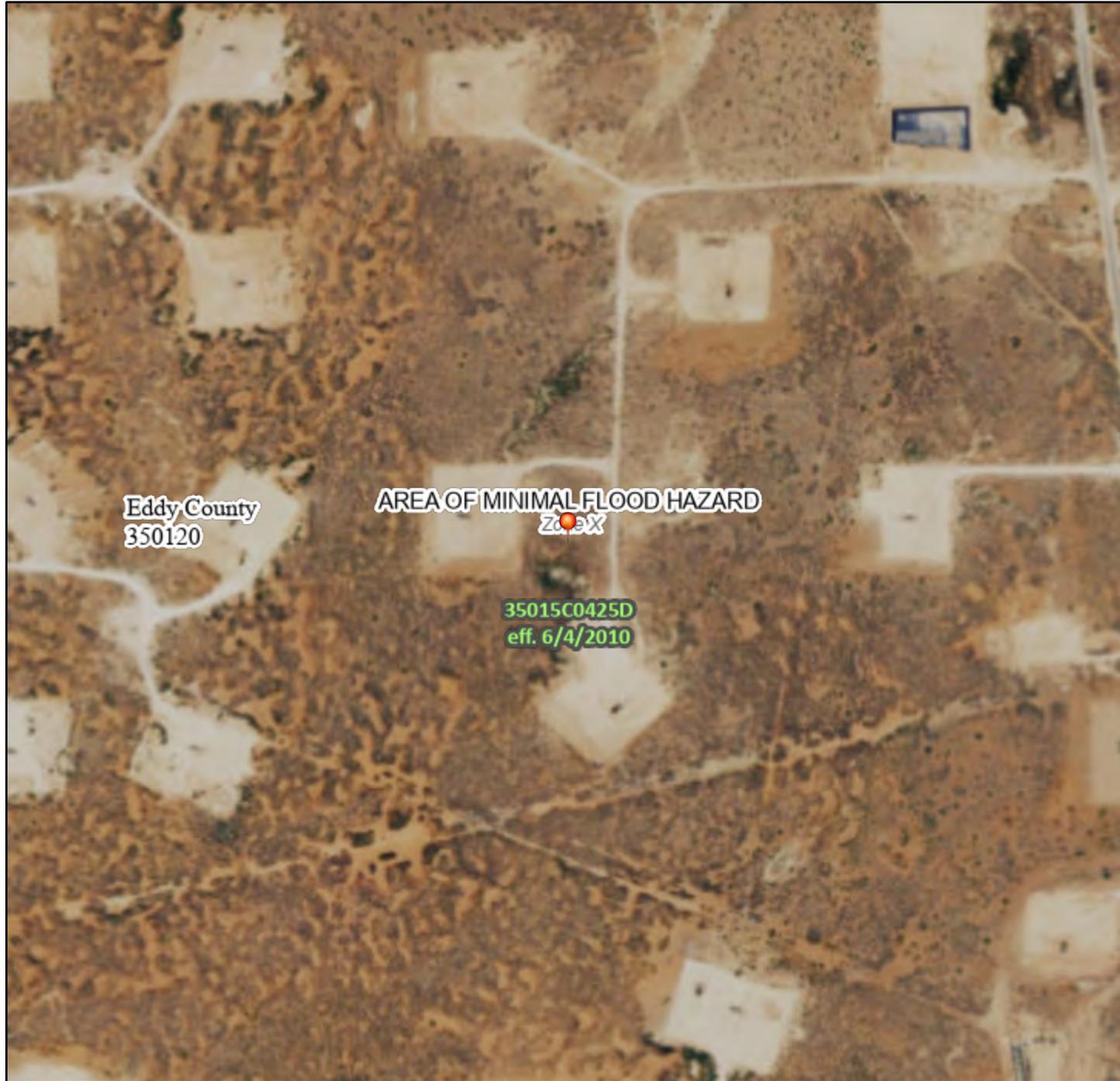
-  300 Radius
-  Half Mile Radius
-  Jackson B 17 Wellhead



# National Flood Hazard Layer FIRMette



103°56'14"W 32°51'47"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**
  - 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
  - Hydrographic Feature
- 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 8/19/2021 at 4:53 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.

# EOG Jackson B #17 Wellhead



August 27, 2021

### Wetlands

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

# Attachment B Soil Boring Log



## TEST PIT STRATIGRAPHIC LOG (OVERBURDEN)

PROJECT NAME: EOG/Jackson B #17 Wellhead PROJECT  
 NUMBER: 11228313  
 CLIENT: EOG Resources, INC.  
 LOCATION: M-01-17S-30E, Eddy Co. NM 32.85807 -103.93198

HOLE DESIGNATION: TP-#1  
 DATE COMPLETED: 22 July 2021  
 TEST PIT METHOD: Air Rotary  
 FIELD PERSONNEL: Lee M./Zach C.

