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	nAPP2116941928
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)* nAPP2116941928
Contact mailing address 104 S. 4th Street, Artesia, NM 88210	

Location of Release Source

Latitude 32.64837 Longitude -104.54375
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Roden GD Federal #3	Site Type Battery
Date Release Discovered 06/15/2021	API# *(if applicable)* 30-015-26096

Unit Letter	Section	Township	Range	County
F	24	19S	24E	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)

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

Cause of Release: Historical impacts were discovered during the P&A of the battery. The steel oil tank and fiberglass tank both had corrosion damage that allowed the release of crude oil. Release volume and date are unknown.

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2116941928
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☑ No	If YES, for what reason(s) does the responsible party consider this a major release?
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

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

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

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

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

Printed Name: Chase Settle
Title: Rep Safety & Environmental Sr
Signature: Chase Settle
Date: 06/18/2021
email: Chase_Settle@eogresources.com
Telephone: 575-748-1471

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2116941928
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?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☑ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☑ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☑ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☑ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☑ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☑ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☑ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☑ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☑ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2116941928
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: Chase Settle Date: 03/14/2022

email: Chase_Settle@eogresources.com Telephone: 575-748-1471

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2116941928
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: Chase Settle Date: 03/14/2022

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: Jennifer Nobui Date: 03/18/2022

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

Our ref: 11230055

March 09, 2022

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

Re: Site Characterization and Remediation Work Plan
Roden GD Federal #3 Release Site
EOG Resources Inc.
Incident ID: nAPP2116941928
F-24-19S-24E, 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 Delineation 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 Roden GD Federal #3 Release Site (Site). The Site is located in Unit Letter F Section 24 of Township 19 South and Range 24 East in Eddy County, New Mexico. The GPS coordinates for the release site are 32.64837 N latitude and 104.54375 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, Site Assessment: Soil Analytical Results Map.

2. Background Information

A C-141, Release Notification, for this release was submitted to the NMOCD on June 18, 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 tank battery containment 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 release falls under the jurisdiction of the NMOCD District 2 Office in Artesia, New Mexico. The NMOCD assigned the release with Incident Number NAPP2116941928. The Release Notification and Site Assessment/Characterization portions of Form C-141 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).

On December 17, 2021, White Drilling Company (White) installed a soil boring at GPS coordinates, 32.648064 N latitude and 104.544387 W longitude to approximately 108 feet below ground surface (bgs) which is located on the site. The well was left open for seventy-two (72) hours and a water level meter was utilized to determine the presence or absence of groundwater. Groundwater was detected at 102.2 ft bgs and the boring was plugged and abandoned. Depth to groundwater for this site is greater than one hundred (100) feet. According to the Site characterization evaluation and 19.15.29.12.C(4)(a)(i) the Site is located within an area of medium karst potential. No receptors (water wells, playas, wetlands, waterways, lakebeds or ordinance boundaries) were located within each specific boundaries or distance from the Site. The Site characterization documentation (White's Temporary Well Log, GHD Boring 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	10 mg/kg
BTEX	50 mg/kg

4. Initial Soil Delineation Assessment Summary and Findings

On July 19, 2021, GHD Services Inc. (GHD) and EOG's contractor Culberson Construction Energy Services (CCI) installed seven (7) test pits, TP1 through TP7, within the suspected impacted area. Soil samples were collected at depths ranging from surface to twenty (20) 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.

One (1) of the seven (7) test pits had samples exceeding applicable NMAC Table 3.1 Closure Criteria for groundwater greater than one hundred (100) feet: TP5-15 and TP5-20. 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.

On December 20, 2021, GHD and White installed a soil boring SB-1 to fifty-eight (58) feet bgs in order to vertically delineate the area around TP5. Soil samples were collected in approximate five (5) foot intervals beginning at five (5) feet bgs, from SB-1. All soil samples were analyzed for BTEX by EPA Method 8021B, TPH by Method 8015B Modified, and chloride by EPA Method 300 by HEAL in Albuquerque, New Mexico. Benzene,

BTEX, and Total TPH concentrations were delineated to below 10 mg/kg, 50 mg/kg, and 2,500 mg/kg at forty-five (45) feet bgs. The SB-1 Soil Boring Log is provided as Attachment B.

5. nAPP2116941928 Proposed Work Plan

Test pit TP5 exhibited BTEX and Total TPH above Table 1 closure criteria to a depth of twenty (20) feet bgs. Soil boring SB-1 exhibited exceedances above Table 1 closure criteria for BTEX and TPH from five (5) feet bgs to twenty-five (25) and thirty-five to forty (40) feet bgs. None of the other samples submitted for analysis exhibited exceedances above Table 1 closure criteria.

GHD, on behalf of EOG, proposes to excavate soils containing benzene, BTEX, Total TPH, and chloride concentrations over 10 mg/kg, 50 mg/kg, 100 mg/kg and 600 mg/kg, respectively, within the top four (4) feet of the impacted area. Additionally, the area around TP5/SB-1 will be excavated a depth between twenty (20) and twenty-five (25) feet bgs depending on confirmation sample results. At the completion of confirmation sampling, if constituents are below Table 1 criteria, the site will be backfilled with non-impacted soil. If results are above Table 1 criteria, a microbial strain will be added to begin the bioremediation of the underlying hydrocarbon impacts, then the excavation will be backfilled with non-impacted soil prior to the setting of treatment wells.

After the TP-5/SB-1 area has been backfilled, a drill rig will be contracted to install soil treatment wells within this area to assist with the bioremediation and venting of the hydrocarbon impacts below twenty-five (25) feet bgs. One treatment well will be installed for every 100 square feet of impacted area to be remediated, this will be determined by confirmation sampling the bottom of the excavation and sidewalls of the TP-1/SB-1 area when it is excavated to 25 feet bgs. The wells will consist of two (2) inch pvc pipe with slotted well screen installed for the last 5-10 feet of the well, well depth will be staggered to ensure that the microbial product used to increase bioremediation makes contact with all areas that require treatment. The microbial strain will be absorbed into the surrounding soils, allowing for the digestion of organics and the breakdown of the hydrocarbons. The microbial strain will be injected into the wells every two (2) weeks for approximately twelve (12) weeks, totaling six (6) separate treatments. Thirty (30) days after the last treatment, a core rig will be brought in to perform sampling of the treated areas. This will consist of performing one sample boring per 200 square feet, with samples collected at five (5) foot increments with anticipated sampling to begin at thirty (30) feet bgs to a depth of forty (40) feet bgs.

Composite confirmation samples will be collected from the sidewalls and bottom of the excavation from areas no larger than two hundred (200) square feet. Discrete soil samples will be collected from the sidewalls and bottom of the excavation if any staining is observed. 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. Sidewall samples in the first four feet will meet Table 1 closure criteria for groundwater less than fifty (50) feet. After four (4) feet the closure criteria will revert back to Table 1 closure criteria for groundwater greater than one hundred (100) feet.

Excavated soils will be transported to a NMOCD approved disposal facility for disposal. The anticipated volume of soil to be disposed of is approximately 470 cubic yards. The excavation portion of the Remediation Plan will be performed within 90 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, the bioremediation portion of the Remediation Plan is scheduled to take 180 days, but more time may be required to adequately breakdown the hydrocarbon within the impacted soils therefore an update and

extension of time may be required dependent on the speed of bioremediation. Once confirmation samples collected from the soil boring(s) post treatment are below Table 1 closure criteria, treatment wells will be plugged with non-impacted soil material and cut/capped at a depth of three (3) feet bgs, or completely removed with the bore hole backfilled with non-impacted soil material. 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 an update will be provided to NMOCD with the progress to date with the additional remediation steps that will occur for the site.

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

Sincerely,

GHD

Becky Haskell
Senior Project Manager

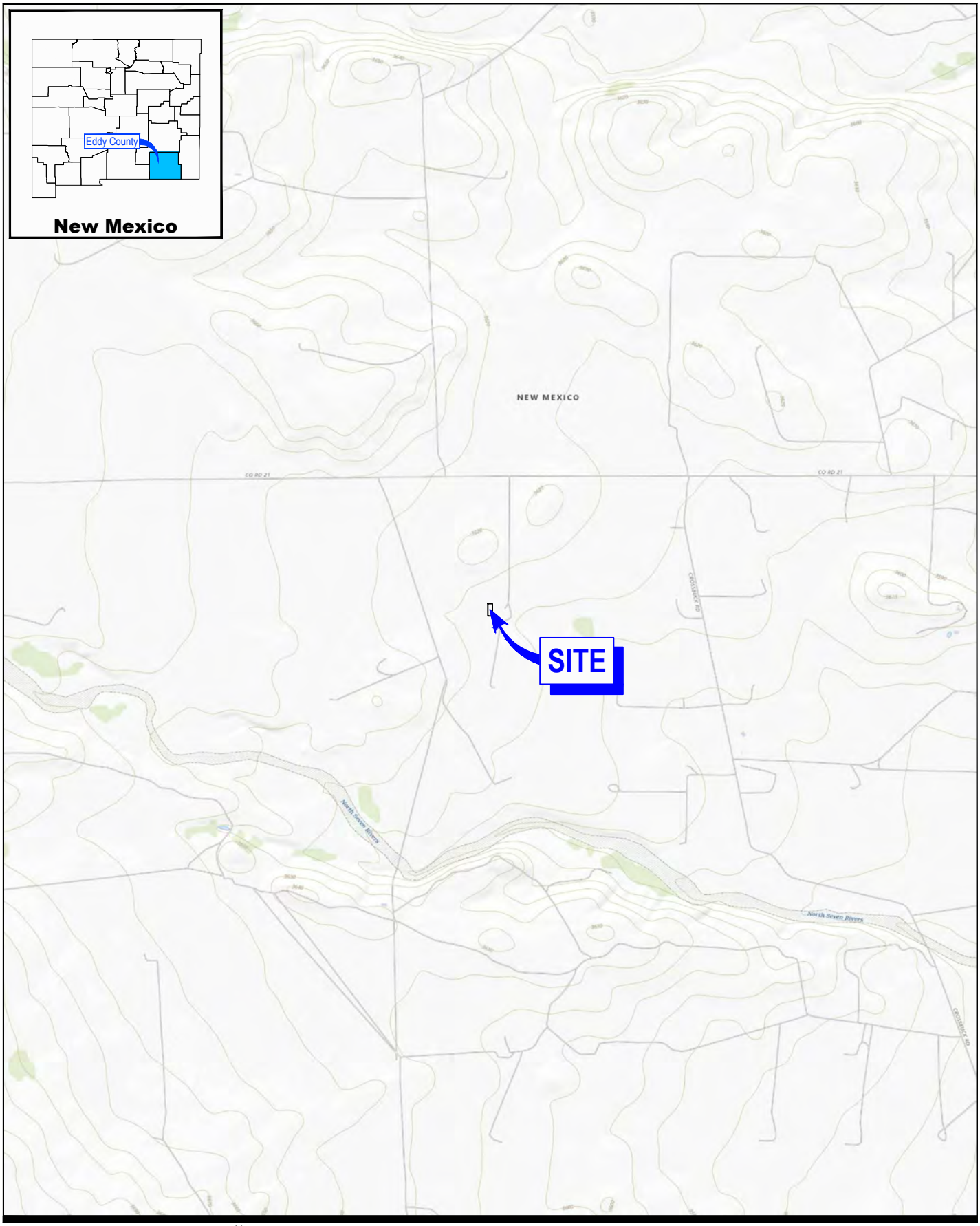
Zach H. Comino
Field Geologist

BH/ZC/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 – SB-1 Soil Boring Log
Attachment C – Laboratory Analytical Reports and Chain-of-Custody Documentation

