

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

Notice of Intent

Sundry ID: 2645983

Type of Submission: Notice of Intent

Date Sundry Submitted: 11/29/2021

Date proposed operation will begin: 05/02/2022

Type of Action: Reclamation

Time Sundry Submitted: 12:17

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

<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

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.

<b>Operator Electronic Signature:</b> TINA HUERTA	<b>Signed on:</b> NOV 29, 2021 12:17 PM
<b>Name:</b> EOG RESOURCES INCORPORATED	
<b>Title:</b> Regulatory Specialist	
<b>Street Address:</b> 104 SOUTH FOURTH STREET	
<b>City:</b> Artesia	<b>State:</b> NM
<b>Phone:</b> (575) 748-4168	
<b>Email address:</b> tina_huerta@eogresources.com	

Field Representative

<b>Representative Name:</b>		
<b>Street Address:</b>		
<b>City:</b>	<b>State:</b>	<b>Zip:</b>
<b>Phone:</b>		
<b>Email address:</b>		

BLM Point of Contact

<b>BLM POC Name:</b> JAMES A AMOS	<b>BLM POC Title:</b> Acting Assistant Field Manager
<b>BLM POC Phone:</b> 5752345927	<b>BLM POC Email Address:</b> jamos@blm.gov
<b>Disposition:</b> Approved	<b>Disposition Date:</b> 03/09/2022
<b>Signature:</b> 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.

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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: _____



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## Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>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

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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

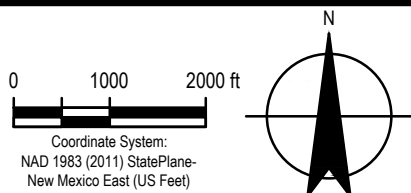
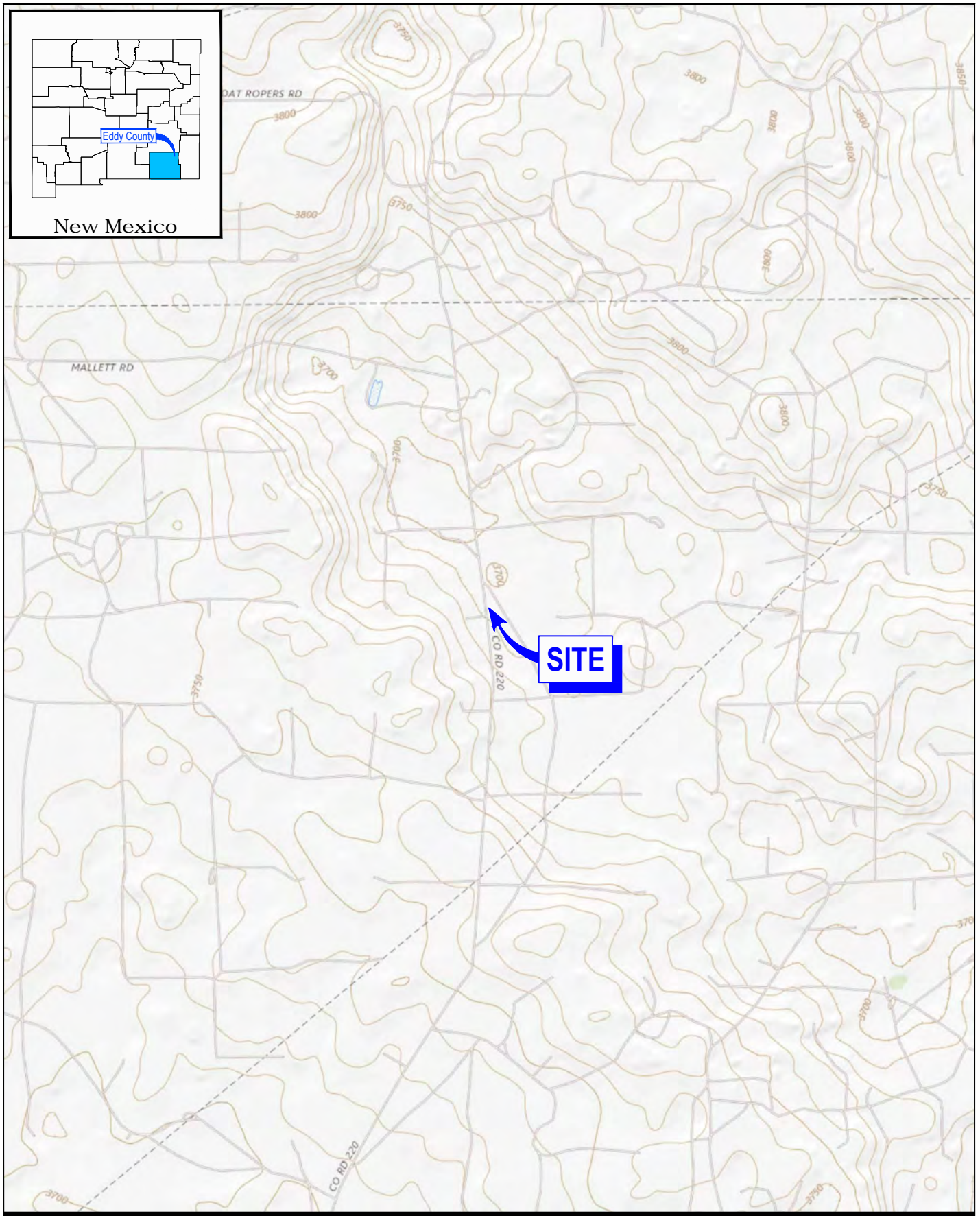
BH/tl/1