File: \\GHDNET\GHD\USMIDLAND\PROJECTS\56211228312\FIELD NOTES\GINT LOGS\11228312 LOGS.GPJ Library File: 11228312 GHD\_ENVIRO\_V04.GLB Report: OVERBURDEN LOG Date: 26/7/21

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH m BGS	SAMPLE					
			NUMBER	INTERVAL	REC (%)	mS/cm	NaCl	
5	Start strat log @ 20ft							
10								
15								
20	SAND, fine/medium, red and brown, dry	20.00						
22.50	CLAYEY SAND, red and brown, with caliche interbedded, slightly moist	22.50	20-25'			980		
25	SAND, fine/medium, red and brown, dry - bed of caliche at 27.00ft BGS	25.00	25-30'			1120		
30	- slightly moist at 32.50ft BGS		30-35'			960		
35								
37.50	CLAYEY SAND, red and brown, slightly moist	37.50	35-40'			620		
40	SAND, fine/medium, red and brown, dry	40.00	40-45'			490		
45			45-50'			400	396	
50			50-55'			300	356	
55			55-60'			920	875	
60			60-65'			500		
65			65-70'			260	268	
70			70-75'			420	396	
75	END OF BOREHOLE @ 75.00ft BGS	75.00						

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

CHEMICAL ANALYSIS  

Note: mS/cm and NaCl data is field screening data

# 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: clients.hallenvironmental.com

June 02, 2021

Tom Larson  
GHD  
6121 Indian School Road, NE #200  
Albuquerque, NM 87110  
TEL: (505) 884-0672  
FAX

RE: Jackson B 17 Wellhead

OrderNo.: 2105A89

Dear Tom Larson:

Hall Environmental Analysis Laboratory received 10 sample(s) on 5/26/2021 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 white background.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order: 2105A89

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/2/2021

**CLIENT:** GHD **Lab Order:** 2105A89  
**Project:** Jackson B 17 Wellhead

**Lab ID:** 2105A89-001 **Collection Date:** 5/24/2021 10:45:00 AM  
**Client Sample ID:** TP1-8 **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	850	60		mg/Kg	20	6/1/2021 3:37:04 PM	60357
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	3200	440		mg/Kg	50	5/28/2021 11:33:14 AM	60287
Motor Oil Range Organics (MRO)	4400	2200		mg/Kg	50	5/28/2021 11:33:14 AM	60287
Surr: DNOP	0	70-130	S	%Rec	50	5/28/2021 11:33:14 AM	60287
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	1600	250		mg/Kg	50	5/28/2021 4:07:25 AM	60281
Surr: BFB	153	70-130	S	%Rec	50	5/28/2021 4:07:25 AM	60281
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	11	1.2		mg/Kg	50	5/28/2021 4:07:25 AM	60281
Toluene	58	2.5		mg/Kg	50	5/28/2021 4:07:25 AM	60281
Ethylbenzene	63	2.5		mg/Kg	50	5/28/2021 4:07:25 AM	60281
Xylenes, Total	76	5.0		mg/Kg	50	5/28/2021 4:07:25 AM	60281
Surr: 4-Bromofluorobenzene	112	70-130		%Rec	50	5/28/2021 4:07:25 AM	60281

**Lab ID:** 2105A89-002 **Collection Date:** 5/24/2021 11:00:00 AM  
**Client Sample ID:** TP2-S **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	ND	61		mg/Kg	20	6/1/2021 3:49:28 PM	60357
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	8.5		mg/Kg	1	5/28/2021 2:58:15 PM	60297
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	5/28/2021 2:58:15 PM	60297
Surr: DNOP	115	70-130		%Rec	1	5/28/2021 2:58:15 PM	60297
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/27/2021 6:32:00 PM	60288
Surr: BFB	87.0	70-130		%Rec	1	5/27/2021 6:32:00 PM	60288
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.025		mg/Kg	1	5/27/2021 6:32:00 PM	60288
Toluene	ND	0.049		mg/Kg	1	5/27/2021 6:32:00 PM	60288
Ethylbenzene	ND	0.049		mg/Kg	1	5/27/2021 6:32:00 PM	60288
Xylenes, Total	ND	0.098		mg/Kg	1	5/27/2021 6:32:00 PM	60288
Surr: 4-Bromofluorobenzene	81.7	70-130		%Rec	1	5/27/2021 6:32:00 PM	60288

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105A89

Date Reported: 6/2/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Wellhead

**Lab Order:** 2105A89

**Lab ID:** 2105A89-003

**Collection Date:** 5/24/2021 11:05:00 AM

**Client Sample ID:** TP2-2

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	ND	60		mg/Kg	20	6/1/2021 4:01:53 PM	60357
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	8.6		mg/Kg	1	5/28/2021 2:13:50 PM	60297
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	5/28/2021 2:13:50 PM	60297
Surr: DNOP	98.5	70-130		%Rec	1	5/28/2021 2:13:50 PM	60297
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/27/2021 7:31:00 PM	60288
Surr: BFB	86.2	70-130		%Rec	1	5/27/2021 7:31:00 PM	60288
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.025		mg/Kg	1	5/27/2021 7:31:00 PM	60288
Toluene	ND	0.049		mg/Kg	1	5/27/2021 7:31:00 PM	60288
Ethylbenzene	ND	0.049		mg/Kg	1	5/27/2021 7:31:00 PM	60288
Xylenes, Total	ND	0.098		mg/Kg	1	5/27/2021 7:31:00 PM	60288
Surr: 4-Bromofluorobenzene	83.1	70-130		%Rec	1	5/27/2021 7:31:00 PM	60288