cc: Chase Settle

Figures



0 1000 2000 ft

N

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

GHD

EOG RESOURCES
EDDY COUNTY, NEW MEXICO
RODEN GD FEDERAL #3

Project No. **11230055-02**
Date **December 2021**

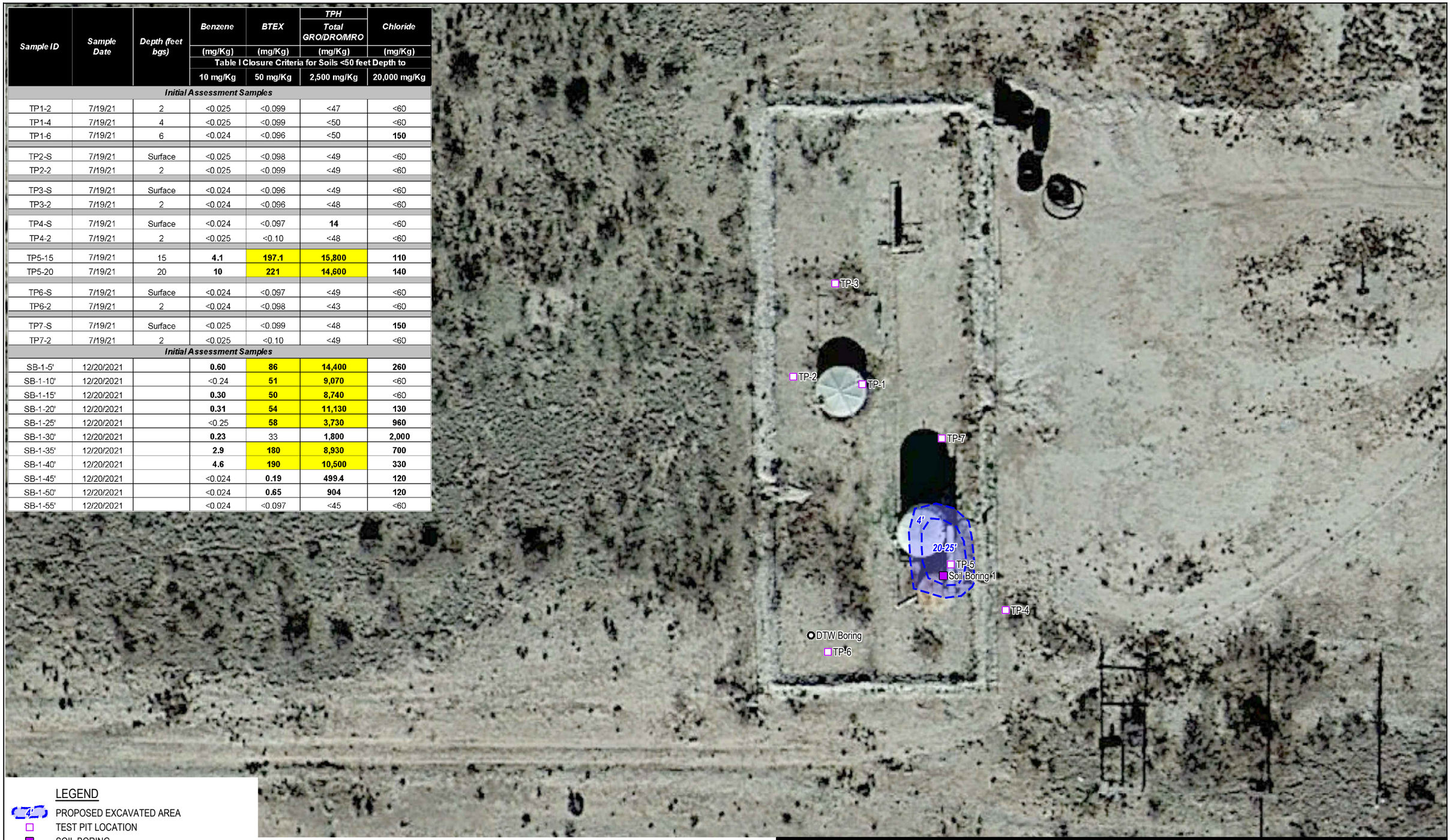
SITE LOCATION MAP

FIGURE 1

Filename: N:\US\Midland\Projects\562\11230055\Digital_Design\ACAD\Figures\RPT001\11230055-GHD-0000-RPT-EN-0101_DL-001.dwg

Data Source: USGS 7.5 Minute Quad "Parish Ranch, Foster Ranch, Dayton, and Seven Rivers, New Mexico"
Lat/Long: 32.6482° North, 104.5443° West

Sample ID	Sample Date	Depth (feet bgs)	Benzene	BTEX	TPH Total GRO/DRO/MRO	Chloride
			(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
			Table I Closure Criteria for Soils <50 feet Depth to			
			10 mg/Kg	50 mg/Kg	2,500 mg/Kg	20,000 mg/Kg
Initial Assessment Samples						
TP1-2	7/19/21	2	<0.025	<0.099	<47	<60
TP1-4	7/19/21	4	<0.025	<0.099	<50	<60
TP1-6	7/19/21	6	<0.024	<0.096	<50	**150**
TP2-S	7/19/21	Surface	<0.025	<0.098	<49	<60
TP2-2	7/19/21	2	<0.025	<0.099	<49	<60
TP3-S	7/19/21	Surface	<0.024	<0.096	<49	<60
TP3-2	7/19/21	2	<0.024	<0.096	<48	<60
TP4-S	7/19/21	Surface	<0.024	<0.097	**14**	<60
TP4-2	7/19/21	2	<0.025	<0.10	<48	<60
TP5-15	7/19/21	15	**4.1**	**197.1**	**15,800**	**110**
TP5-20	7/19/21	20	**10**	**221**	**14,600**	**140**
TP6-S	7/19/21	Surface	<0.024	<0.097	<49	<60
TP6-2	7/19/21	2	<0.024	<0.098	<43	<60
TP7-S	7/19/21	Surface	<0.025	<0.099	<48	**150**
TP7-2	7/19/21	2	<0.025	<0.10	<49	<60
Initial Assessment Samples						
SB-1-5'	12/20/2021		**0.60**	**86**	**14,400**	**260**
SB-1-10'	12/20/2021		<0.24	**51**	**9,070**	<60
SB-1-15'	12/20/2021		**0.30**	**50**	**8,740**	<60
SB-1-20'	12/20/2021		**0.31**	**54**	**11,130**	**130**
SB-1-25'	12/20/2021		<0.25	**58**	**3,730**	**960**
SB-1-30'	12/20/2021		**0.23**	33	**1,800**	**2,000**
SB-1-35'	12/20/2021		**2.9**	**180**	**8,930**	**700**
SB-1-40'	12/20/2021		**4.6**	**190**	**10,500**	**330**
SB-1-45'	12/20/2021		<0.024	**0.19**	**499.4**	**120**
SB-1-50'	12/20/2021		<0.024	**0.65**	**904**	**120**
SB-1-55'	12/20/2021		<0.024	<0.097	<45	<60



LEGEND

- 4' — PROPOSED EXCAVATED AREA
- TEST PIT LOCATION
- SOIL BORING
- SOIL BORING TO GROUNDWATER
- DEPTH — DEPTH OF SAMPLE (FT)
- BTEX — BENZENE, TOLUENE, ETHYLBENZENE & XYLENES CONCENTRATION (MG/KG)
- TPH — TOTAL PETROLEUM HYDROCARBONS CONCENTRATION (MG/KG)

NOTES:

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

0 15 30 ft

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

N

GHD

EOG RESOURCES
EDDY COUNTY, NEW MEXICO
RODEN GD FEDERAL #3

SITE ASSESSMENT:
SOIL ANALYTICAL RESULTS MAP

Project No. **11230055**
Date **March 2022**

FIGURE 2

Filename: \\ghdnet\ghd\US\Midland\Projects\562\11230055\Digital_Design\ACAD\Figures\RPT001\11230055-GHD-0000-RPT-EN-0101_DL-001.dwg
Plot Date: 09 March 2022 3:32 PM

Data Source: Image © 2021 Google - Imagery Date: December 21, 2019
Lat/Long: 32.6482° North, 104.5443° West

Tables

Table 1
Summary of Soil Analytical Data
Roden GD Federal #3
EOG Resources
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)	(mg/Kg)
			Table I Closure Criteria for Soils <50 feet Depth to Groundwater 19.15.29 NMAC									
			10 mg/Kg	---	---	---	50 mg/Kg	---	---	---	2,500 mg/Kg	20,000 mg/Kg
Initial Assessment Samples												
TP1-2	7/19/21	2	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<9.4	<47	<47	<60
TP1-4	7/19/21	4	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	< 10	<50	<50	<60
TP1-6	7/19/21	6	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.9	<50	<50	**150**
TP2-S	7/19/21	Surface	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<9.8	<49	<49	<60
TP2-2	7/19/21	2	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<9.8	<49	<49	<60
TP3-S	7/19/21	Surface	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.7	<49	<49	<60
TP3-2	7/19/21	2	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.7	<48	<48	<60
TP4-S	7/19/21	Surface	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	**14**	<49	**14**	<60
TP4-2	7/19/21	2	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<9.5	<48	<48	<60
TP5-15	7/19/21	15	**4.1**	**20**	**73**	**100**	**197.1**	**2,000**	**9,900**	**3,900**	**15,800**	**110**
TP5-20	7/19/21	20	**10**	**19**	**82**	**110**	**221**	**2,300**	**8,800**	**3,500**	**14,600**	**140**
TP6-S	7/19/21	Surface	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<9.8	<49	<49	<60
TP6-2	7/19/21	2	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	<8.7	<43	<43	<60
TP7-S	7/19/21	Surface	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<9.7	<48	<48	**150**
TP7-2	7/19/21	2	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<9.7	<49	<49	<60
Initial Assessment Samples												
SB-1-5'	12/20/2021		**0.6**	**7.2**	**25**	**53**	**86**	**1,100**	**11,000**	**2,300**	**14,400**	**260**
SB-1-10'	12/20/2021		<0.24	**0.56**	**21**	**29**	**51**	**870**	**6,400**	**1,800**	**9,070**	<60
SB-1-15'	12/20/2021		**0.3**	**0.48**	**21**	**28**	**50**	**740**	**5,900**	**2,100**	**8,740**	<60
SB-1-20'	12/20/2021		**0.31**	<0.50	**22**	**31**	**54**	**830**	**7,800**	**2,500**	**11,130**	**130**
SB-1-25'	12/20/2021		<0.25	**8.4**	**17**	**33**	**58**	**840**	**2,300**	**590**	**3,730**	**960**
SB-1-30'	12/20/2021		**0.23**	**4.5**	**8.1**	**20**	**33**	**470**	**920**	**410**	**1,800**	**2,000**
SB-1-35'	12/20/2021		**2.9**	**45**	**34**	**95**	**180**	**2,700**	**5,500**	**730**	**8,930**	**700**
SB-1-40'	12/20/2021		**4.6**	**46**	**38**	**100**	**190**	**2,600**	**6,400**	**1,500**	**10,500**	**330**
SB-1-45'	12/20/2021		<0.024	<0.049	**0.069**	**0.12**	**0.19**	**9.4**	**380**	**110**	**499.4**	**120**
SB-1-50'	12/20/2021		<0.024	**0.061**	**0.17**	**0.42**	**0.65**	**24**	**700**	**180**	**904**	**120**
SB-1-55'	12/20/2021		<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<9.1	<45	<45	<60