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

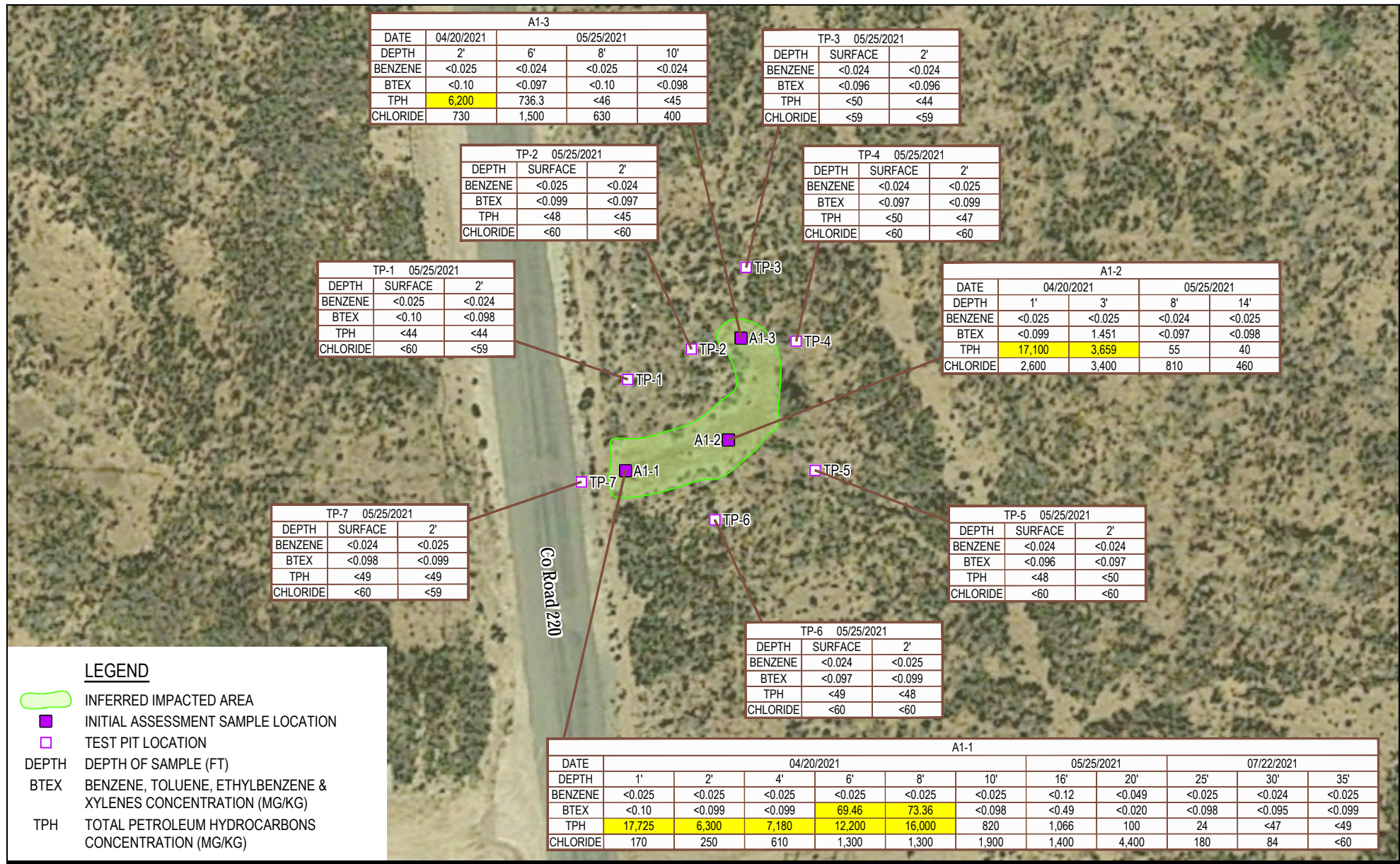
SITE LOCATION MAP

FIGURE 1

Filename: \\ghdnet\ghd\USMidland\Projects\562\11228312\Digital\_Design\ACAD\Figures\RPT001\11228312-GHD-0000-RPT-EN-0101\_DL-001.dwg

Data Source: USGS 7.5 Minute Quad "Loco Hills and Henshaw Tank, New Mexico"  
Lat/Long: 32.858298° North, 103.926368° West





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

**EOG RESOURCES**  
 EDDY COUNTY, NEW MEXICO  
 JACKSON B #17 FLOWLINE AREA #1  
  
**SITE ASSESSMENT:**  
**SOIL ANALYTICAL RESULTS MAP**

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

**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
								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			
Initial Assessment Samples												
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	Toluene	Ethylbenzene	Xylenes	BTEX	TPH				Chloride	
								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
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 exceed 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)	<u>None</u> Slight Mod. Strong	
	<input type="checkbox"/>	30-40'				Red/brown fine Sand (SP) with varying amounts of silt and caliche	<u>None</u> Slight Mod. Strong	
	<input type="checkbox"/>	40-80'				Dry, dark red/brown sandy Silts (SM)	<u>None</u> Slight Mod. Strong	
	<input type="checkbox"/>	80-125'				Red/brown fine Sand (SP)	<u>None</u> 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

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"/>						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	
	<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	






**Notes:**

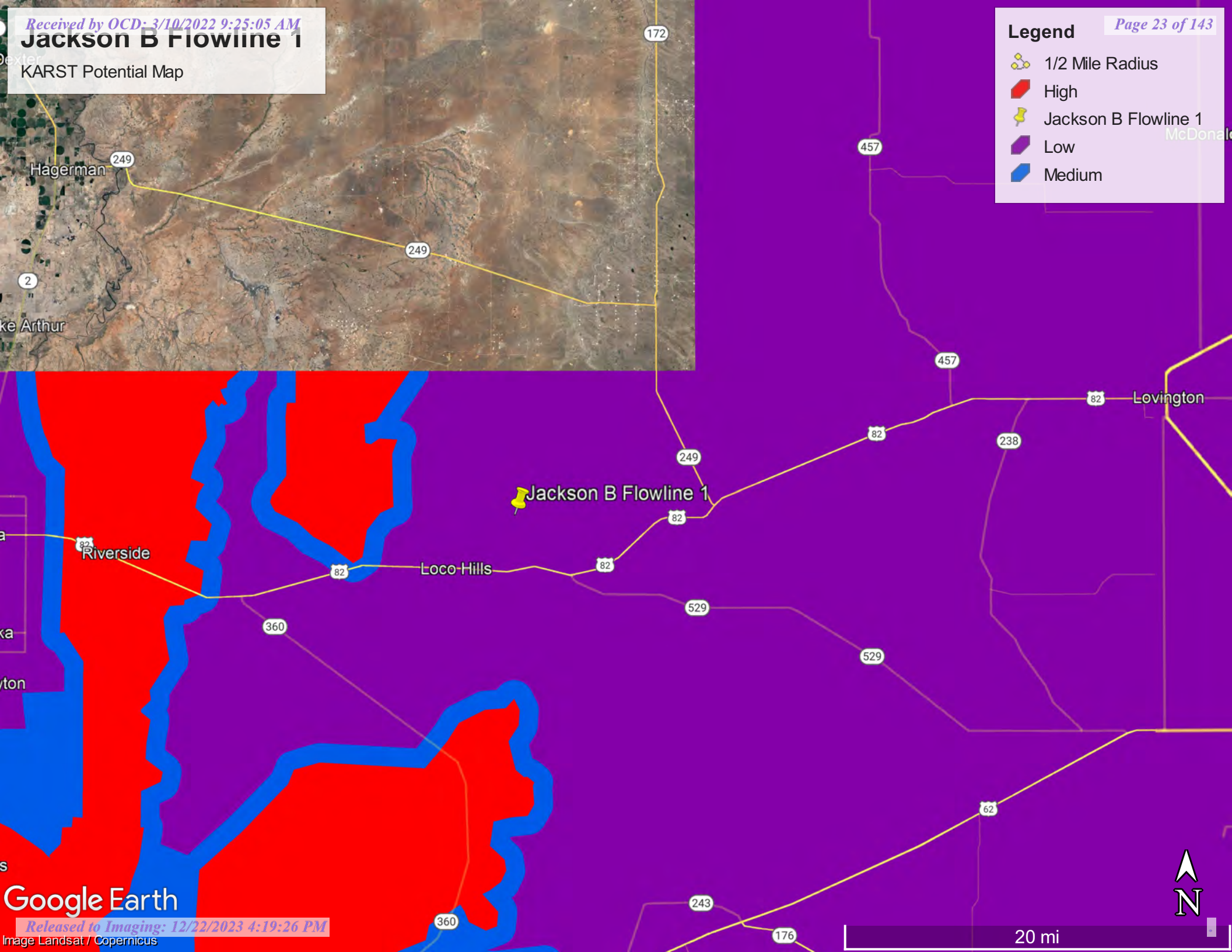
The borehole was advanced to 125' below ground surface (bgs). A 2-inch diameter temporary well constructed of schedule 40 PVC thread coupled to 10-feet of machine slotted well screen was installed in the open borehole. 72-hours after installation, a Solinst water level meter was utilized to determine the presence or absence of groundwater. The temporary well casing was subsequently removed and the bore hole backfilled with hole plug (bentonite chips) and hydrated.