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105A89

Date Reported: 6/2/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Wellhead

**Lab Order:** 2105A89

**Lab ID:** 2105A89-004

**Collection Date:** 5/24/2021 11:10:00 AM

**Client Sample ID:** TP3-S

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	240	60		mg/Kg	20	6/1/2021 4:14:18 PM	60357
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	8.6		mg/Kg	1	5/29/2021 3:47:23 PM	60297
Motor Oil Range Organics (MRO)	100	43		mg/Kg	1	5/29/2021 3:47:23 PM	60297
Surr: DNOP	85.1	70-130		%Rec	1	5/29/2021 3:47:23 PM	60297
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/27/2021 8:31:00 PM	60288
Surr: BFB	85.0	70-130		%Rec	1	5/27/2021 8:31:00 PM	60288
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.025		mg/Kg	1	5/27/2021 8:31:00 PM	60288
Toluene	ND	0.050		mg/Kg	1	5/27/2021 8:31:00 PM	60288
Ethylbenzene	ND	0.050		mg/Kg	1	5/27/2021 8:31:00 PM	60288
Xylenes, Total	ND	0.10		mg/Kg	1	5/27/2021 8:31:00 PM	60288
Surr: 4-Bromofluorobenzene	82.9	70-130		%Rec	1	5/27/2021 8:31:00 PM	60288

**Lab ID:** 2105A89-005

**Collection Date:** 5/24/2021 11:15:00 AM

**Client Sample ID:** TP3-2

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	610	60		mg/Kg	20	6/1/2021 4:26:42 PM	60357
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/28/2021 3:28:18 PM	60297
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/28/2021 3:28:18 PM	60297
Surr: DNOP	99.0	70-130		%Rec	1	5/28/2021 3:28:18 PM	60297
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/27/2021 8:51:00 PM	60288
Surr: BFB	87.4	70-130		%Rec	1	5/27/2021 8:51:00 PM	60288
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.024		mg/Kg	1	5/27/2021 8:51:00 PM	60288
Toluene	ND	0.048		mg/Kg	1	5/27/2021 8:51:00 PM	60288
Ethylbenzene	ND	0.048		mg/Kg	1	5/27/2021 8:51:00 PM	60288
Xylenes, Total	ND	0.095		mg/Kg	1	5/27/2021 8:51:00 PM	60288
Surr: 4-Bromofluorobenzene	81.8	70-130		%Rec	1	5/27/2021 8:51:00 PM	60288

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 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 Limit
	S % Recovery outside of range due to dilution or matrix	

**Analytical Report**

Lab Order: 2105A89

Date Reported: 6/2/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Wellhead

**Lab Order:** 2105A89

**Lab ID:** 2105A89-006

**Collection Date:** 5/24/2021 11:20:00 AM

**Client Sample ID:** TP4-S

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	ND	60		mg/Kg	20	6/1/2021 4:39:07 PM	60357
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	5/28/2021 3:38:14 PM	60297
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	5/28/2021 3:38:14 PM	60297
Surr: DNOP	101	70-130		%Rec	1	5/28/2021 3:38:14 PM	60297
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/27/2021 9:11:00 PM	60288
Surr: BFB	83.1	70-130		%Rec	1	5/27/2021 9:11:00 PM	60288
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.024		mg/Kg	1	5/27/2021 9:11:00 PM	60288
Toluene	ND	0.049		mg/Kg	1	5/27/2021 9:11:00 PM	60288
Ethylbenzene	ND	0.049		mg/Kg	1	5/27/2021 9:11:00 PM	60288
Xylenes, Total	ND	0.097		mg/Kg	1	5/27/2021 9:11:00 PM	60288
Surr: 4-Bromofluorobenzene	81.8	70-130		%Rec	1	5/27/2021 9:11:00 PM	60288

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105A89

Date Reported: 6/2/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Wellhead

**Lab Order:** 2105A89

**Lab ID:** 2105A89-007

**Collection Date:** 5/24/2021 11:25:00 AM

**Client Sample ID:** TP4-2

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	ND	60		mg/Kg	20	6/1/2021 4:51:31 PM	60357
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	5/28/2021 3:48:10 PM	60297
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/28/2021 3:48:10 PM	60297
Surr: DNOP	114	70-130		%Rec	1	5/28/2021 3:48:10 PM	60297
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/27/2021 9:31:00 PM	60288
Surr: BFB	87.4	70-130		%Rec	1	5/27/2021 9:31:00 PM	60288
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.025		mg/Kg	1	5/27/2021 9:31:00 PM	60288
Toluene	ND	0.050		mg/Kg	1	5/27/2021 9:31:00 PM	60288
Ethylbenzene	ND	0.050		mg/Kg	1	5/27/2021 9:31:00 PM	60288
Xylenes, Total	ND	0.10		mg/Kg	1	5/27/2021 9:31:00 PM	60288
Surr: 4-Bromofluorobenzene	83.0	70-130		%Rec	1	5/27/2021 9:31:00 PM	60288