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

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
RA-13117 POD 2 (SB-2)		RA-13117

WELL OWNER NAME(S)	PHONE (OPTIONAL)
EOG Resources Inc.	575-703-6537

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
105 S. 4th Street	Artesia	NM	88210

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	38	52.97	N
	LONGITUDE	104	32	39.67	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

Roden GD Federal

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD-1456	John W. White	White Drilling Company, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
12/17/2021	12/21/2021		108'	102'

COMPLETED WELL IS: ☐ ARTESIAN ☐ DRY HOLE ☑ SHALLOW (UNCONFINED) — STATIC WATER LEVEL IN COMPLETED WELL (FT): 102'

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☑ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY:

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0.0	105.0	6.0	Type 1 Cement-Bentonite Slurry	21.20	Pump Mix w/Trimie Pipe
105.0	108.0	6.0	Hole backfilled in with native soil		

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 04/30/19)

FILE NO.	POD NO.	TRN NO.	
LOCATION		WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES **(attach supplemental sheets to fully describe all units)**	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0.0	2.0	2.0	Brown clayey sand w/gravel	Y ✓ N	
2.0	6.0	4.0	Brown sandy clay	Y ✓ N	
6.0	16.0	10.0	Gravel w/sand	Y ✓ N	
16.0	18.0	2.0	Yellow brown sand/sandstone	Y ✓ N	
18.0	22.0	4.0	Red brown sand/sandstone	Y ✓ N	
22.0	31.0	9.0	Tan sand/clayey sand	Y ✓ N	
31.0	35.0	4.0	Red brown silty sand/sandstone	Y ✓ N	
35.0	38.0	3.0	Red brown clayey sand	Y ✓ N	
38.0	41.0	3.0	Sand w/gravel	Y ✓ N	
41.0	52.0	11.0	Red brown silty sand	Y ✓ N	
52.0	56.0	4.0	Brown silty sand	Y ✓ N	
56.0	57.0	1.0	Red brown sand/sandstone	Y ✓ N	
57.0	58.0	1.0	Dark red brown silty sandstone	Y ✓ N	
58.0	64.0	6.0	Dark gray sandstone	Y ✓ N	
64.0	74.0	10.0	Layers of red and brown siltstone	Y ✓ N	
74.0	80.0	6.0	Red brown sand/sandstone	Y ✓ N	
80.0	94.0	6.0	Red brown siltstone w/gray nodgles	Y ✓ N	
94.0	108.0	14.0	Gray brown sandstone	✓ Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

William B. Atkins

6. SIGNATURE

BY SIGNING BELOW, I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED WELL. I ALSO CERTIFY THAT THE WELL TAG, IF REQUIRED, HAS BEEN INSTALLED AND THAT THIS WELL RECORD WILL ALSO BE FILED WITH THE PERMIT HOLDER WITHIN 30 DAYS AFTER THE COMPLETION OF WELL DRILLING.

John W. White — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

01/04/2022 — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 04/30/2019)

FILE NO.	POD NO.	TRN NO.	
LOCATION		WELL TAG ID NO.	PAGE 2 OF 2

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Roden GD Federal #3
PROJECT NUMBER: 11230055
CLIENT: EOG Resources
LOCATION: Artesia, New Mexico
DRILLING CONTRACTOR: White Drilling Company, Inc.

HOLE DESIGNATION: DTW Well
DATE COMPLETED: December 17, 2021
DRILLING METHOD: Air Rotary/Split Spoons
FIELD PERSONNEL: L. Mullins
DRILLER: B. Atkins

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH BGS	SOIL BORING	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE CHLORIDE (mg/kg)
	SM-SILTY SAND, dark brown, dry						
	CL-SILTY CLAY, with gravel interbedded throughout	4.00					
	SANDSTONE, partially consolidated, gravel interbedded throughout light brown, dry	16.00					
	SP-SAND, fine to medium grained, light brown, dry	20.00	Backfilled With Cement Grout				
	SP-SAND, with silt, fine to medium grained, reddish brown, dry	30.00					
	SANDSTONE, partially consolidated, reddish brown, dry	38.00					
	SP-SAND, fine to medium grained	40.00					
	SM-SILTY SAND, with consolidated siltstone, reddish brown	55.00					

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

File: I:\LOG DATABASE\8-CHAR\11-----\1123---\11230055 RODEN\11230055-CO.GPJ Library File: GHD_ENVIRO_V06.GLB Report: OVERBURDEN LOG Date: 1/18/22

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Roden GD Federal #3
PROJECT NUMBER: 11230055
CLIENT: EOG Resources
LOCATION: Artesia, New Mexico
DRILLING CONTRACTOR: White Drilling Company, Inc.

HOLE DESIGNATION: DTW Well
DATE COMPLETED: December 17, 2021
DRILLING METHOD: Air Rotary/Split Spoons
FIELD PERSONNEL: L. Mullins
DRILLER: B. Atkins

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH BGS	SOIL BORING	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE CHLORIDE (mg/kg)
65	SM-SILTY SAND, with gravel interbedded throughout, reddish brown, slightly moist	63.00					
70							
75	- moist at 75.00ft BGS						
80	SP-SAND, with silt, fine to medium grained, reddish brown, slightly moist	79.00					
85							
90	SANDSTONE, consolidated	90.00					
95	SM-SILTY SAND, with partially consolidated sandstone, light brown, slightly moist	95.00					
100							
105							
110	END OF BOREHOLE @ 108.00ft BGS Gauged depth to water of DTW Well 72 hours later: 102.2 ft BGS	108.00					
115							

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

File: I:\LOG DATABASE\8-CHAR\11-----\1123---\11230055 RODEN\11230055-CO.GPJ Library File: GHD_ENVIRO_V06.GLB Report: OVERBURDEN LOG Date: 1/18/22

Roden GD Federal #3

12/14/2021, 8:26:02 AM

GIS WATERS PODs

Active

Pending

OSE District Boundary

SiteBoundaries

Water Right Regulations

Closure Area

1:18,056

0 0.17 0.35 0.7 mi

0 0.3 0.6 1.2 km

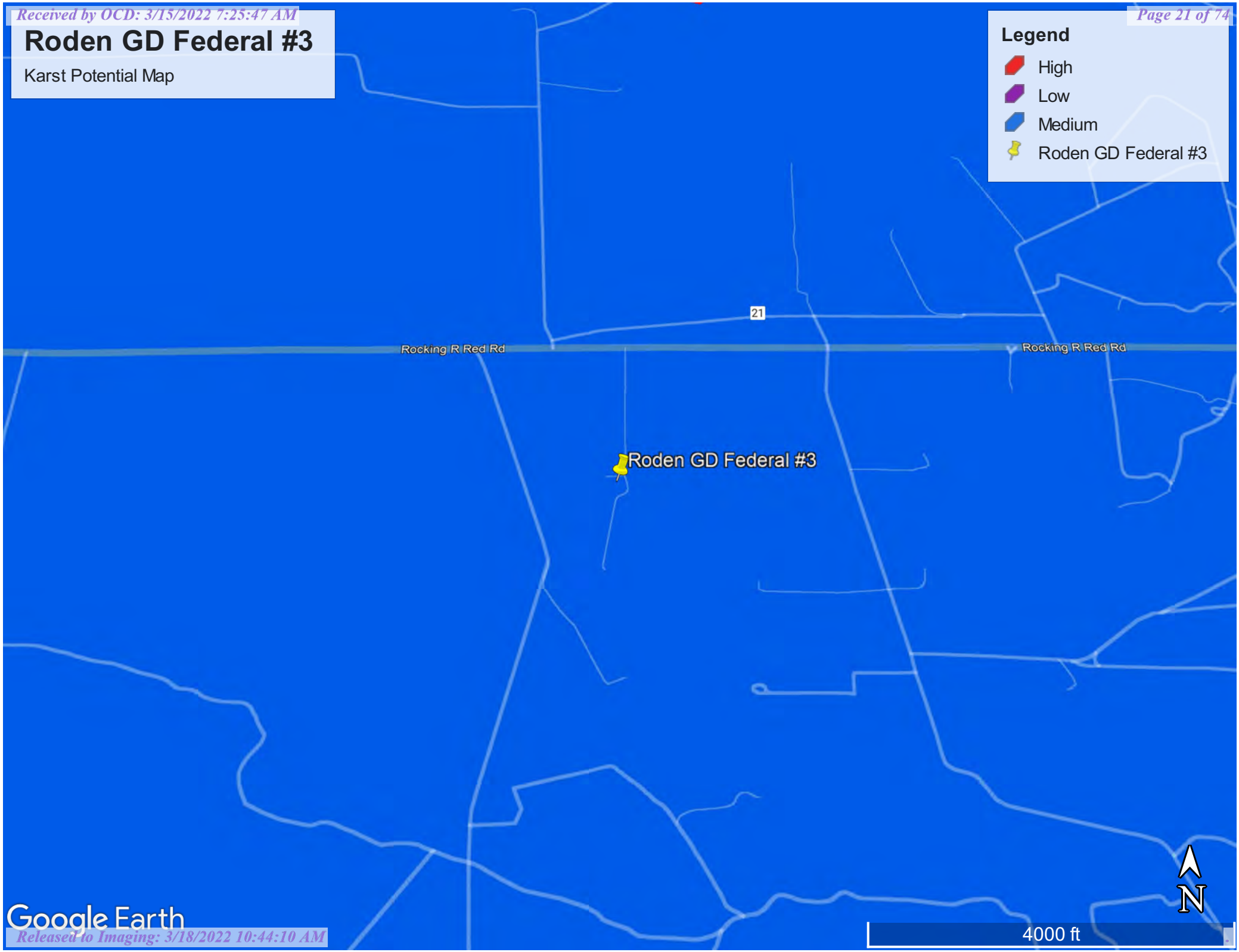
Esri, HERE, iPC, U.S. Department of Energy Office of Legacy Management, Esri, HERE, Garmin, iPC, Maxar

OSE POD Locations Web Map

These maps are distributed “as is” without warranty of any kind.