# 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

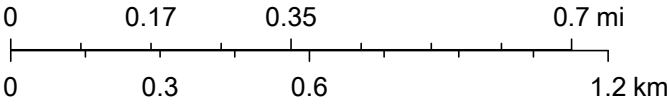
OSE District Boundary

New Mexico State Trust Lands

Both Estates

SiteBoundaries

1:18,056




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





# Jackson B Flowline 1

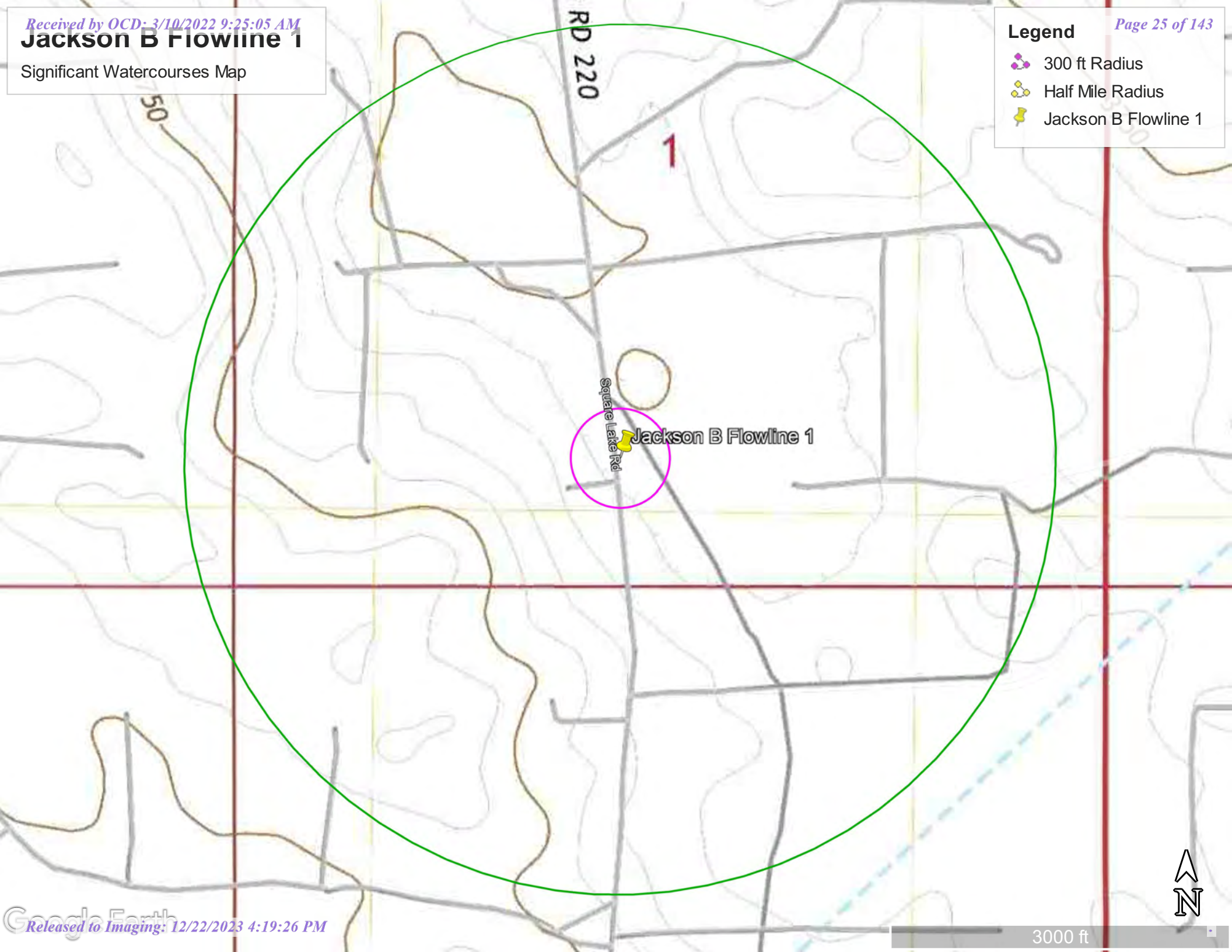
Significant Watercourses Map

Legend

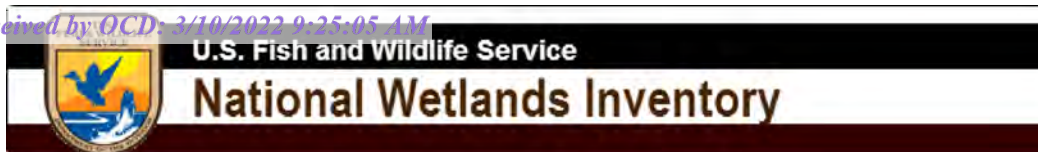
 300 ft Radius

 Half Mile Radius

 Jackson B Flowline 1







## EOG Jackson #17 Flowline Area #1



August 26, 2021

**Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

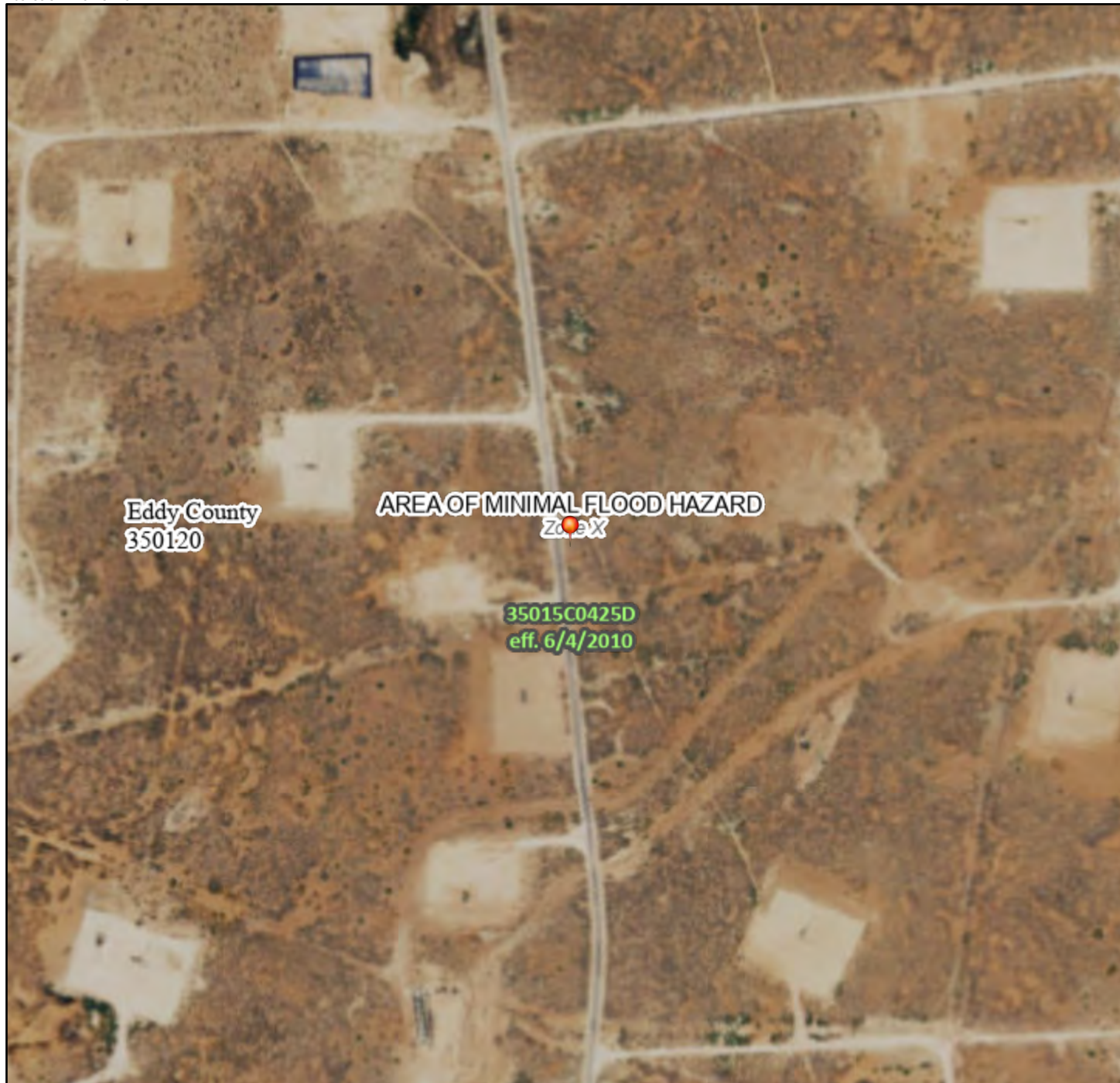
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