**Lab ID:** 2105A89-008

**Collection Date:** 5/24/2021 11:30:00 AM

**Client Sample ID:** TP5-S

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	110	60		mg/Kg	20	6/1/2021 5:03:56 PM	60357
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	170	9.5		mg/Kg	1	5/28/2021 2:41:02 PM	60297
Motor Oil Range Organics (MRO)	230	47		mg/Kg	1	5/28/2021 2:41:02 PM	60297
Surr: DNOP	80.3	70-130		%Rec	1	5/28/2021 2:41:02 PM	60297
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/27/2021 9:51:00 PM	60288
Surr: BFB	84.9	70-130		%Rec	1	5/27/2021 9:51:00 PM	60288
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.024		mg/Kg	1	5/27/2021 9:51:00 PM	60288
Toluene	ND	0.048		mg/Kg	1	5/27/2021 9:51:00 PM	60288
Ethylbenzene	ND	0.048		mg/Kg	1	5/27/2021 9:51:00 PM	60288
Xylenes, Total	ND	0.096		mg/Kg	1	5/27/2021 9:51:00 PM	60288
Surr: 4-Bromofluorobenzene	80.3	70-130		%Rec	1	5/27/2021 9:51:00 PM	60288

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 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 Limit
	S % Recovery outside of range due to dilution or matrix	

**Analytical Report**

Lab Order: 2105A89

Date Reported: 6/2/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Wellhead

**Lab Order:** 2105A89

**Lab ID:** 2105A89-009

**Collection Date:** 5/24/2021 11:35:00 AM

**Client Sample ID:** TP5-2

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	93	60		mg/Kg	20	6/1/2021 5:16:21 PM	60357
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	5/28/2021 3:58:05 PM	60297
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/28/2021 3:58:05 PM	60297
Surr: DNOP	109	70-130		%Rec	1	5/28/2021 3:58:05 PM	60297
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/27/2021 10:10:00 PM	60288
Surr: BFB	84.4	70-130		%Rec	1	5/27/2021 10:10:00 PM	60288
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	0.024		mg/Kg	1	5/27/2021 10:10:00 PM	60288
Toluene	ND	0.047		mg/Kg	1	5/27/2021 10:10:00 PM	60288
Ethylbenzene	ND	0.047		mg/Kg	1	5/27/2021 10:10:00 PM	60288
Xylenes, Total	ND	0.094		mg/Kg	1	5/27/2021 10:10:00 PM	60288
Surr: 4-Bromofluorobenzene	81.3	70-130		%Rec	1	5/27/2021 10:10:00 PM	60288

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order: 2105A89

Date Reported: 6/2/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD  
**Project:** Jackson B 17 Wellhead

**Lab Order:** 2105A89

**Lab ID:** 2105A89-010

**Collection Date:** 5/25/2021 10:45:00 AM

**Client Sample ID:** TP1-20

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	560	60		mg/Kg	20	6/1/2021 5:53:35 PM	60357
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	3500	440		mg/Kg	50	5/28/2021 2:00:01 PM	60297
Motor Oil Range Organics (MRO)	2500	2200		mg/Kg	50	5/28/2021 2:00:01 PM	60297
Surr: DNOP	0	70-130	S	%Rec	50	5/28/2021 2:00:01 PM	60297
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>CCM</b>
Gasoline Range Organics (GRO)	570	23		mg/Kg	5	5/27/2021 10:30:00 PM	60288
Surr: BFB	213	70-130	S	%Rec	5	5/27/2021 10:30:00 PM	60288
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	0.87	0.12		mg/Kg	5	5/27/2021 10:30:00 PM	60288
Toluene	0.38	0.23		mg/Kg	5	5/27/2021 10:30:00 PM	60288
Ethylbenzene	10	0.23		mg/Kg	5	5/27/2021 10:30:00 PM	60288
Xylenes, Total	9.2	0.47		mg/Kg	5	5/27/2021 10:30:00 PM	60288
Surr: 4-Bromofluorobenzene	143	70-130	S	%Rec	5	5/27/2021 10:30:00 PM	60288

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2105A89

02-Jun-21

**Client:** GHD  
**Project:** Jackson B 17 Wellhead

Sample ID: <b>MB-60357</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>60357</b>	RunNo: <b>78785</b>								
Prep Date: <b>6/1/2021</b>	Analysis Date: <b>6/1/2021</b>	SeqNo: <b>2762658</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-60357</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>60357</b>	RunNo: <b>78785</b>								
Prep Date: <b>6/1/2021</b>	Analysis Date: <b>6/1/2021</b>	SeqNo: <b>2762659</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	92.5	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 Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2105A89

02-Jun-21

**Client:** GHD  
**Project:** Jackson B 17 Wellhead

Sample ID: <b>MB-60287</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>60287</b>	RunNo: <b>77689</b>								
Prep Date: <b>5/26/2021</b>	Analysis Date: <b>5/27/2021</b>	SeqNo: <b>2758381</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		111	70	130			

Sample ID: <b>LCS-60287</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>60287</b>	RunNo: <b>77689</b>								
Prep Date: <b>5/26/2021</b>	Analysis Date: <b>5/27/2021</b>	SeqNo: <b>2758383</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	59	10	50.00	0	118	68.9	141			
Surr: DNOP	6.0		5.000		121	70	130			

Sample ID: <b>LCS-60304</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>60304</b>	RunNo: <b>77729</b>								
Prep Date: <b>5/27/2021</b>	Analysis Date: <b>5/28/2021</b>	SeqNo: <b>2759335</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.8		5.000		115	70	130			