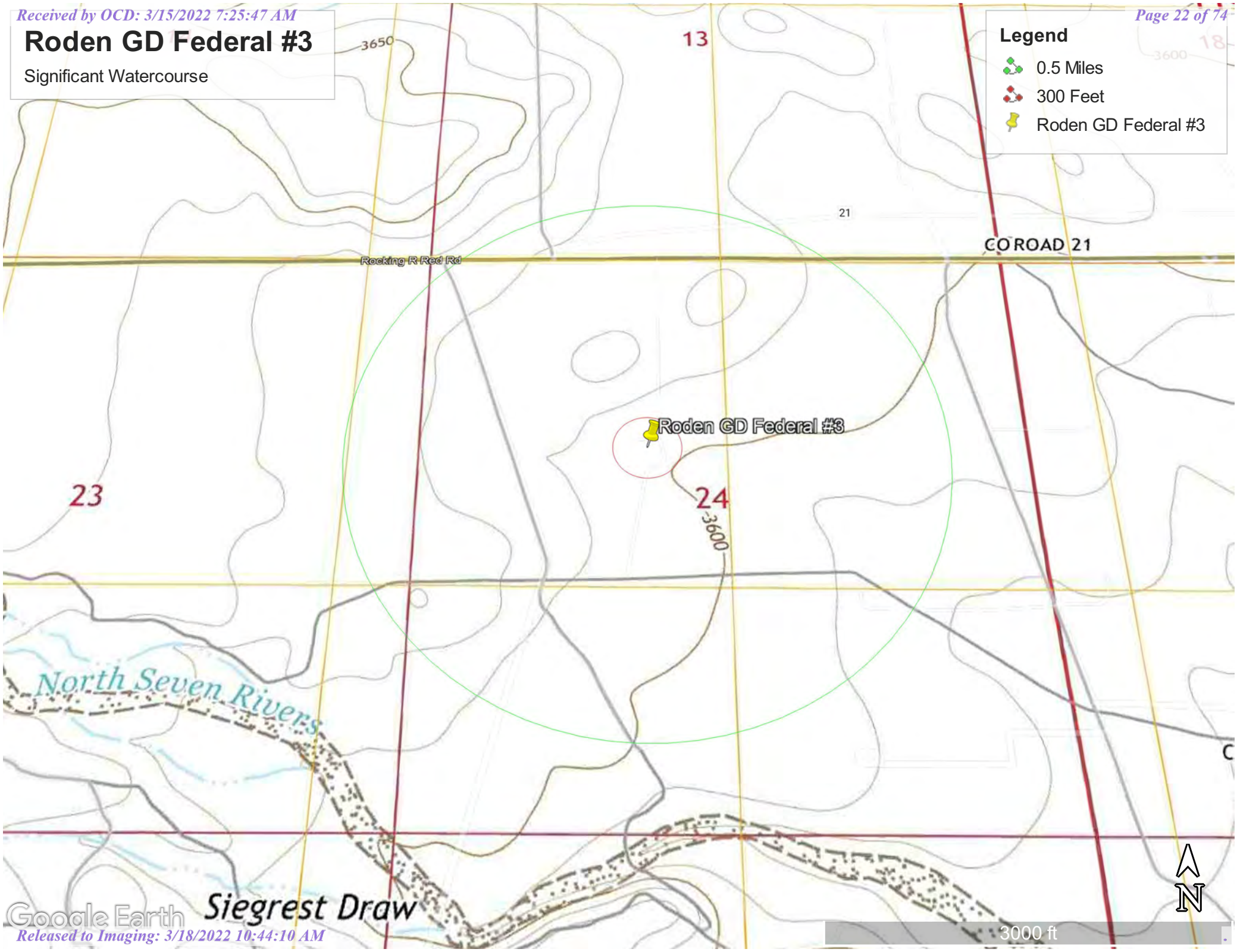
Roden GD Federal #3

Karst Potential Map



Roden GD Federal #3

Significant Watercourse



U.S. Fish and Wildlife Service
National Wetlands Inventory

Roden GD Federal #3

December 14, 2021

Wetlands

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

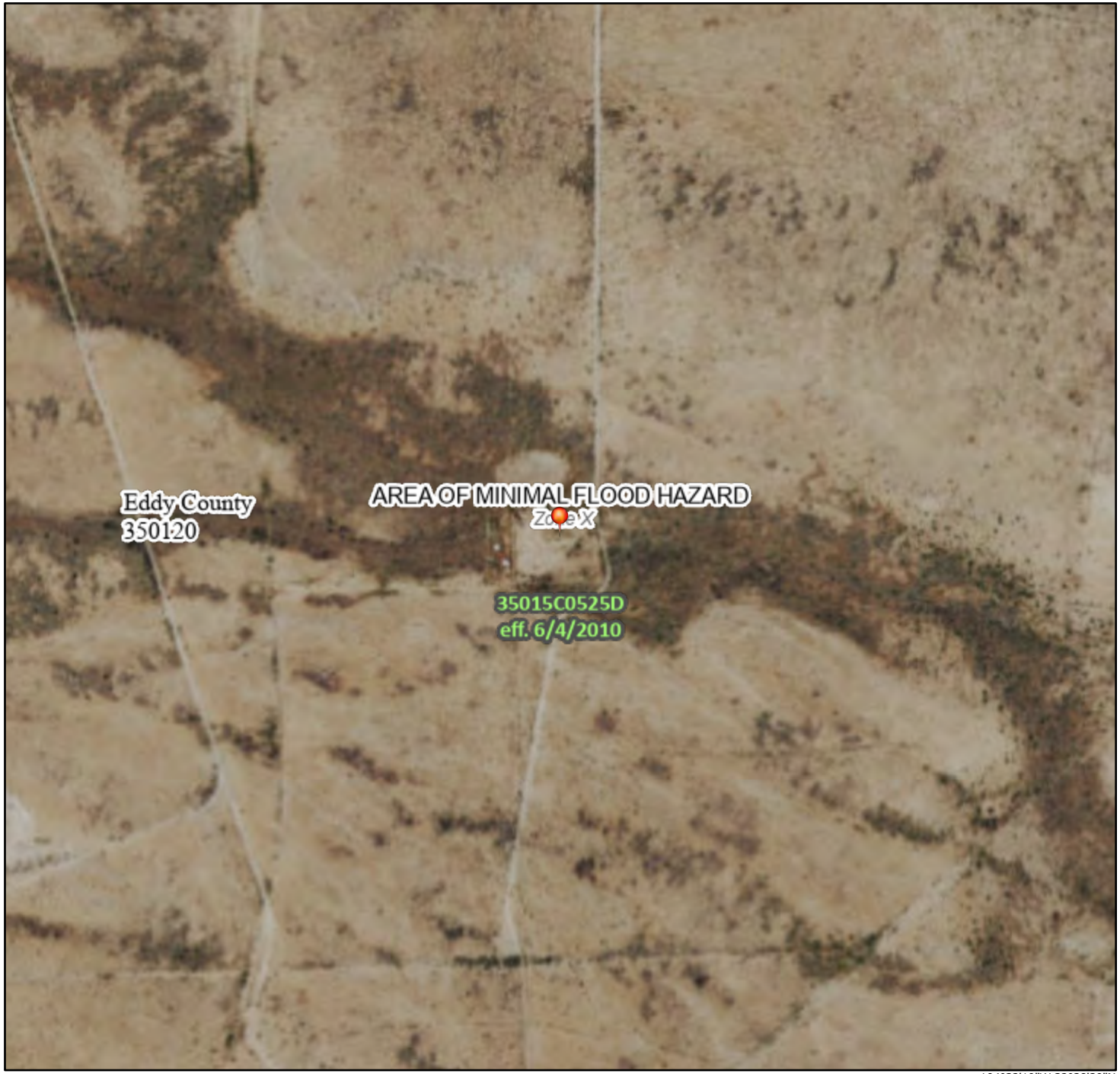
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

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

National Flood Hazard Layer FIRMette

FEMA

104°32'56"W 32°39'9"N



104°32'19"W 32°38'39"N

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

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

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

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

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

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

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

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

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

N

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

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 12/14/2021 at 9:36 AM 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
SB-1 Soil Boring Log

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
RA-13117 POD 1 (SB-1)		RA-13117

WELL OWNER NAME(S)	PHONE (OPTIONAL)
EOG Resources Inc.	575-703-6537

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
105 S. 4th Street	Artesia	NM	88210

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	38	53.29	N
	LONGITUDE	104	32	39.27	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

Roden GD Federal

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD-1456	John W. White	White Drilling Company, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
12/20/2021	12/21/2021		60.0	DRY

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): DRY

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☑ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY:

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0.0	60.0	6.0	Type 1 Cement-Bentonite Slurry	11.77	Pump Mix w/Trimie Pipe

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 04/30/19)

FILE NO.	POD NO.	TRN NO.
LOCATION	WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES **(attach supplemental sheets to fully describe all units)**	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0.0	6.0	6.0	HC Stained gravel	Y ✓ N	
6.0	7.0	1.0	Brown sandy clay w/gravel	Y ✓ N	
7.0	20.0	13.0	Gravel	Y ✓ N	
20.0	22.0	2.0	Gray stained sand/sandstone	Y ✓ N	
22.0	32.0	10.0	Green brown sand/sandstone	Y ✓ N	
32.0	33.0	1.0	Light gray sand/sandstone	Y ✓ N	
33.0	44.0	11.0	Brown and green layers of sand/sandstone	Y ✓ N	
44.0	53.0	9.0	Red brown sand/sandstone	Y ✓ N	
53.0	56.0	3.0	Dark red brown siltstone	Y ✓ N	
56.0	60.0	4.0	Red brown silty sandstone	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST: TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION: Hydrocarbon and chlorides present

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

William B. Atkins

6. SIGNATURE

BY SIGNING BELOW, I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED WELL. I ALSO CERTIFY THAT THE WELL TAG, IF REQUIRED, HAS BEEN INSTALLED AND THAT THIS WELL RECORD WILL ALSO BE FILED WITH THE PERMIT HOLDER WITHIN 30 DAYS AFTER THE COMPLETION OF WELL DRILLING.

John W. White — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

01/04/2022 — DATE

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 04/30/2019)

FILE NO.	POD NO.	TRN NO.	
LOCATION		WELL TAG ID NO.	PAGE 2 OF 2

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Roden GD Federal #3
HOLE DESIGNATION: SB-1
PROJECT NUMBER: 11230055
DATE COMPLETED: December 20, 2021
CLIENT: EOG Resources
DRILLING METHOD: Air Rotary/Split Spoons
LOCATION: Artesia, New Mexico
FIELD PERSONNEL: L. Mullins
DRILLING CONTRACTOR: White Drilling Company, Inc.
DRILLER: B. Atkins

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH BGS	SOIL BORING	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	CHLORIDE (mg/kg)	TOTAL TPH (mg/kg)
	ML-SILT, with sand, with gravel interbedded throughout, gray, dry							
5				5'			260	14400
10				10'			<60	9070
15				15'			<60	8740
20				20'			130	11130
	ML-SANDY SILT, gray, dry	22.00						
	SP-SAND, with silt, fine to medium grained, white and gray, dry	24.00						
25	SP-SAND, with silt, fine to medium grained, light brown, slightly moist	26.00	Backfilled With Cement Grout	25'			960	3730
30				30'			2000	1800
	- with partially consolidated sandstone from 34.00 to 35.00ft BGS							
35	SP-SAND, with silt, fine to medium grained, light brown, slightly moist	35.00		35'			700	8930
40				40'			330	10500
	ML-SANDY SILT, reddish brown, dry	44.00						
45				45'			120	499.4
	SP-SAND, with silt, fine to medium grained, light brown and reddish brown, dry	48.00						
50				50'			120	904
	SM-SILTY SAND, light brown, dry	52.00						
55				55'			<60	<45
	END OF BOREHOLE @ 58.00ft BGS	58.00						