# National Flood Hazard Layer 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		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



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

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 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)

Page 1 of 1

PROJECT NAME: EOG/Jackson B #17 Flowline Area #1

HOLE DESIGNATION: A1-1

PROJECT NUMBER: 11228312

DATE COMPLETED: 22 July 2021

CLIENT: EOG Resources. INC.

DRILLING METHOD: Air Rotary

LOCATION: M-1-17S-30E; 32.858274, -103.926467

FIELD PERSONNEL: Lee M./Zach C.

File: \\GHDNET\GHD\USMIDLAND\PROJECTS\562112\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 over a light blue horizontal line.

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		

Page 1 of 13

## 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		

Page 2 of 13

## 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		

Page 3 of 13

## 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		

Page 4 of 13

## 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		

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## 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		

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## 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		

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## 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

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**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

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**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

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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

*CC*

Completed By: Desiree Dominguez

4/22/2021 8:13:30 AM

*DD*

Reviewed By: JR 4/22/21

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace  $<1/4$ " for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved  
bottles checked  
for pH:

( $<2$  or  $>12$  unless noted)

Adjusted? \_\_\_\_\_

Checked by: \_\_\_\_\_

### Special Handling (if applicable)

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

Person Notified: \_\_\_\_\_

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

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

16. Additional remarks:

### 17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.7	Good				





Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: 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 light blue horizontal line.

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

Lab Order: 2105B47

Project: Jackson B 17 Flowline 1

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

Lab Order: 2105B47

Project: Jackson B 17 Flowline 1

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

Lab Order: 2105B47

Project: Jackson B 17 Flowline 1

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

Lab Order: 2105B47

Project: Jackson B 17 Flowline 1

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

Lab Order: 2105B47

Project: Jackson B 17 Flowline 1

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

Lab Order: 2105B47

Project: Jackson B 17 Flowline 1

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

Lab Order: 2105B47

Project: Jackson B 17 Flowline 1

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

Lab Order: 2105B47

Project: Jackson B 17 Flowline 1

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

Lab Order: 2105B47

Project: Jackson B 17 Flowline 1

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

Lab Order: 2105B47

Project: Jackson B 17 Flowline 1

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

Lab Order: 2105B47

Project: Jackson B 17 Flowline 1

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

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**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

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QC SUMMARY REPORT  
Hall Environmental Analysis Laboratory, Inc.

WO#: 2105B47  
10-Jun-21

Client: GHD  
Project: Jackson B 17 Flowline 1

Sample ID: MB-60318	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 60318	RunNo: 78780								
Prep Date: 5/28/2021	Analysis Date: 6/1/2021	SeqNo: 2762510	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		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>lcs-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>lcs-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>lcs-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>lcs-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

Page 27 of 28

QC SUMMARY REPORT  
Hall Environmental Analysis Laboratory, Inc.

WO#: 2105B47  
10-Jun-21

Client: GHD  
Project: Jackson B 17 Flowline 1

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

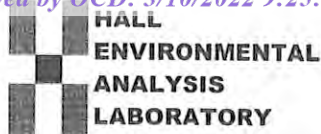
Analyte detected in the associated Method Blank
- E

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

*Juan Rojas*

Completed By: Cheyenne Cason

5/27/2021 8:35:30 AM

*Cheyenne Cason*

Reviewed By:

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace  $<1/4"$  for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved  
bottles checked  
for pH:

(&lt;2 or &gt;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 ☒

Person Notified:

Date:

By Whom:

Via:

☐ eMail☐ Phone☐ Fax☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.4	Good				
2	0.7	Good				



## Chain-of-Custody Record

Client:

GHD

Mailing Address:

324 W Main St Suite 108 Albuquerque, NM 87102

Phone #: (505) 377-4218

email or Fax#: Becky.Haskell@GHD.com

QA/QC Package: Chase Sittle @ cgsources.com

Tom Larson @ GHD.com

☐ Standard
 ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP
 ☐ Other

☐ EDD (Type)

Turn-Around Time:

☒ Standard
 ☐ Rush

Project Name:

Jackson B #17 Flowline #1

Project #:

11225312

Project Manager:

Tom Larson

Becky Haskell

Sampler:

Zach Canino

On Ice:

☒ Yes
 ☐ No

Sample Temperature:

0.9-0.7-0.4

Container Type and #

Jar

Preservative Type

HEAL No. 2105B347

HEAL No.

2105B347

Date

0925

Date

0925

Time

0935

Time

1000

Time

1010

Time

1020

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1105

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Date

0925

Date

0925

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0935

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1000

Time

1010

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1025

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Time

1050

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Time

1110

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1010

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Date







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		

Page 1 of 7

## 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		

Page 2 of 7

## 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

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**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

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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 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

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**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			

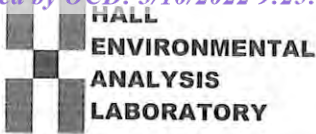
Sample ID: <b>mb-61570</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>PBS</b>	Batch ID: <b>61570</b>			RunNo: <b>80156</b>						
Prep Date: <b>7/26/2021</b>	Analysis Date: <b>7/29/2021</b>			SeqNo: <b>2822452</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	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

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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

Cason

Cason

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace  $<1/4"$  for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved  
bottles checked  
for pH:

(&lt;2 or &gt;12 unless noted)

Adjusted?

Checked by: Cason 7/24/21

Special Handling (if applicable)

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

Person Notified: \_\_\_\_\_

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

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.4	Good				





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.