Sample ID: <b>MB-60304</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>60304</b>	RunNo: <b>77729</b>								
Prep Date: <b>5/27/2021</b>	Analysis Date: <b>5/28/2021</b>	SeqNo: <b>2759336</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	13		10.00		127	70	130			

Sample ID: <b>2105A89-002AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>TP2-S</b>	Batch ID: <b>60297</b>	RunNo: <b>77729</b>								
Prep Date: <b>5/27/2021</b>	Analysis Date: <b>5/28/2021</b>	SeqNo: <b>2759627</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	8.4	41.91	0	104	15	184			
Surr: DNOP	4.3		4.191		103	70	130			

Sample ID: <b>LCS-60297</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>60297</b>	RunNo: <b>77729</b>								
Prep Date: <b>5/27/2021</b>	Analysis Date: <b>5/28/2021</b>	SeqNo: <b>2759631</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58	10	50.00	0	116	68.9	141			

**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 Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2105A89

02-Jun-21

**Client:** GHD  
**Project:** Jackson B 17 Wellhead

Sample ID: <b>LCS-60297</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>60297</b>	RunNo: <b>77729</b>								
Prep Date: <b>5/27/2021</b>	Analysis Date: <b>5/28/2021</b>	SeqNo: <b>2759631</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.4		5.000		109	70	130			

Sample ID: <b>MB-60297</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>60297</b>	RunNo: <b>77729</b>								
Prep Date: <b>5/27/2021</b>	Analysis Date: <b>5/28/2021</b>	SeqNo: <b>2759632</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		113	70	130			

Sample ID: <b>2105A89-002AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>TP2-S</b>	Batch ID: <b>60297</b>	RunNo: <b>77729</b>								
Prep Date: <b>5/27/2021</b>	Analysis Date: <b>5/28/2021</b>	SeqNo: <b>2760890</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	9.0	45.13	0	95.5	15	184	0.988	23.9	
Surr: DNOP	4.5		4.513		99.8	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 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 Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2105A89

02-Jun-21

**Client:** GHD  
**Project:** Jackson B 17 Wellhead

Sample ID: <b>mb-60281</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>60281</b>	RunNo: <b>77699</b>								
Prep Date: <b>5/26/2021</b>	Analysis Date: <b>5/27/2021</b>	SeqNo: <b>2758755</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	70	130			

Sample ID: <b>lcs-60281</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>60281</b>	RunNo: <b>77699</b>								
Prep Date: <b>5/26/2021</b>	Analysis Date: <b>5/27/2021</b>	SeqNo: <b>2758756</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	78.6	131			
Surr: BFB	1100		1000		112	70	130			

Sample ID: <b>LCS-60288</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>60288</b>	RunNo: <b>77731</b>								
Prep Date: <b>5/26/2021</b>	Analysis Date: <b>5/27/2021</b>	SeqNo: <b>2759007</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	5.0	25.00	0	88.8	78.6	131			
Surr: BFB	970		1000		96.5	70	130			

Sample ID: <b>MB-60288</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>60288</b>	RunNo: <b>77731</b>								
Prep Date: <b>5/26/2021</b>	Analysis Date: <b>5/27/2021</b>	SeqNo: <b>2759008</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	830		1000		83.2	70	130			

Sample ID: <b>2105A89-002ams</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>TP2-S</b>	Batch ID: <b>60288</b>	RunNo: <b>77731</b>								
Prep Date: <b>5/26/2021</b>	Analysis Date: <b>5/27/2021</b>	SeqNo: <b>2759010</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	4.9	24.37	0	101	61.3	114			
Surr: BFB	960		974.7		98.6	70	130			

Sample ID: <b>2105A89-002amsd</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>TP2-S</b>	Batch ID: <b>60288</b>	RunNo: <b>77731</b>								
Prep Date: <b>5/26/2021</b>	Analysis Date: <b>5/27/2021</b>	SeqNo: <b>2759011</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 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 Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2105A89

02-Jun-21

**Client:** GHD  
**Project:** Jackson B 17 Wellhead

Sample ID: <b>2105A89-002amsd</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>TP2-S</b>	Batch ID: <b>60288</b>	RunNo: <b>77731</b>								
Prep Date: <b>5/26/2021</b>	Analysis Date: <b>5/27/2021</b>	SeqNo: <b>2759011</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	4.9	24.58	0	98.3	61.3	114	2.09	20	
Surr: BFB	970		983.3		98.9	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 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 Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2105A89

02-Jun-21

**Client:** GHD  
**Project:** Jackson B 17 Wellhead

Sample ID: <b>mb-60281</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>60281</b>	RunNo: <b>77699</b>								
Prep Date: <b>5/26/2021</b>	Analysis Date: <b>5/27/2021</b>	SeqNo: <b>2758801</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	1.0		1.000		103	70	130			

Sample ID: <b>LCS-60281</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>60281</b>	RunNo: <b>77699</b>								
Prep Date: <b>5/26/2021</b>	Analysis Date: <b>5/27/2021</b>	SeqNo: <b>2758802</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	101	80	120			
Toluene	1.0	0.050	1.000	0	102	80	120			
Ethylbenzene	1.0	0.050	1.000	0	100	80	120			
Xylenes, Total	3.0	0.10	3.000	0	102	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		105	70	130			