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

CHEMICAL ANALYSIS (5')

File: I:\LOG DATABASE\8-CHAR\11-----\1123----\11230055 RODEN\11230055-CO.GPJ Library File: GHD_ENVIRO_V06.GLB Report: OVERBURDEN LOG Date: 1/18/22

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

July 29, 2021

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

RE: Roden GD Federal 3 OrderNo.: 2107A10

Dear Becky Haskell:

Hall Environmental Analysis Laboratory received 15 sample(s) on 7/21/2021 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 or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2107A10**
Date Reported: **7/29/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland **Client Sample ID:** TP1-2
Project: Roden GD Federal 3 **Collection Date:** 7/19/2021 7:45:00 AM
Lab ID: 2107A10-001 **Matrix:** SOIL **Received Date:** 7/21/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	7/27/2021 1:58:45 AM	61562
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/23/2021 1:46:03 PM	61492
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/23/2021 1:46:03 PM	61492
Surr: DNOP	99.9	70-130		%Rec	1	7/23/2021 1:46:03 PM	61492
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/23/2021 6:35:49 PM	61466
Surr: BFB	94.7	70-130		%Rec	1	7/23/2021 6:35:49 PM	61466
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	7/23/2021 6:35:49 PM	61466
Toluene	ND	0.049		mg/Kg	1	7/23/2021 6:35:49 PM	61466
Ethylbenzene	ND	0.049		mg/Kg	1	7/23/2021 6:35:49 PM	61466
Xylenes, Total	ND	0.099		mg/Kg	1	7/23/2021 6:35:49 PM	61466
Surr: 4-Bromofluorobenzene	97.4	70-130		%Rec	1	7/23/2021 6:35:49 PM	61466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of 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

Analytical Report
Lab Order **2107A10**
Date Reported: **7/29/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland **Client Sample ID:** TP1-4
Project: Roden GD Federal 3 **Collection Date:** 7/19/2021 7:50:00 AM
Lab ID: 2107A10-002 **Matrix:** SOIL **Received Date:** 7/21/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	7/27/2021 2:11:10 AM	61562
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/23/2021 2:29:20 PM	61492
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/23/2021 2:29:20 PM	61492
Surr: DNOP	107	70-130		%Rec	1	7/23/2021 2:29:20 PM	61492
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/23/2021 6:59:17 PM	61466
Surr: BFB	93.6	70-130		%Rec	1	7/23/2021 6:59:17 PM	61466
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	7/23/2021 6:59:17 PM	61466
Toluene	ND	0.049		mg/Kg	1	7/23/2021 6:59:17 PM	61466
Ethylbenzene	ND	0.049		mg/Kg	1	7/23/2021 6:59:17 PM	61466
Xylenes, Total	ND	0.099		mg/Kg	1	7/23/2021 6:59:17 PM	61466
Surr: 4-Bromofluorobenzene	96.3	70-130		%Rec	1	7/23/2021 6:59:17 PM	61466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of 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

Analytical Report
Lab Order **2107A10**
Date Reported: **7/29/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland **Client Sample ID:** TP1-6
Project: Roden GD Federal 3 **Collection Date:** 7/19/2021 7:55:00 AM
Lab ID: 2107A10-003 **Matrix:** SOIL **Received Date:** 7/21/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	150	60		mg/Kg	20	7/27/2021 2:23:35 AM	61562
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/23/2021 2:40:51 PM	61492
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/23/2021 2:40:51 PM	61492
Surr: DNOP	107	70-130		%Rec	1	7/23/2021 2:40:51 PM	61492
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/23/2021 7:22:45 PM	61466
Surr: BFB	94.0	70-130		%Rec	1	7/23/2021 7:22:45 PM	61466
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	7/23/2021 7:22:45 PM	61466
Toluene	ND	0.048		mg/Kg	1	7/23/2021 7:22:45 PM	61466
Ethylbenzene	ND	0.048		mg/Kg	1	7/23/2021 7:22:45 PM	61466
Xylenes, Total	ND	0.096		mg/Kg	1	7/23/2021 7:22:45 PM	61466
Surr: 4-Bromofluorobenzene	96.5	70-130		%Rec	1	7/23/2021 7:22:45 PM	61466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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

Analytical Report
Lab Order **2107A10**
Date Reported: **7/29/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland **Client Sample ID:** TP2-S
Project: Roden GD Federal 3 **Collection Date:** 7/19/2021 8:10:00 AM
Lab ID: 2107A10-004 **Matrix:** SOIL **Received Date:** 7/21/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	7/27/2021 2:36:00 AM	61562
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/23/2021 2:52:24 PM	61492
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/23/2021 2:52:24 PM	61492
Surr: DNOP	116	70-130		%Rec	1	7/23/2021 2:52:24 PM	61492
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/23/2021 7:46:14 PM	61466
Surr: BFB	89.7	70-130		%Rec	1	7/23/2021 7:46:14 PM	61466
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	7/23/2021 7:46:14 PM	61466
Toluene	ND	0.049		mg/Kg	1	7/23/2021 7:46:14 PM	61466
Ethylbenzene	ND	0.049		mg/Kg	1	7/23/2021 7:46:14 PM	61466
Xylenes, Total	ND	0.098		mg/Kg	1	7/23/2021 7:46:14 PM	61466
Surr: 4-Bromofluorobenzene	91.9	70-130		%Rec	1	7/23/2021 7:46:14 PM	61466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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

Analytical Report
Lab Order **2107A10**
Date Reported: **7/29/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland **Client Sample ID:** TP2-2
Project: Roden GD Federal 3 **Collection Date:** 7/19/2021 8:15:00 AM
Lab ID: 2107A10-005 **Matrix:** SOIL **Received Date:** 7/21/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	7/27/2021 2:48:24 AM	61562
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/23/2021 3:03:59 PM	61492
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/23/2021 3:03:59 PM	61492
Surr: DNOP	109	70-130		%Rec	1	7/23/2021 3:03:59 PM	61492
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/23/2021 8:56:43 PM	61466
Surr: BFB	93.7	70-130		%Rec	1	7/23/2021 8:56:43 PM	61466
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	7/23/2021 8:56:43 PM	61466
Toluene	ND	0.050		mg/Kg	1	7/23/2021 8:56:43 PM	61466
Ethylbenzene	ND	0.050		mg/Kg	1	7/23/2021 8:56:43 PM	61466
Xylenes, Total	ND	0.099		mg/Kg	1	7/23/2021 8:56:43 PM	61466
Surr: 4-Bromofluorobenzene	96.5	70-130		%Rec	1	7/23/2021 8:56:43 PM	61466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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

Analytical Report
Lab Order **2107A10**
Date Reported: **7/29/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland **Client Sample ID:** TP3-S
Project: Roden GD Federal 3 **Collection Date:** 7/19/2021 8:20:00 AM
Lab ID: 2107A10-006 **Matrix:** SOIL **Received Date:** 7/21/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	7/27/2021 3:00:49 AM	61562
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/23/2021 3:15:33 PM	61492
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/23/2021 3:15:33 PM	61492
Surr: DNOP	121	70-130		%Rec	1	7/23/2021 3:15:33 PM	61492
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/23/2021 9:20:12 PM	61466
Surr: BFB	91.8	70-130		%Rec	1	7/23/2021 9:20:12 PM	61466
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	7/23/2021 9:20:12 PM	61466
Toluene	ND	0.048		mg/Kg	1	7/23/2021 9:20:12 PM	61466
Ethylbenzene	ND	0.048		mg/Kg	1	7/23/2021 9:20:12 PM	61466
Xylenes, Total	ND	0.096		mg/Kg	1	7/23/2021 9:20:12 PM	61466
Surr: 4-Bromofluorobenzene	94.2	70-130		%Rec	1	7/23/2021 9:20:12 PM	61466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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

Analytical Report
Lab Order **2107A10**
Date Reported: **7/29/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland **Client Sample ID:** TP3-2
Project: Roden GD Federal 3 **Collection Date:** 7/19/2021 8:25:00 AM
Lab ID: 2107A10-007 **Matrix:** SOIL **Received Date:** 7/21/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	7/27/2021 9:43:28 AM	61578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/23/2021 4:01:51 PM	61498
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/23/2021 4:01:51 PM	61498
Surr: DNOP	117	70-130		%Rec	1	7/23/2021 4:01:51 PM	61498
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/23/2021 9:43:40 PM	61466
Surr: BFB	92.0	70-130		%Rec	1	7/23/2021 9:43:40 PM	61466
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	7/23/2021 9:43:40 PM	61466
Toluene	ND	0.048		mg/Kg	1	7/23/2021 9:43:40 PM	61466
Ethylbenzene	ND	0.048		mg/Kg	1	7/23/2021 9:43:40 PM	61466
Xylenes, Total	ND	0.096		mg/Kg	1	7/23/2021 9:43:40 PM	61466
Surr: 4-Bromofluorobenzene	94.3	70-130		%Rec	1	7/23/2021 9:43:40 PM	61466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of 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

Analytical Report
Lab Order **2107A10**
Date Reported: **7/29/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland **Client Sample ID:** TP4-S
Project: Roden GD Federal 3 **Collection Date:** 7/19/2021 9:15:00 AM
Lab ID: 2107A10-008 **Matrix:** SOIL **Received Date:** 7/21/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	7/27/2021 10:20:42 AM	61578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	14	9.7		mg/Kg	1	7/23/2021 4:36:43 PM	61498
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/23/2021 4:36:43 PM	61498
Surr: DNOP	155	70-130	S	%Rec	1	7/23/2021 4:36:43 PM	61498
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/23/2021 10:07:19 PM	61466
Surr: BFB	88.3	70-130		%Rec	1	7/23/2021 10:07:19 PM	61466
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	7/23/2021 10:07:19 PM	61466
Toluene	ND	0.049		mg/Kg	1	7/23/2021 10:07:19 PM	61466
Ethylbenzene	ND	0.049		mg/Kg	1	7/23/2021 10:07:19 PM	61466
Xylenes, Total	ND	0.097		mg/Kg	1	7/23/2021 10:07:19 PM	61466
Surr: 4-Bromofluorobenzene	91.6	70-130		%Rec	1	7/23/2021 10:07:19 PM	61466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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

Analytical Report
Lab Order **2107A10**
Date Reported: **7/29/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland **Client Sample ID:** TP4-2
Project: Roden GD Federal 3 **Collection Date:** 7/19/2021 9:20:00 AM
Lab ID: 2107A10-009 **Matrix:** SOIL **Received Date:** 7/21/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	7/27/2021 11:22:46 AM	61578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/23/2021 4:48:34 PM	61498
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/23/2021 4:48:34 PM	61498
Surr: DNOP	103	70-130		%Rec	1	7/23/2021 4:48:34 PM	61498
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/23/2021 3:20:00 PM	61491
Surr: BFB	116	70-130		%Rec	1	7/23/2021 3:20:00 PM	61491
EPA METHOD 8021B: VOLATILES						Analyst: **mb**	
Benzene	ND	0.025		mg/Kg	1	7/23/2021 3:20:00 PM	61491
Toluene	ND	0.050		mg/Kg	1	7/23/2021 3:20:00 PM	61491
Ethylbenzene	ND	0.050		mg/Kg	1	7/23/2021 3:20:00 PM	61491
Xylenes, Total	ND	0.10		mg/Kg	1	7/23/2021 3:20:00 PM	61491
Surr: 4-Bromofluorobenzene	115	70-130		%Rec	1	7/23/2021 3:20:00 PM	61491