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 SettleTitle: Rep Safety & Environmental SrSignature: Date: 08/31/2021email: Chase\_Settle@eogresources.comTelephone: 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

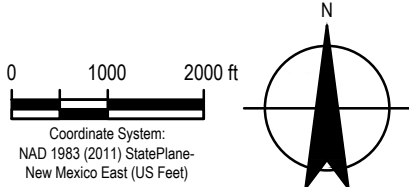
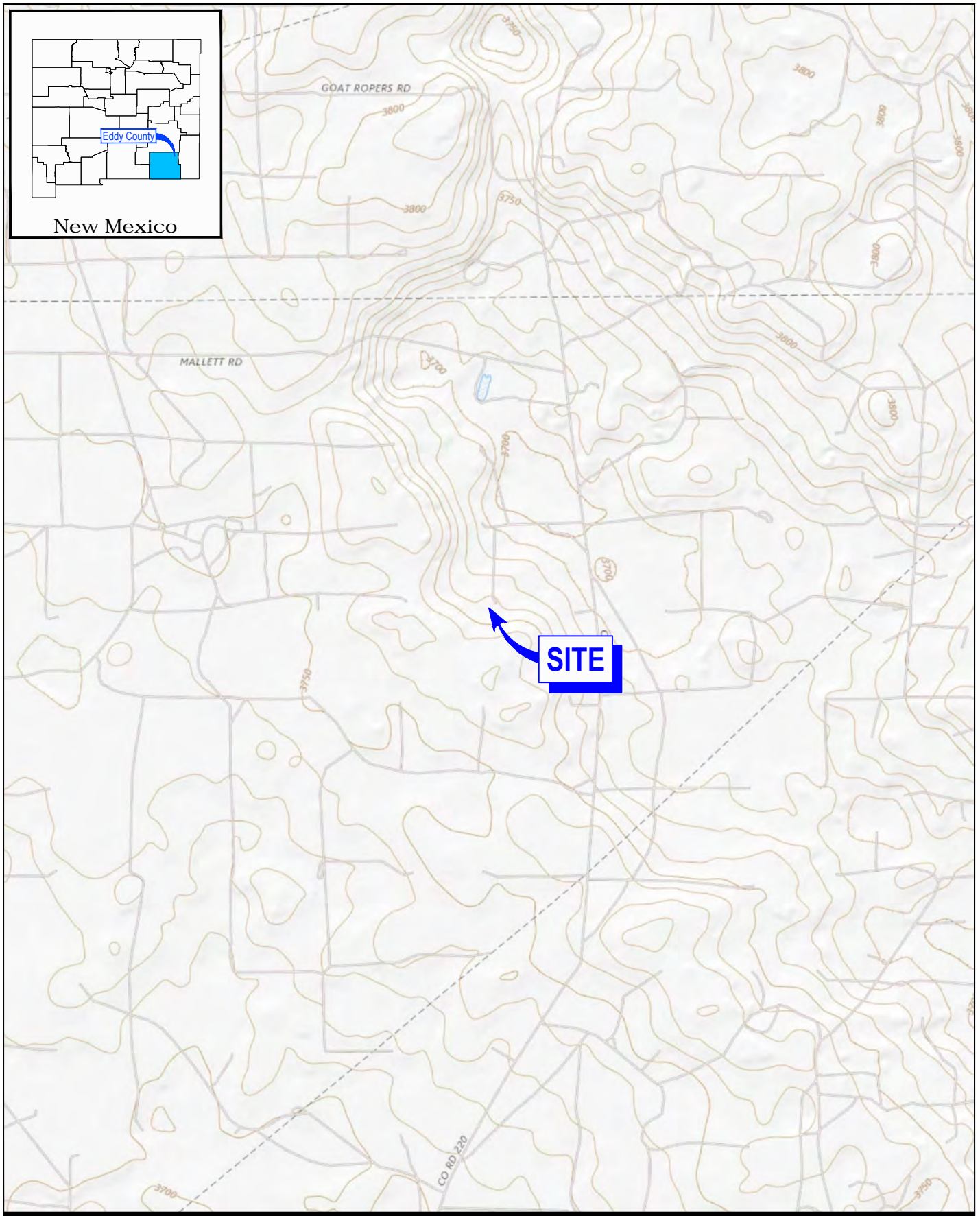
BH/tl/1

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



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

Project No. 11228313  
Date August 2021

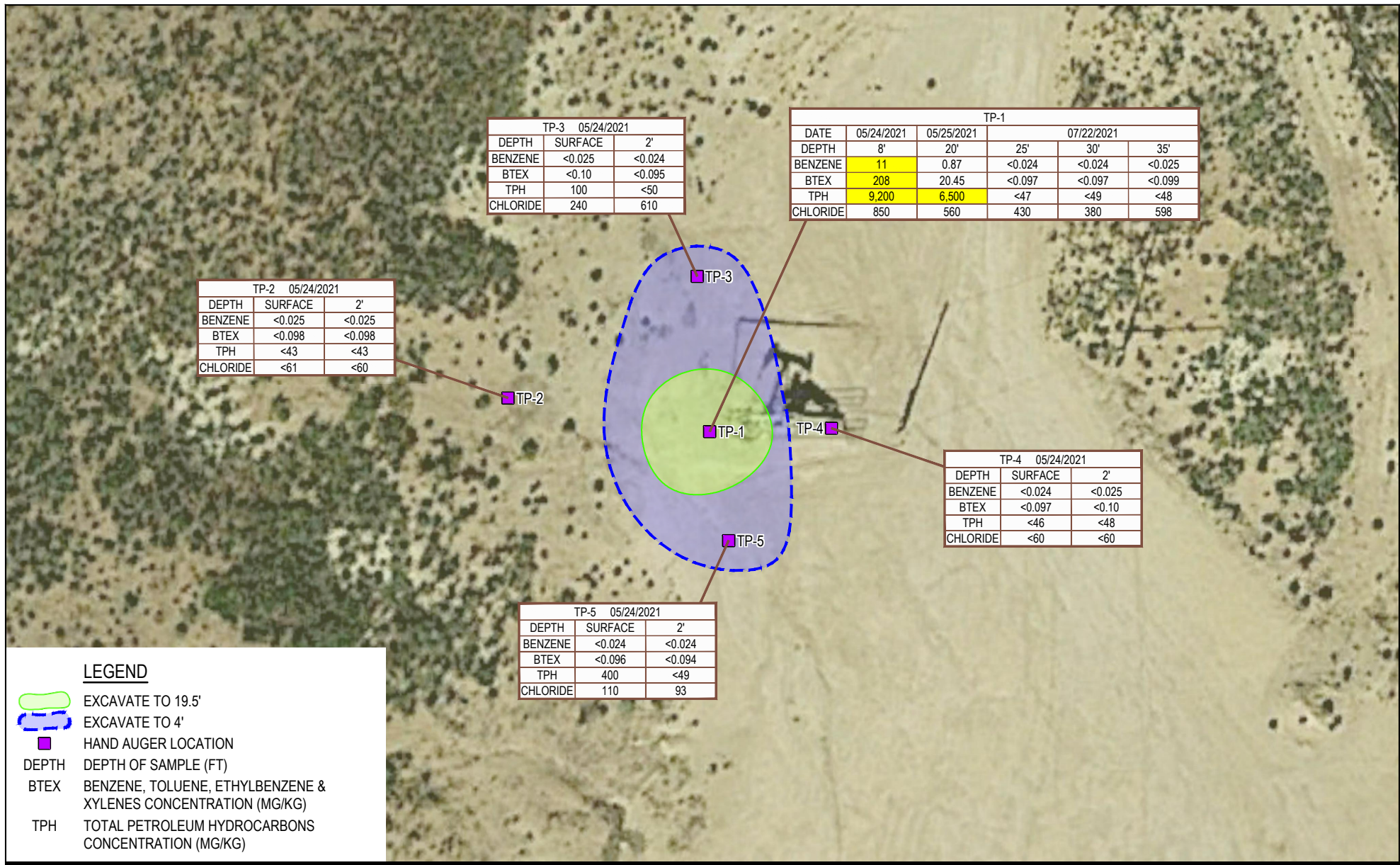
SITE LOCATION MAP

FIGURE 1

Filename: \\ghdnet\ghd\USMidland\Project\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