Sample ID: <b>LCS-60288</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>60288</b>	RunNo: <b>77731</b>								
Prep Date: <b>5/26/2021</b>	Analysis Date: <b>5/27/2021</b>	SeqNo: <b>2759025</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	90.6	80	120			
Toluene	0.89	0.050	1.000	0	89.3	80	120			
Ethylbenzene	0.91	0.050	1.000	0	91.3	80	120			
Xylenes, Total	2.7	0.10	3.000	0	89.2	80	120			
Surr: 4-Bromofluorobenzene	0.84		1.000		83.8	70	130			

Sample ID: <b>MB-60288</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>60288</b>	RunNo: <b>77731</b>								
Prep Date: <b>5/26/2021</b>	Analysis Date: <b>5/27/2021</b>	SeqNo: <b>2759026</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	0.80		1.000		80.2	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 Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2105A89

02-Jun-21

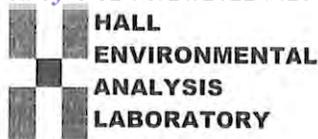
**Client:** GHD  
**Project:** Jackson B 17 Wellhead

Sample ID: <b>2105A89-003ams</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>TP2-2</b>	Batch ID: <b>60288</b>	RunNo: <b>77731</b>								
Prep Date: <b>5/26/2021</b>	Analysis Date: <b>5/27/2021</b>	SeqNo: <b>2759029</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.024	0.9634	0	98.0	76.3	120			
Toluene	0.93	0.048	0.9634	0	96.5	78.5	120			
Ethylbenzene	0.96	0.048	0.9634	0	100	78.1	124			
Xylenes, Total	2.8	0.096	2.890	0	97.4	79.3	125			
Surr: 4-Bromofluorobenzene	0.80		0.9634		83.4	70	130			

Sample ID: <b>2105A89-003amsd</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>TP2-2</b>	Batch ID: <b>60288</b>	RunNo: <b>77731</b>								
Prep Date: <b>5/26/2021</b>	Analysis Date: <b>5/27/2021</b>	SeqNo: <b>2759030</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	0.9911	0	95.6	76.3	120	0.425	20	
Toluene	0.94	0.050	0.9911	0	94.9	78.5	120	1.21	20	
Ethylbenzene	0.97	0.050	0.9911	0	97.6	78.1	124	0.466	20	
Xylenes, Total	2.8	0.099	2.973	0	95.3	79.3	125	0.671	20	
Surr: 4-Bromofluorobenzene	0.83		0.9911		83.6	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 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 Limit



Hall Environmental Analysis Laboratory  
 4901 Hawkins NE  
 Albuquerque, NM 87109  
 TEL: 505-345-3975 FAX: 505-345-4107  
 Website: clients.hallenvironmental.com

# Sample Log-In Check List

Client Name: **GHD** Work Order Number: **2105A89** RcptNo: **1**

Received By: **Juan Rojas** 5/26/2021 7:30:00 AM *Juan Rojas*  
 Completed By: **Cheyenne Cason** 5/26/2021 8:02:09 AM *Cason*  
 Reviewed By: **SPA 5-26-21**

**Chain of Custody**

1. Is Chain of Custody complete? Yes  No  Not Present   
 2. How was the sample delivered? Courier

**Log In**

3. Was an attempt made to cool the samples? Yes  No  NA   
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA   
 5. Sample(s) in proper container(s)? Yes  No   
 6. Sufficient sample volume for indicated test(s)? Yes  No   
 7. Are samples (except VOA and ONG) properly preserved? Yes  No   
 8. Was preservative added to bottles? Yes  No  NA   
 9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes  No  NA   
 10. Were any sample containers received broken? Yes  No   
 11. Does paperwork match bottle labels? 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.)

*IO*  
*5-26-21*  
 # of preserved bottles checked for pH: \_\_\_\_\_  
 (<2 or >12 unless noted)  
 Adjusted? \_\_\_\_\_  
 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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.4	Good				

### Chain-of-Custody Record

Client: GHD

Mailing Address:  
324 W. Main St Suite 108, Artesia, NM 87010  
 Phone #: (505) 377-4218  
 email or Fax#: Becky.Haskell@GHD.com  
 QA/QC Package: Chase - Settle @ zach.com  
 Standard Tom. Larson @ GHD.com  
 Accreditation:  Az Compliance  
 NELAC  Other  
 EDD (Type)

Turn-Around Time:  
 Standard  Rush 5 day  
 Project Name:  
Jackson B #17 Wellhead  
 Project #:  
11228313

Project Manager:  
Becky Haskell  
Tom Larson

Sampler: Zach Comino  
 On Ice:  Yes  No  
 # of Coolers: 1 30/5/20/21  
 Cooler Temp (including CF): 5.5-0.5-5.4°C