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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

Analytical Report
Lab Order **2107A10**
Date Reported: **7/29/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland **Client Sample ID:** TP5-15
Project: Roden GD Federal 3 **Collection Date:** 7/19/2021 10:00:00 AM
Lab ID: 2107A10-010 **Matrix:** SOIL **Received Date:** 7/21/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	110	60		mg/Kg	20	7/27/2021 11:35:10 AM	61578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	9900	180		mg/Kg	20	7/23/2021 5:00:16 PM	61498
Motor Oil Range Organics (MRO)	3900	900		mg/Kg	20	7/23/2021 5:00:16 PM	61498
Surr: DNOP	0	70-130	S	%Rec	20	7/23/2021 5:00:16 PM	61498
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**	
Gasoline Range Organics (GRO)	2000	50		mg/Kg	10	7/27/2021 1:12:00 PM	61491
Surr: BFB	685	70-130	S	%Rec	10	7/27/2021 1:12:00 PM	61491
EPA METHOD 8021B: VOLATILES						Analyst: **mb**	
Benzene	4.1	0.25		mg/Kg	10	7/27/2021 1:12:00 PM	61491
Toluene	20	0.50		mg/Kg	10	7/27/2021 1:12:00 PM	61491
Ethylbenzene	73	5.0		mg/Kg	100	7/27/2021 10:51:00 PM	61491
Xylenes, Total	100	9.9		mg/Kg	100	7/27/2021 10:51:00 PM	61491
Surr: 4-Bromofluorobenzene	387	70-130	S	%Rec	10	7/27/2021 1:12:00 PM	61491

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of 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

Analytical Report
Lab Order **2107A10**
Date Reported: **7/29/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland **Client Sample ID:** TP5-20
Project: Roden GD Federal 3 **Collection Date:** 7/19/2021 10:10:00 AM
Lab ID: 2107A10-011 **Matrix:** SOIL **Received Date:** 7/21/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	140	61		mg/Kg	20	7/27/2021 11:47:36 AM	61578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	8800	180		mg/Kg	20	7/23/2021 5:12:08 PM	61498
Motor Oil Range Organics (MRO)	3500	890		mg/Kg	20	7/23/2021 5:12:08 PM	61498
Surr: DNOP	0	70-130	S	%Rec	20	7/23/2021 5:12:08 PM	61498
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**	
Gasoline Range Organics (GRO)	2300	48		mg/Kg	10	7/27/2021 1:32:00 PM	61491
Surr: BFB	720	70-130	S	%Rec	10	7/27/2021 1:32:00 PM	61491
EPA METHOD 8021B: VOLATILES						Analyst: **mb**	
Benzene	10	0.24		mg/Kg	10	7/27/2021 1:32:00 PM	61491
Toluene	19	0.48		mg/Kg	10	7/27/2021 1:32:00 PM	61491
Ethylbenzene	82	4.8		mg/Kg	100	7/27/2021 11:11:00 PM	61491
Xylenes, Total	110	9.6		mg/Kg	100	7/27/2021 11:11:00 PM	61491
Surr: 4-Bromofluorobenzene	403	70-130	S	%Rec	10	7/27/2021 1:32:00 PM	61491

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of 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

Analytical Report
Lab Order **2107A10**
Date Reported: **7/29/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland
Client Sample ID: TP6-S
Project: Roden GD Federal 3
Collection Date: 7/19/2021 11:00:00 AM
Lab ID: 2107A10-012 **Matrix:** SOIL **Received Date:** 7/21/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	7/27/2021 12:00:01 PM	61578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/23/2021 5:23:52 PM	61498
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/23/2021 5:23:52 PM	61498
Surr: DNOP	162	70-130	S	%Rec	1	7/23/2021 5:23:52 PM	61498
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/27/2021 1:52:00 PM	61491
Surr: BFB	133	70-130	S	%Rec	1	7/27/2021 1:52:00 PM	61491
EPA METHOD 8021B: VOLATILES						Analyst: **mb**	
Benzene	ND	0.024		mg/Kg	1	7/27/2021 1:52:00 PM	61491
Toluene	ND	0.049		mg/Kg	1	7/27/2021 1:52:00 PM	61491
Ethylbenzene	ND	0.049		mg/Kg	1	7/27/2021 1:52:00 PM	61491
Xylenes, Total	ND	0.097		mg/Kg	1	7/27/2021 1:52:00 PM	61491
Surr: 4-Bromofluorobenzene	114	70-130		%Rec	1	7/27/2021 1:52:00 PM	61491

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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

Analytical Report
Lab Order **2107A10**
Date Reported: **7/29/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland **Client Sample ID:** TP6-2
Project: Roden GD Federal 3 **Collection Date:** 7/19/2021 11:05:00 AM
Lab ID: 2107A10-013 **Matrix:** SOIL **Received Date:** 7/21/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	7/27/2021 12:12:26 PM	61578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	7/23/2021 5:35:43 PM	61498
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	7/23/2021 5:35:43 PM	61498
Surr: DNOP	104	70-130		%Rec	1	7/23/2021 5:35:43 PM	61498
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/27/2021 2:12:00 PM	61491
Surr: BFB	119	70-130		%Rec	1	7/27/2021 2:12:00 PM	61491
EPA METHOD 8021B: VOLATILES						Analyst: **mb**	
Benzene	ND	0.024		mg/Kg	1	7/23/2021 7:58:00 PM	61491
Toluene	ND	0.049		mg/Kg	1	7/23/2021 7:58:00 PM	61491
Ethylbenzene	ND	0.049		mg/Kg	1	7/23/2021 7:58:00 PM	61491
Xylenes, Total	ND	0.098		mg/Kg	1	7/23/2021 7:58:00 PM	61491
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	1	7/23/2021 7:58:00 PM	61491

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of 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

Analytical Report
Lab Order **2107A10**
Date Reported: **7/29/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland
Client Sample ID: TP7-S
Project: Roden GD Federal 3
Collection Date: 7/19/2021 11:20:00 AM
Lab ID: 2107A10-014 **Matrix:** SOIL **Received Date:** 7/21/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	150	60		mg/Kg	20	7/27/2021 12:24:50 PM	61578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/23/2021 5:47:37 PM	61498
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/23/2021 5:47:37 PM	61498
Surr: DNOP	121	70-130		%Rec	1	7/23/2021 5:47:37 PM	61498
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/27/2021 2:32:00 PM	61491
Surr: BFB	120	70-130		%Rec	1	7/27/2021 2:32:00 PM	61491
EPA METHOD 8021B: VOLATILES						Analyst: **mb**	
Benzene	ND	0.025		mg/Kg	1	7/23/2021 8:17:00 PM	61491
Toluene	ND	0.050		mg/Kg	1	7/23/2021 8:17:00 PM	61491
Ethylbenzene	ND	0.050		mg/Kg	1	7/23/2021 8:17:00 PM	61491
Xylenes, Total	ND	0.099		mg/Kg	1	7/23/2021 8:17:00 PM	61491
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	1	7/23/2021 8:17:00 PM	61491

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of 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

Analytical Report
Lab Order **2107A10**
Date Reported: **7/29/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland **Client Sample ID:** TP7-2
Project: Roden GD Federal 3 **Collection Date:** 7/19/2021 11:25:00 AM
Lab ID: 2107A10-015 **Matrix:** SOIL **Received Date:** 7/21/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	7/27/2021 12:37:14 PM	61578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/23/2021 5:59:30 PM	61498
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/23/2021 5:59:30 PM	61498
Surr: DNOP	123	70-130		%Rec	1	7/23/2021 5:59:30 PM	61498
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/27/2021 2:52:00 PM	61491
Surr: BFB	121	70-130		%Rec	1	7/27/2021 2:52:00 PM	61491
EPA METHOD 8021B: VOLATILES						Analyst: **mb**	
Benzene	ND	0.025		mg/Kg	1	7/23/2021 8:37:00 PM	61491
Toluene	ND	0.050		mg/Kg	1	7/23/2021 8:37:00 PM	61491
Ethylbenzene	ND	0.050		mg/Kg	1	7/23/2021 8:37:00 PM	61491
Xylenes, Total	ND	0.10		mg/Kg	1	7/23/2021 8:37:00 PM	61491
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	7/23/2021 8:37:00 PM	61491

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107A10**
29-Jul-21

Client: GHD Midland
Project: Roden GD Federal 3

Sample ID: **MB-61562** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **61562** RunNo: **80053**
Prep Date: **7/26/2021** Analysis Date: **7/26/2021** SeqNo: **2818288** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-61562** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **61562** RunNo: **80053**
Prep Date: **7/26/2021** Analysis Date: **7/26/2021** SeqNo: **2818289** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.4	90	110			

Sample ID: **MB-61578** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **61578** RunNo: **80089**
Prep Date: **7/27/2021** Analysis Date: **7/27/2021** SeqNo: **2820505** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-61578** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **61578** RunNo: **80089**
Prep Date: **7/27/2021** Analysis Date: **7/27/2021** SeqNo: **2820506** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of 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#: **2107A10**
29-Jul-21

Client: GHD Midland
Project: Roden GD Federal 3

Sample ID: **MB-61492** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **61492** RunNo: **80027**
Prep Date: **7/22/2021** Analysis Date: **7/23/2021** SeqNo: **2816162** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.8		10.00		88.5	70	130			

Sample ID: **LCS-61492** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **61492** RunNo: **80027**
Prep Date: **7/22/2021** Analysis Date: **7/23/2021** SeqNo: **2816163** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	90.8	68.9	141			
Surr: DNOP	4.6		5.000		92.0	70	130			

Sample ID: **MB-61498** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **61498** RunNo: **80027**
Prep Date: **7/22/2021** Analysis Date: **7/23/2021** SeqNo: **2817071** 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	13		10.00		132	70	130			S

Sample ID: **LCS-61498** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **61498** RunNo: **80027**
Prep Date: **7/22/2021** Analysis Date: **7/23/2021** SeqNo: **2817072** Units: **mg/Kg**

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	6.6		5.000		131	70	130			S

Sample ID: **2107A10-007AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **TP3-2** Batch ID: **61498** RunNo: **80027**
Prep Date: **7/22/2021** Analysis Date: **7/23/2021** SeqNo: **2817084** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	8.5	42.48	0	106	15	184			
Surr: DNOP	4.5		4.248		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 Quanitative 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#: **2107A10**
29-Jul-21

Client: GHD Midland
Project: Roden GD Federal 3

Sample ID: **2107A10-007AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **TP3-2** Batch ID: **61498** RunNo: **80027**
Prep Date: **7/22/2021** Analysis Date: **7/23/2021** SeqNo: **2817085** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.8	48.88	0	102	15	184	9.85	23.9	
Surr: DNOP	4.9		4.888		101	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107A10**
29-Jul-21

Client: GHD Midland
Project: Roden GD Federal 3

Sample ID: **mb-61466**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **61466**	RunNo: **80051**							
Prep Date: **7/21/2021**	Analysis Date: **7/23/2021**	SeqNo: **2816709**	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	960		1000		96.4	70	130			