**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)
			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	11	58	63	76	208	1,600	3,200	4,400	9,200	850
TP1-20	5/25/21	20	0.87	0.38	10	9.2	20.45	570	3,500	2,500	6,500	560
TP1-25	7/22/21	25	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<9.4	<47	<47	430
TP1-30	7/22/21	30	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<9.8	<49	<49	380
TP1-35	7/22/21	35	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<9.7	<48	<48	598
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	100	100	240
TP3-2	5/24/21	2	<0.024	<0.048	<0.048	<0.095	<0.095	<4.8	<10	<50	<50	610
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	170	230	400	110
TP5-2	5/24/21	2	<0.024	<0.047	<0.047	<0.094	<0.094	<4.7	<9.7	<49	<49	93

- 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 NMOC 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

Jackson B #33

Jackson B #17 Well Head

Jackson B #17 Flowline Area #1

Temporary Well




1000 ft




# 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)	<u>None</u> Slight Mod. Strong	
	<input type="checkbox"/>	30-40'				Red/brown fine Sand (SP) with varying amounts of silt and caliche	<u>None</u> Slight Mod. Strong	
	<input type="checkbox"/>	40-80'				Dry, dark red/brown sandy Silts (SM)	<u>None</u> Slight Mod. Strong	
	<input type="checkbox"/>	80-125'				Red/brown fine Sand (SP)	<u>None</u> 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

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"/>						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	
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	<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	

**Notes:**





The borehole was advanced to 125' below ground surface (bgs). A 2-inch diameter temporary well constructed of schedule 40 PVC thread coupled to 10-feet of machine slotted well screen was installed in the open borehole. 72-hours after installation, a Solinst water level meter was utilized to determine the presence or absence of groundwater. The temporary well casing was subsequently removed and the bore hole backfilled with hole plug (bentonite chips) and hydrated.




# EOG Jackson B #17 Wellhead

Karst Potential Map

## Legend

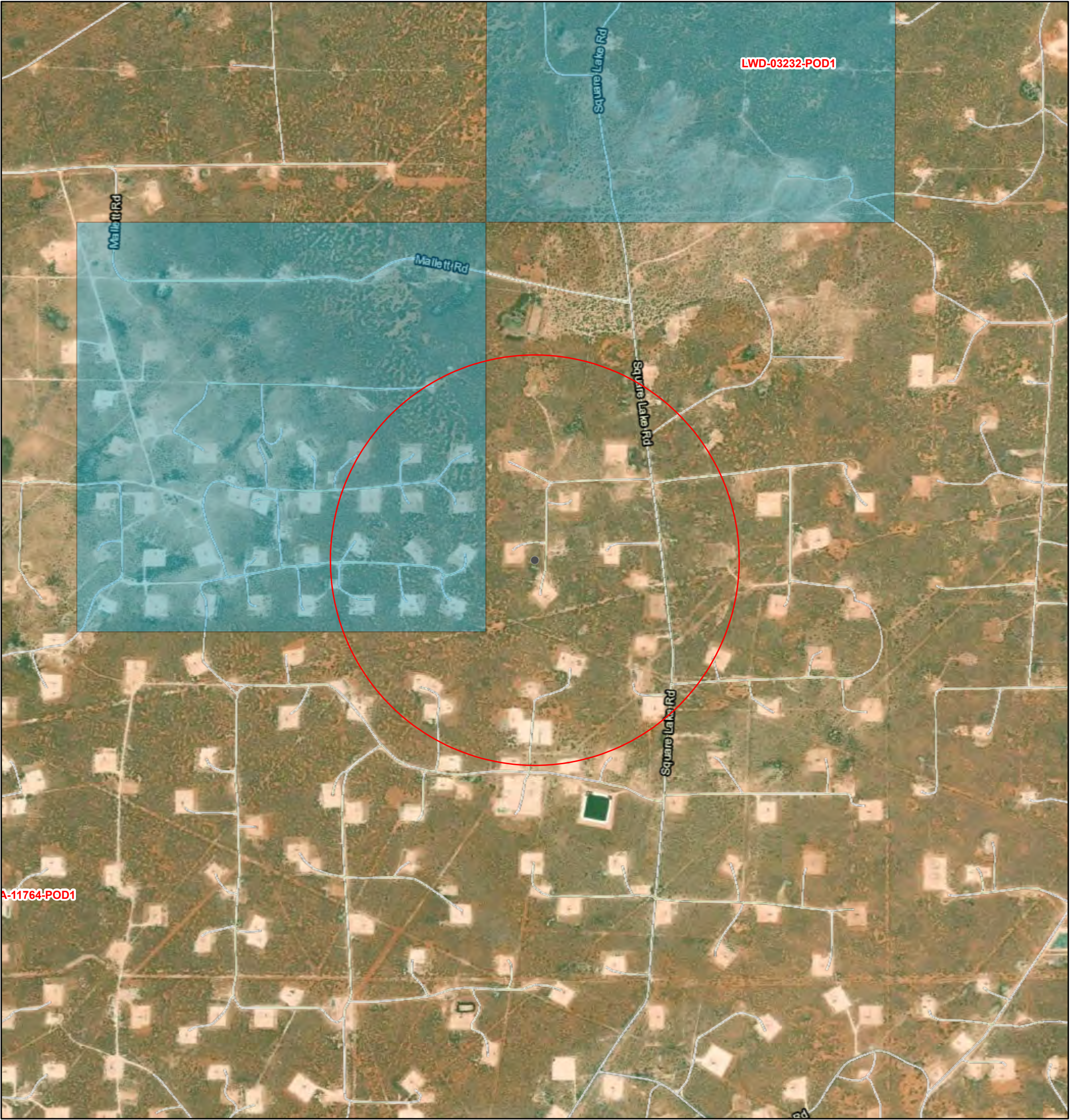
-  EOG Jackson B #17 Wellhead
-  High
-  Low
-  Medium

 EOG Jackson B #17 Wellhead






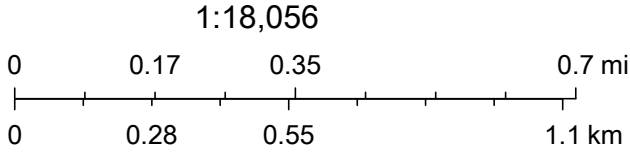


OSE PUBLIC PRINT



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

-  OSE District Boundary
- New Mexico State Trust Lands
-  Both Estates
-  SiteBoundaries