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
<u>05/20/21</u>	<u>1045</u>		<u>TP1-8</u>			<u>2105A89</u>
	<u>1100</u>		<u>TP2-5</u>			<u>001</u>
	<u>1105</u>		<u>TP2-2</u>			<u>002</u>
	<u>1110</u>		<u>TP3-5</u>			<u>003</u>
	<u>1115</u>		<u>TP3-2</u>			<u>004</u>
	<u>1120</u>		<u>TP4-5</u>			<u>005</u>
	<u>1125</u>		<u>TP4-2</u>			<u>006</u>
	<u>1130</u>		<u>TP5-5</u>			<u>007</u>
	<u>1135</u>		<u>TP5-2</u>			<u>008</u>
	<u>1045</u>		<u>TP1-20</u>			<u>009</u>
						<u>010</u>

Received by: Mumma Date: 5/25/21 Time: 0900  
 Relinquished by: Zach Comino / ZL  
 Received by: Mumma Date: 5/25/21 Time: 1900  
 Relinquished by: Mumma



**HALL ENVIRONMENTAL ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

#### Analysis Request

Analysis Request	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub>	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
<u>PH:8015D(GRO / DRO / MRO)</u>								<u>2105A89</u>
<u>ETEX / MTBE / TMB's (8021)</u>								<u>2105A89</u>
								<u>2105A89</u>

Remarks: Please email zach.comino@GHD.com along with others listed above

Direct bill to 506 Chase Settle



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

July 30, 2021

Tom Larson  
GHD Midland  
2135 S Loop 250 W  
Midland, TX 79703  
TEL: (432) 686-0086  
FAX

RE: Jackson B 17 Well Head

OrderNo.: 2107C47

Dear Tom Larson:

Hall Environmental Analysis Laboratory received 11 sample(s) on 7/24/2021 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 **2107C47**

Date Reported: **7/30/2021**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD Midland

**Client Sample ID:** TP1-25

**Project:** Jackson B 17 Well Head

**Collection Date:** 7/22/2021 8:20:00 AM

**Lab ID:** 2107C47-001

**Matrix:** SOIL

**Received Date:** 7/24/2021 7:48:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	430	60		mg/Kg	20	7/30/2021 3:06:05 AM	61662
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/27/2021 4:20:14 PM	61572
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/27/2021 4:20:14 PM	61572
Surr: DNOP	138	70-130	S	%Rec	1	7/27/2021 4:20:14 PM	61572
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/29/2021 5:48:47 AM	61570
Surr: BFB	106	70-130		%Rec	1	7/29/2021 5:48:47 AM	61570
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.024		mg/Kg	1	7/29/2021 5:48:47 AM	61570
Toluene	ND	0.048		mg/Kg	1	7/29/2021 5:48:47 AM	61570
Ethylbenzene	ND	0.048		mg/Kg	1	7/29/2021 5:48:47 AM	61570
Xylenes, Total	ND	0.097		mg/Kg	1	7/29/2021 5:48:47 AM	61570
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	7/29/2021 5:48:47 AM	61570

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order **2107C47**

Date Reported: **7/30/2021**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD Midland

**Client Sample ID:** TP1-30

**Project:** Jackson B 17 Well Head

**Collection Date:** 7/22/2021 8:40:00 AM

**Lab ID:** 2107C47-002

**Matrix:** SOIL

**Received Date:** 7/24/2021 7:48:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	380	59		mg/Kg	20	7/30/2021 3:43:19 AM	61662
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/27/2021 4:30:08 PM	61572
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/27/2021 4:30:08 PM	61572
Surr: DNOP	151	70-130	S	%Rec	1	7/27/2021 4:30:08 PM	61572
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/29/2021 6:12:13 AM	61570
Surr: BFB	106	70-130		%Rec	1	7/29/2021 6:12:13 AM	61570
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.024		mg/Kg	1	7/29/2021 6:12:13 AM	61570
Toluene	ND	0.048		mg/Kg	1	7/29/2021 6:12:13 AM	61570
Ethylbenzene	ND	0.048		mg/Kg	1	7/29/2021 6:12:13 AM	61570
Xylenes, Total	ND	0.097		mg/Kg	1	7/29/2021 6:12:13 AM	61570
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	7/29/2021 6:12:13 AM	61570

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order **2107C47**

Date Reported: **7/30/2021**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD Midland

**Client Sample ID:** TP1-35

**Project:** Jackson B 17 Well Head

**Collection Date:** 7/22/2021 8:50:00 AM

**Lab ID:** 2107C47-003

**Matrix:** SOIL

**Received Date:** 7/24/2021 7:48:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	598	59.6		mg/Kg	20	7/30/2021 3:55:44 AM	61662
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/27/2021 4:39:59 PM	61572
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/27/2021 4:39:59 PM	61572
Surr: DNOP	148	70-130	S	%Rec	1	7/27/2021 4:39:59 PM	61572
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/29/2021 6:35:48 AM	61570
Surr: BFB	106	70-130		%Rec	1	7/29/2021 6:35:48 AM	61570
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.025		mg/Kg	1	7/29/2021 6:35:48 AM	61570
Toluene	ND	0.050		mg/Kg	1	7/29/2021 6:35:48 AM	61570
Ethylbenzene	ND	0.050		mg/Kg	1	7/29/2021 6:35:48 AM	61570
Xylenes, Total	ND	0.099		mg/Kg	1	7/29/2021 6:35:48 AM	61570
Surr: 4-Bromofluorobenzene	99.3	70-130		%Rec	1	7/29/2021 6:35:48 AM	61570