Sample ID: **lcs-61466**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **61466**	RunNo: **80051**							
Prep Date: **7/21/2021**	Analysis Date: **7/23/2021**	SeqNo: **2816710**	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	1000		1000		102	70	130			

Sample ID: **mb-61491**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **61491**	RunNo: **80029**							
Prep Date: **7/22/2021**	Analysis Date: **7/23/2021**	SeqNo: **2818753**	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	1200		1000		120	70	130			

Sample ID: **mb-61496**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **61496**	RunNo: **80029**							
Prep Date: **7/22/2021**	Analysis Date: **7/24/2021**	SeqNo: **2818754**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		113	70	130			

Sample ID: **lcs-61491**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **61491**	RunNo: **80029**							
Prep Date: **7/22/2021**	Analysis Date: **7/23/2021**	SeqNo: **2818755**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.1	78.6	131			
Surr: BFB	1300		1000		127	70	130			

Sample ID: **lcs-61496**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **61496**	RunNo: **80029**							
Prep Date: **7/22/2021**	Analysis Date: **7/24/2021**	SeqNo: **2818757**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1300		1000		126	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of 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#: **2107A10**
29-Jul-21

Client: GHD Midland
Project: Roden GD Federal 3

Sample ID: **2107A10-009ams** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **TP4-2** Batch ID: **61491** RunNo: **80104**
Prep Date: **7/22/2021** Analysis Date: **7/27/2021** SeqNo: **2820637** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.8	24.15	0	91.8	61.3	114			
Surr: BFB	1300		966.2		130	70	130			

Sample ID: **2107A10-009amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **TP4-2** Batch ID: **61491** RunNo: **80104**
Prep Date: **7/22/2021** Analysis Date: **7/27/2021** SeqNo: **2820641** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.9	24.73	0	83.6	61.3	114	7.05	20	
Surr: BFB	1300		989.1		131	70	130	0	0	S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative 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#: **2107A10**
29-Jul-21

Client: GHD Midland
Project: Roden GD Federal 3

Sample ID: **mb-61466** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **61466** RunNo: **80051**
Prep Date: **7/21/2021** Analysis Date: **7/23/2021** SeqNo: **2816768** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.98		1.000		97.7	70	130			

Sample ID: **LCS-61466** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **61466** RunNo: **80051**
Prep Date: **7/21/2021** Analysis Date: **7/23/2021** SeqNo: **2816769** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.0	80	120			
Toluene	0.94	0.050	1.000	0	94.3	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.4	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.8	80	120			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.4	70	130			

Sample ID: **mb-61491** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **61491** RunNo: **80029**
Prep Date: **7/22/2021** Analysis Date: **7/23/2021** SeqNo: **2818955** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.2		1.000		118	70	130			

Sample ID: **mb-61496** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **61496** RunNo: **80029**
Prep Date: **7/22/2021** Analysis Date: **7/24/2021** SeqNo: **2818956** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		112	70	130			

Sample ID: **lcs-61491** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **61491** RunNo: **80029**
Prep Date: **7/22/2021** Analysis Date: **7/23/2021** SeqNo: **2818957** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of 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#: **2107A10**
29-Jul-21

Client: GHD Midland
Project: Roden GD Federal 3

Sample ID: **lcs-61491**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **LCSS**	Batch ID: **61491**	RunNo: **80029**							
Prep Date: **7/22/2021**	Analysis Date: **7/23/2021**	SeqNo: **2818957**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	94.7	80	120			
Toluene	0.95	0.050	1.000	0	95.4	80	120			
Ethylbenzene	0.98	0.050	1.000	0	97.5	80	120			
Xylenes, Total	3.0	0.10	3.000	0	98.4	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		116	70	130			

Sample ID: **lcs-61496**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **LCSS**	Batch ID: **61496**	RunNo: **80029**							
Prep Date: **7/22/2021**	Analysis Date: **7/24/2021**	SeqNo: **2818959**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		114	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of 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

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: **2107A10** RcptNo: 1

Received By: **Desiree Dominguez** **7/21/2021 7:50:00 AM** DD

Completed By: **Desiree Dominguez** **7/21/2021 9:20:01 AM** DD

Reviewed By: JR 7/21/21

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: TMC 7-21-21

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				

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

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 5-day

Project Name: Roden GD Federal #3

Project #: 11230055

Project Manager: Becky Haskell, Tom Larson

Sampler: Zach Comino

On Ice: X Yes ☐ No

# of Coolers: 1

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2107A10	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Chloride Method 300
07/19/21	0745	S	TP1-2	Jar		-001	X	X									X
	0750		TP1-4			-002											
	0755		TP1-6			-003											
	0810		TP2-S			-004											
	0815		TP2-2			-005											
	0820		TP3-S			-006											
	0825		TP3-2			-007											
	0915		TP4-S			-008											
	0920		TP4-2			-009											
	1000		TP5-15			-010											
	1010		TP5-20			-011											
	1100		TP6-S			-012											

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
07/20/21	0800	Zach Comino				
7/20/21	1900			Courier	7/21/21	7:50

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.

Chain-of-Custody Record

2 of 2

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

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 5-day

Project Name: Roden GD Federal #3

Project #: 11230055

Project Manager: Becky Haskell, Tom Larson

Sampler: Zach Comino

On Ice: X Yes ☐ No

# of Coolers: 1

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2107A10
07/21/21	1105	S	TP6-2	Jar		-013
	1120		TP7-5			-014
	1125		TP7-2			-015

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Chloride Method 300
X	X									
										X

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
07/21	0800	Zach Comino			7/20/21	0800
7/21/21	1900			Courier	7/21/21	7:50

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.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

January 03, 2022

Becky Haskell

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

RE: Roden GD Federal OrderNo.: 2112D36

Dear Becky Haskell:

Hall Environmental Analysis Laboratory received 11 sample(s) on 12/23/2021 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 or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2112D36**
Date Reported: **1/3/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland
Client Sample ID: SB-1-5'
Project: Roden GD Federal
Collection Date: 12/20/2021 2:35:00 PM
Lab ID: 2112D36-001 **Matrix:** SOIL **Received Date:** 12/23/2021 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	260	60		mg/Kg	20	12/30/2021 6:58:33 PM	64803
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	11000	180		mg/Kg	20	12/30/2021 12:16:55 AM	64735
Motor Oil Range Organics (MRO)	2300	880		mg/Kg	20	12/30/2021 12:16:55 AM	64735
Surr: DNOP	0	70-130	S	%Rec	20	12/30/2021 12:16:55 AM	64735
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**	
Gasoline Range Organics (GRO)	1100	24		mg/Kg	5	12/28/2021 1:11:00 PM	64725
Surr: BFB	598	70-130	S	%Rec	5	12/28/2021 1:11:00 PM	64725
EPA METHOD 8021B: VOLATILES						Analyst: **mb**	
Benzene	0.60	0.12		mg/Kg	5	12/28/2021 1:11:00 PM	64725
Toluene	7.2	0.24		mg/Kg	5	12/28/2021 1:11:00 PM	64725
Ethylbenzene	25	2.4		mg/Kg	50	12/29/2021 9:39:00 AM	64725
Xylenes, Total	53	0.47		mg/Kg	5	12/28/2021 1:11:00 PM	64725
Surr: 4-Bromofluorobenzene	223	70-130	S	%Rec	5	12/28/2021 1:11:00 PM	64725

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report
Lab Order **2112D36**
Date Reported: **1/3/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland
Project: Roden GD Federal
Lab ID: 2112D36-002 **Matrix:** SOIL

Client Sample ID: SB-1-10'
Collection Date: 12/20/2021 2:40:00 PM
Received Date: 12/23/2021 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	12/30/2021 7:35:36 PM	64803
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	6400	200		mg/Kg	20	12/29/2021 9:06:22 PM	64735
Motor Oil Range Organics (MRO)	1800	1000		mg/Kg	20	12/29/2021 9:06:22 PM	64735
Surr: DNOP	0	70-130	S	%Rec	20	12/29/2021 9:06:22 PM	64735
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**	
Gasoline Range Organics (GRO)	870	48		mg/Kg	10	12/28/2021 1:30:00 PM	64725
Surr: BFB	408	70-130	S	%Rec	10	12/28/2021 1:30:00 PM	64725
EPA METHOD 8021B: VOLATILES						Analyst: **mb**	
Benzene	ND	0.24		mg/Kg	10	12/28/2021 1:30:00 PM	64725
Toluene	0.56	0.48		mg/Kg	10	12/28/2021 1:30:00 PM	64725
Ethylbenzene	21	0.48		mg/Kg	10	12/28/2021 1:30:00 PM	64725
Xylenes, Total	29	0.95		mg/Kg	10	12/28/2021 1:30:00 PM	64725
Surr: 4-Bromofluorobenzene	232	70-130	S	%Rec	10	12/28/2021 1:30:00 PM	64725

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2112D36**
Date Reported: **1/3/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland
Client Sample ID: SB-1-15'
Project: Roden GD Federal
Collection Date: 12/20/2021 2:45:00 PM
Lab ID: 2112D36-003 **Matrix:** SOIL **Received Date:** 12/23/2021 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CAS**
Chloride	ND	60		mg/Kg	20	12/30/2021 7:47:56 PM	64803
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**SB**
Diesel Range Organics (DRO)	5900	190		mg/Kg	20	12/28/2021 4:40:51 PM	64735
Motor Oil Range Organics (MRO)	2100	940		mg/Kg	20	12/28/2021 4:40:51 PM	64735
Surr: DNOP	0	70-130	S	%Rec	20	12/28/2021 4:40:51 PM	64735
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**mb**
Gasoline Range Organics (GRO)	740	25		mg/Kg	5	12/28/2021 2:49:00 PM	64725
Surr: BFB	558	70-130	S	%Rec	5	12/28/2021 2:49:00 PM	64725
EPA METHOD 8021B: VOLATILES						Analyst:	**mb**
Benzene	0.30	0.12		mg/Kg	5	12/28/2021 2:49:00 PM	64725
Toluene	0.48	0.25		mg/Kg	5	12/28/2021 2:49:00 PM	64725
Ethylbenzene	21	0.25		mg/Kg	5	12/28/2021 2:49:00 PM	64725
Xylenes, Total	28	0.49		mg/Kg	5	12/28/2021 2:49:00 PM	64725
Surr: 4-Bromofluorobenzene	212	70-130	S	%Rec	5	12/28/2021 2:49:00 PM	64725

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2112D36**
Date Reported: **1/3/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland
Client Sample ID: SB-1-20'
Project: Roden GD Federal
Collection Date: 12/20/2021 2:50:00 PM
Lab ID: 2112D36-004 **Matrix:** SOIL **Received Date:** 12/23/2021 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	130	61		mg/Kg	20	12/30/2021 8:00:17 PM	64803
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	7800	190		mg/Kg	20	12/28/2021 4:51:35 PM	64735
Motor Oil Range Organics (MRO)	2500	950		mg/Kg	20	12/28/2021 4:51:35 PM	64735
Surr: DNOP	0	70-130	S	%Rec	20	12/28/2021 4:51:35 PM	64735
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**	
Gasoline Range Organics (GRO)	830	50		mg/Kg	10	12/28/2021 3:09:00 PM	64725
Surr: BFB	396	70-130	S	%Rec	10	12/28/2021 3:09:00 PM	64725
EPA METHOD 8021B: VOLATILES						Analyst: **mb**	
Benzene	0.31	0.25		mg/Kg	10	12/28/2021 3:09:00 PM	64725
Toluene	ND	0.50		mg/Kg	10	12/28/2021 3:09:00 PM	64725
Ethylbenzene	22	0.50		mg/Kg	10	12/28/2021 3:09:00 PM	64725
Xylenes, Total	31	1.0		mg/Kg	10	12/28/2021 3:09:00 PM	64725
Surr: 4-Bromofluorobenzene	224	70-130	S	%Rec	10	12/28/2021 3:09:00 PM	64725