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




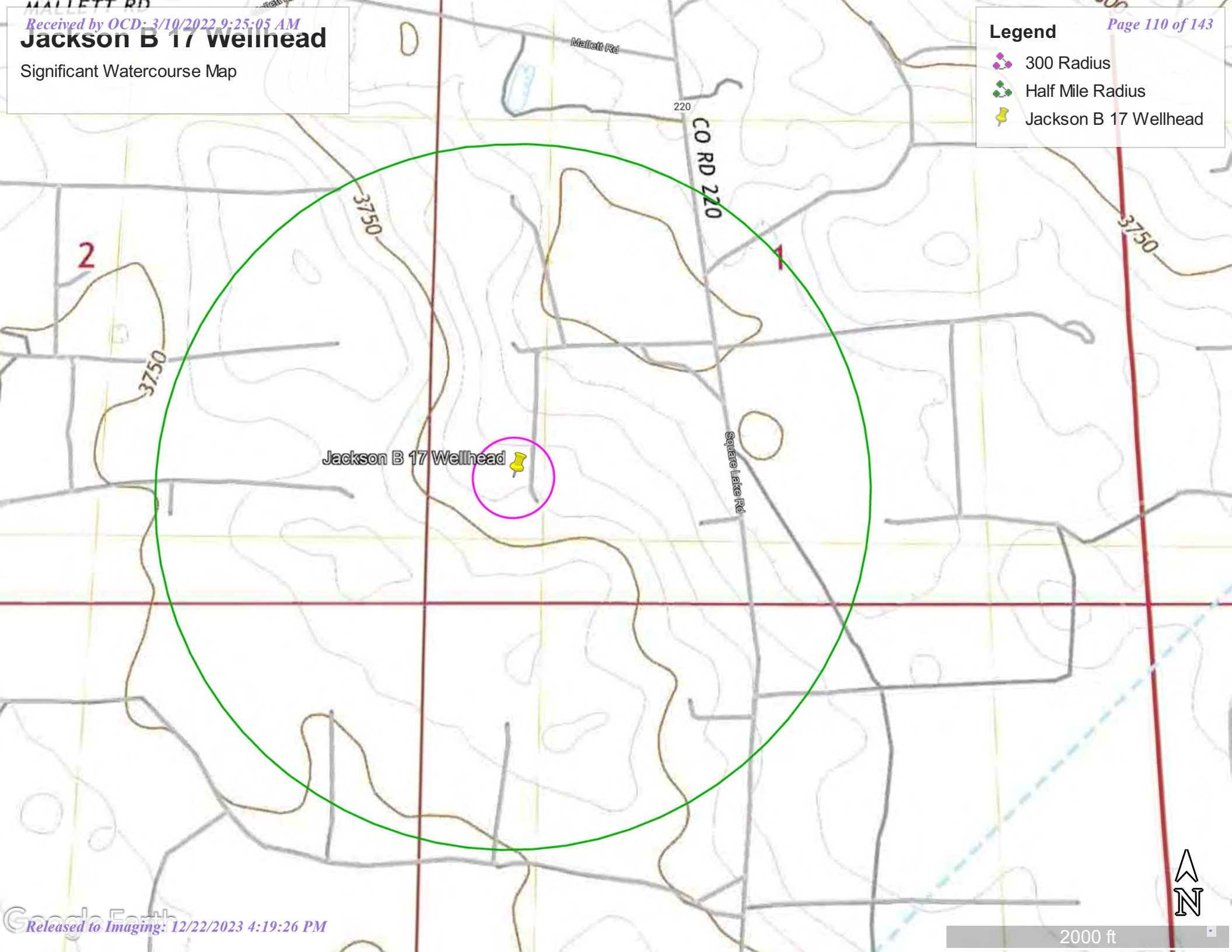
Significant Watercourse Map

Legend

 300 Radius

 Half Mile Radius

 Jackson B 17 Wellhead



  
N

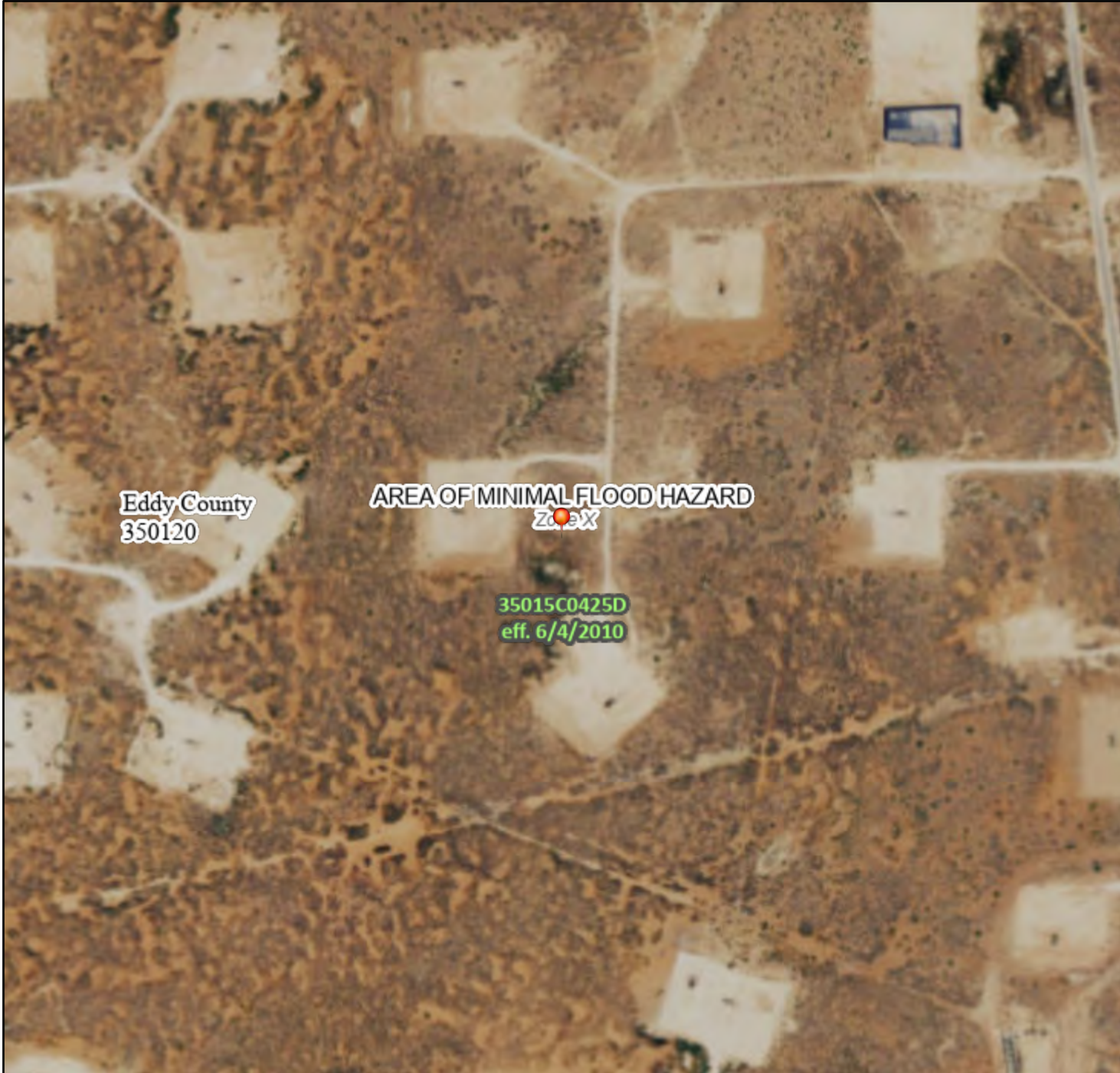
 2000 ft



# 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
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
OTHER FEATURES		17.5 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

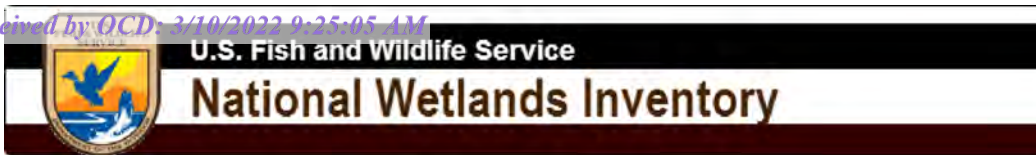
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

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

## Attachment B Soil Boring Log



# TEST PIT STRATIGRAPHIC LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: EOG/Jackson B #17 Wellhead PROJECT

HOLE DESIGNATION: TP-#1

NUMBER: 11228313

DATE COMPLETED: 22 July 2021

CLIENT: EOG Resources, INC.