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	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 Limit
	S	% Recovery outside of range due to dilution or matrix		

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2107C47

30-Jul-21

**Client:** GHD Midland  
**Project:** Jackson B 17 Well Head

Sample ID: <b>MB-61662</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>61662</b>	RunNo: <b>80187</b>								
Prep Date: <b>7/29/2021</b>	Analysis Date: <b>7/30/2021</b>	SeqNo: <b>2823381</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-61662</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>61662</b>	RunNo: <b>80187</b>								
Prep Date: <b>7/29/2021</b>	Analysis Date: <b>7/30/2021</b>	SeqNo: <b>2823382</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	96.6	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 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 Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2107C47

30-Jul-21

**Client:** GHD Midland  
**Project:** Jackson B 17 Well Head

Sample ID: <b>MB-61572</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>61572</b>	RunNo: <b>80098</b>								
Prep Date: <b>7/26/2021</b>	Analysis Date: <b>7/27/2021</b>	SeqNo: <b>2820635</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	12		10.00		123	70	130			

Sample ID: <b>LCS-61572</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>61572</b>	RunNo: <b>80098</b>								
Prep Date: <b>7/26/2021</b>	Analysis Date: <b>7/27/2021</b>	SeqNo: <b>2820636</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	106	68.9	141			
Surr: DNOP	4.9		5.000		97.3	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 Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2107C47

30-Jul-21

**Client:** GHD Midland  
**Project:** Jackson B 17 Well Head

Sample ID: <b>ics-61570</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>61570</b>	RunNo: <b>80156</b>								
Prep Date: <b>7/26/2021</b>	Analysis Date: <b>7/28/2021</b>	SeqNo: <b>2822398</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	78.6	131			
Surr: BFB	1200		1000		120	70	130			

Sample ID: <b>mb-61570</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>61570</b>	RunNo: <b>80156</b>								
Prep Date: <b>7/26/2021</b>	Analysis Date: <b>7/29/2021</b>	SeqNo: <b>2822400</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		106	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 Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2107C47

30-Jul-21

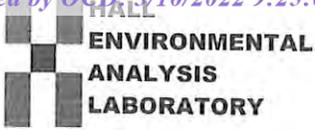
**Client:** GHD Midland  
**Project:** Jackson B 17 Well Head

Sample ID: <b>LCS-61570</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>61570</b>	RunNo: <b>80156</b>								
Prep Date: <b>7/26/2021</b>	Analysis Date: <b>7/28/2021</b>	SeqNo: <b>2822450</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	88.8	80	120			
Toluene	0.91	0.050	1.000	0	91.1	80	120			
Ethylbenzene	0.91	0.050	1.000	0	91.0	80	120			
Xylenes, Total	2.8	0.10	3.000	0	91.7	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	70	130			

Sample ID: <b>mb-61570</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>61570</b>	RunNo: <b>80156</b>								
Prep Date: <b>7/26/2021</b>	Analysis Date: <b>7/29/2021</b>	SeqNo: <b>2822452</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	1.0		1.000		101	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 Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: GHD Midland

Work Order Number: 2107C47

RcptNo: 1

Received By: Cheyenne Cason 7/24/2021 7:48:00 AM

Handwritten signature

Completed By: Cheyenne Cason 7/24/2021 8:04:30 AM

Handwritten signature

Reviewed By: SPA 7.24.21

Chain of Custody

- 1. Is Chain of Custody complete? Yes [checked] No [ ] Not Present [ ]
2. How was the sample delivered? Courier

Log In

- 3. Was an attempt made to cool the samples? Yes [checked] No [ ] NA [ ]
4. Were all samples received at a temperature of >0° C to 6.0°C Yes [checked] No [ ] NA [ ]
5. Sample(s) in proper container(s)? Yes [checked] No [ ]
6. Sufficient sample volume for indicated test(s)? Yes [checked] No [ ]
7. Are samples (except VOA and ONG) properly preserved? Yes [checked] No [ ]
8. Was preservative added to bottles? Yes [ ] No [checked] NA [ ]
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes [ ] No [ ] NA [checked]
10. Were any sample containers received broken? Yes [ ] No [checked]
11. Does paperwork match bottle labels? Yes [checked] No [ ]
12. Are matrices correctly identified on Chain of Custody? Yes [checked] No [ ]
13. Is it clear what analyses were requested? Yes [checked] No [ ]
14. Were all holding times able to be met? Yes [checked] No [ ]

# of preserved bottles checked for pH: (<2 or >12 unless noted) Adjusted?

Checked by: CCC 7/24/21

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [ ] No [ ] NA [checked]

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_
By Whom: \_\_\_\_\_ Via: [ ] eMail [ ] Phone [ ] Fax [ ] In Person
Regarding: \_\_\_\_\_
Client Instructions: \_\_\_\_\_

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 2.4, Good, [ ], [ ], [ ]



**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 89134

**CONDITIONS**

Operator: EOG RESOURCES INC P.O. Box 2267 Midland, TX 79702	OGRID: 7377
	Action Number: 89134
	Action Type: [C-103] NOI General Sundry (C-103X)

**CONDITIONS**

Created By	Condition	Condition Date
dmcclosure	ACCEPTED FOR RECORD	12/22/2023