TEST PIT METHOD: Air Rotary

LOCATION: M-01-17S-30E, Eddy Co. NM 32.85807 -103.93198

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: 28/7/21

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH m BGS	SAMPLE				
			NUMBER	INTERVAL	REC (%)	mS/cm	NaCl
5	Start strat log @ 20ft						
10							
15							
20							
20	SAND, fine/medium, red and brown, dry	20.00					
22.5	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  - slightly moist at 32.50ft BGS	25.00	25-30'			1120	
30			30-35'			960	
35							
37.5	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](http://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 light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

## 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:** 2105A89-001

**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.

**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

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## 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			

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## Analytical Report

Lab Order: 2105A89

Date Reported: 6/2/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Lab Order: 2105A89

Project: Jackson B 17 Wellhead

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			

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## 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.

**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

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## Analytical Report

Lab Order: 2105A89

Date Reported: 6/2/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Lab Order: 2105A89

Project: Jackson B 17 Wellhead

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		

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## 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

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**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

Page 9 of 14

**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: 2105A89-002amsd		SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range						
Client ID: TP2-S		Batch ID: 60288		RunNo: 77731						
Prep Date: 5/26/2021		Analysis Date: 5/27/2021		SeqNo: 2759011		Units: mg/Kg				
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

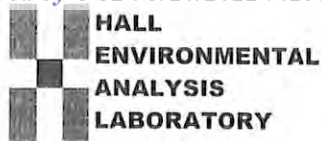
Sample ID: <b>2105A89-003ams</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>TP2-2</b>	Batch ID: <b>60288</b>	RunNo: <b>77731</b>								
Prep Date: <b>5/26/2021</b>	Analysis Date: <b>5/27/2021</b>	SeqNo: <b>2759029</b>	Units: <b>mg/Kg</b>							
Analyte	Result	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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace  $<1/4"$  for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved  
bottles checked  
for pH:

( $<2$  or  $>12$  unless noted)

Adjusted?

Checked by:

IO

S-26-21

Special Handling (if applicable)

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

Person Notified:

Date:

By Whom:

Via:

☐ eMail☐ Phone☐ Fax☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.4	Good				



## Chain-of-Custody Record

Client:

GHD

Mailing Address:

324 W. Main St Suite 108, Alameda, NM 88001

Phone #: (505) 377-4218

email or Fax#: Beck, Huskell@GHD.com

QA/QC Package: Check - Settle @ pressurized.com

Tom. Larson @ GHD.com

□ Standard

□ Accreditation: □ Az Compliance

□ NELAC □ Other

□ EDD (Type)

Turn-Around Time:

Standard

□ Rush

Project Name:

Jackson B #17 Wellhead

Project #:

11228313

Project Manager:

Becky Huskell

Tom Larson

Sampler: Zach Comino

On Ice:

□ Yes

□ No

# of Coolers: 1

Cooler Temp (including CF): 5.5-0.5-5.4°C

Container

Type and #

Preservative

Type

HEAL No.

2105A89

001

002

003

004

005

006

007

008

009

010

Relinquished by:

Zach Comino / 3/10/22

Time:

0900

Date:

3/10/22

Received by:

Mumma

Date

5/25/21

Time

0900

Date

5/25/21

Via:

Mumma

Received by:

Mumma

Date

5/25/21

Time

0900

Date

5/25/21

Via:

Mumma

Received by:

Mumma

Date

5/25/21

Time

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Date

5/25/21

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5/25/21



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		

Page 1 of 7

## 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		

Page 2 of 7



## 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: MB-61662	SampType: MBLK	TestCode: EPA Method 300.0: Anions
Client ID: PBS	Batch ID: 61662	RunNo: 80187
Prep Date: 7/29/2021	Analysis Date: 7/30/2021	SeqNo: 2823381 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	ND	1.5

Sample ID: LCS-61662	SampType: LCS	TestCode: EPA Method 300.0: Anions
Client ID: LCSS	Batch ID: 61662	RunNo: 80187
Prep Date: 7/29/2021	Analysis Date: 7/30/2021	SeqNo: 2823382 Units: mg/Kg
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: lcs-61570	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 61570	RunNo: 80156								
Prep Date: 7/26/2021	Analysis Date: 7/28/2021	SeqNo: 2822398		Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	101	78.6	131			
Surr: BFB	1200		1000		120	70	130			

Sample ID: mb-61570	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 61570	RunNo: 80156								
Prep Date: 7/26/2021	Analysis Date: 7/29/2021	SeqNo: 2822400		Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	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

Page 6 of 7



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

WO#: 2107C47

30-Jul-21

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

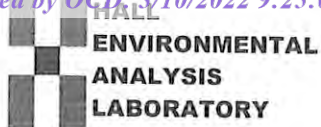
Sample ID: <b>LCS-61570</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>61570</b>			RunNo: <b>80156</b>						
Prep Date: <b>7/26/2021</b>	Analysis Date: <b>7/28/2021</b>			SeqNo: <b>2822450</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	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

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

Reviewed By: SPA 7.24.21

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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐  
5. Sample(s) in proper container(s)? Yes ☒ No ☐  
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐  
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐  
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐  
9. Received at least 1 vial with headspace  $<1/4"$  for AQ VOA? Yes ☐ No ☐ NA ☒  
10. Were any sample containers received broken? Yes ☐ No ☒  
11. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐  
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐  
13. Is it clear what analyses were requested? Yes ☒ No ☐  
14. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved  
bottles checked  
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by: CCC 7/24/21

Special Handling (if applicable)

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

Person Notified: \_\_\_\_\_

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

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	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

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

Jackson B #17 Wellhead

Project #:

1228313

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 #

Jan

Preservative Type

HEAL No. 2107047

Date Time Matrix Sample Name

072321 0830 S TPI-25

0840 TPI-30

0850 TPI-35

0900 TPI-40

0920 TPI-45

0940 TPI-50

1000 TPI-55

1010 TPI-60

1050 TPI-65

1100 TPI-70

105 TPI-75

Date Time Relinquished by:

072321 0830 Zach Comino

Date Time Relinquished by:

072321 0800 Zach Comino

Received by:

Via:

Date Time

7/23/21 800

Received by:

Via:

Date Time

7/24/21 0748

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  
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
dmcclure	ACCEPTED FOR RECORD	12/22/2023