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report
Lab Order **2112D36**
Date Reported: **1/3/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland
Client Sample ID: SB-1-25'
Project: Roden GD Federal
Collection Date: 12/20/2021 2:55:00 PM
Lab ID: 2112D36-005 **Matrix:** SOIL **Received Date:** 12/23/2021 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	960	61		mg/Kg	20	12/30/2021 8:12:39 PM	64803
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	2300	91		mg/Kg	10	12/29/2021 9:27:27 PM	64735
Motor Oil Range Organics (MRO)	590	460		mg/Kg	10	12/29/2021 9:27:27 PM	64735
Surr: DNOP	0	70-130	S	%Rec	10	12/29/2021 9:27:27 PM	64735
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**	
Gasoline Range Organics (GRO)	840	49		mg/Kg	10	12/28/2021 3:29:00 PM	64725
Surr: BFB	321	70-130	S	%Rec	10	12/28/2021 3:29:00 PM	64725
EPA METHOD 8021B: VOLATILES						Analyst: **mb**	
Benzene	ND	0.25		mg/Kg	10	12/28/2021 3:29:00 PM	64725
Toluene	8.4	0.49		mg/Kg	10	12/28/2021 3:29:00 PM	64725
Ethylbenzene	17	0.49		mg/Kg	10	12/28/2021 3:29:00 PM	64725
Xylenes, Total	33	0.99		mg/Kg	10	12/28/2021 3:29:00 PM	64725
Surr: 4-Bromofluorobenzene	191	70-130	S	%Rec	10	12/28/2021 3:29:00 PM	64725

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2112D36**
Date Reported: **1/3/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland
Client Sample ID: SB-1-30'
Project: Roden GD Federal
Collection Date: 12/20/2021 3:00:00 PM
Lab ID: 2112D36-006 **Matrix:** SOIL **Received Date:** 12/23/2021 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	2000	61		mg/Kg	20	12/30/2021 8:24:59 PM	64803
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	920	48		mg/Kg	5	12/30/2021 12:38:15 AM	64735
Motor Oil Range Organics (MRO)	410	240		mg/Kg	5	12/30/2021 12:38:15 AM	64735
Surr: DNOP	71.4	70-130		%Rec	5	12/30/2021 12:38:15 AM	64735
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**	
Gasoline Range Organics (GRO)	470	24		mg/Kg	5	12/28/2021 3:48:00 PM	64725
Surr: BFB	325	70-130	S	%Rec	5	12/28/2021 3:48:00 PM	64725
EPA METHOD 8021B: VOLATILES						Analyst: **mb**	
Benzene	0.23	0.12		mg/Kg	5	12/28/2021 3:48:00 PM	64725
Toluene	4.5	0.24		mg/Kg	5	12/28/2021 3:48:00 PM	64725
Ethylbenzene	8.1	0.24		mg/Kg	5	12/28/2021 3:48:00 PM	64725
Xylenes, Total	20	0.47		mg/Kg	5	12/28/2021 3:48:00 PM	64725
Surr: 4-Bromofluorobenzene	147	70-130	S	%Rec	5	12/28/2021 3:48:00 PM	64725

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report
Lab Order **2112D36**
Date Reported: **1/3/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland
Project: Roden GD Federal
Lab ID: 2112D36-007 **Matrix:** SOIL

Client Sample ID: SB-1-35'
Collection Date: 12/20/2021 3:05:00 PM
Received Date: 12/23/2021 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	700	60		mg/Kg	20	12/30/2021 8:37:20 PM	64803
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	5500	96		mg/Kg	10	12/29/2021 9:48:33 PM	64735
Motor Oil Range Organics (MRO)	730	480		mg/Kg	10	12/29/2021 9:48:33 PM	64735
Surr: DNOP	0	70-130	S	%Rec	10	12/29/2021 9:48:33 PM	64735
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**	
Gasoline Range Organics (GRO)	2700	94		mg/Kg	20	12/28/2021 4:08:00 PM	64725
Surr: BFB	309	70-130	S	%Rec	20	12/28/2021 4:08:00 PM	64725
EPA METHOD 8021B: VOLATILES						Analyst: **mb**	
Benzene	2.9	0.47		mg/Kg	20	12/28/2021 4:08:00 PM	64725
Toluene	45	0.94		mg/Kg	20	12/28/2021 4:08:00 PM	64725
Ethylbenzene	34	0.94		mg/Kg	20	12/28/2021 4:08:00 PM	64725
Xylenes, Total	95	1.9		mg/Kg	20	12/28/2021 4:08:00 PM	64725
Surr: 4-Bromofluorobenzene	140	70-130	S	%Rec	20	12/28/2021 4:08:00 PM	64725

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2112D36**
Date Reported: **1/3/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland
Client Sample ID: SB-1-40'
Project: Roden GD Federal
Collection Date: 12/20/2021 3:10:00 PM
Lab ID: 2112D36-008 **Matrix:** SOIL **Received Date:** 12/23/2021 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	330	60		mg/Kg	20	12/30/2021 8:49:41 PM	64803
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	6400	100		mg/Kg	10	12/28/2021 5:34:36 PM	64735
Motor Oil Range Organics (MRO)	1500	500		mg/Kg	10	12/28/2021 5:34:36 PM	64735
Surr: DNOP	0	70-130	S	%Rec	10	12/28/2021 5:34:36 PM	64735
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**	
Gasoline Range Organics (GRO)	2600	50		mg/Kg	10	12/28/2021 4:28:00 PM	64725
Surr: BFB	467	70-130	S	%Rec	10	12/28/2021 4:28:00 PM	64725
EPA METHOD 8021B: VOLATILES						Analyst: **mb**	
Benzene	4.6	0.25		mg/Kg	10	12/28/2021 4:28:00 PM	64725
Toluene	46	5.0		mg/Kg	100	12/29/2021 9:58:00 AM	64725
Ethylbenzene	38	0.50		mg/Kg	10	12/28/2021 4:28:00 PM	64725
Xylenes, Total	100	0.99		mg/Kg	10	12/28/2021 4:28:00 PM	64725
Surr: 4-Bromofluorobenzene	186	70-130	S	%Rec	10	12/28/2021 4:28:00 PM	64725

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2112D36**
Date Reported: **1/3/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland
Client Sample ID: SB-1-45'
Project: Roden GD Federal
Collection Date: 12/20/2021 3:15:00 PM
Lab ID: 2112D36-009 **Matrix:** SOIL **Received Date:** 12/23/2021 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	120	60		mg/Kg	20	12/30/2021 9:02:01 PM	64803
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	380	9.4		mg/Kg	1	12/29/2021 10:09:38 PM	64735
Motor Oil Range Organics (MRO)	110	47		mg/Kg	1	12/29/2021 10:09:38 PM	64735
Surr: DNOP	88.4	70-130		%Rec	1	12/29/2021 10:09:38 PM	64735
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**	
Gasoline Range Organics (GRO)	9.4	4.9		mg/Kg	1	12/29/2021 10:18:00 AM	64725
Surr: BFB	157	70-130	S	%Rec	1	12/29/2021 10:18:00 AM	64725
EPA METHOD 8021B: VOLATILES						Analyst: **mb**	
Benzene	ND	0.024		mg/Kg	1	12/29/2021 10:18:00 AM	64725
Toluene	ND	0.049		mg/Kg	1	12/29/2021 10:18:00 AM	64725
Ethylbenzene	0.069	0.049		mg/Kg	1	12/29/2021 10:18:00 AM	64725
Xylenes, Total	0.12	0.098		mg/Kg	1	12/29/2021 10:18:00 AM	64725
Surr: 4-Bromofluorobenzene	95.2	70-130		%Rec	1	12/29/2021 10:18:00 AM	64725

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2112D36**
Date Reported: **1/3/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland
Client Sample ID: SB-1-50'
Project: Roden GD Federal
Collection Date: 12/20/2021 3:30:00 PM
Lab ID: 2112D36-010 **Matrix:** SOIL **Received Date:** 12/23/2021 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	120	60		mg/Kg	20	12/30/2021 9:14:22 PM	64803
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	700	9.8		mg/Kg	1	12/28/2021 5:55:53 PM	64735
Motor Oil Range Organics (MRO)	180	49		mg/Kg	1	12/28/2021 5:55:53 PM	64735
Surr: DNOP	114	70-130		%Rec	1	12/28/2021 5:55:53 PM	64735
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**	
Gasoline Range Organics (GRO)	24	4.9		mg/Kg	1	12/28/2021 5:07:00 PM	64725
Surr: BFB	165	70-130	S	%Rec	1	12/28/2021 5:07:00 PM	64725
EPA METHOD 8021B: VOLATILES						Analyst: **mb**	
Benzene	ND	0.024		mg/Kg	1	12/28/2021 5:07:00 PM	64725
Toluene	0.061	0.049		mg/Kg	1	12/28/2021 5:07:00 PM	64725
Ethylbenzene	0.17	0.049		mg/Kg	1	12/28/2021 5:07:00 PM	64725
Xylenes, Total	0.42	0.098		mg/Kg	1	12/28/2021 5:07:00 PM	64725
Surr: 4-Bromofluorobenzene	114	70-130		%Rec	1	12/28/2021 5:07:00 PM	64725

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report
Lab Order **2112D36**
Date Reported: **1/3/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland
Client Sample ID: SB-1-55'
Project: Roden GD Federal
Collection Date: 12/20/2021 3:45:00 PM
Lab ID: 2112D36-011 **Matrix:** SOIL **Received Date:** 12/23/2021 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	12/30/2021 10:16:06 PM	64803
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	12/28/2021 6:06:30 PM	64735
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	12/28/2021 6:06:30 PM	64735
Surr: DNOP	95.1	70-130		%Rec	1	12/28/2021 6:06:30 PM	64735
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **mb**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/28/2021 5:27:00 PM	64725
Surr: BFB	94.3	70-130		%Rec	1	12/28/2021 5:27:00 PM	64725
EPA METHOD 8021B: VOLATILES						Analyst: **mb**	
Benzene	ND	0.024		mg/Kg	1	12/28/2021 5:27:00 PM	64725
Toluene	ND	0.048		mg/Kg	1	12/28/2021 5:27:00 PM	64725
Ethylbenzene	ND	0.048		mg/Kg	1	12/28/2021 5:27:00 PM	64725
Xylenes, Total	ND	0.097		mg/Kg	1	12/28/2021 5:27:00 PM	64725
Surr: 4-Bromofluorobenzene	80.6	70-130		%Rec	1	12/28/2021 5:27:00 PM	64725

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2112D36**

03-Jan-22

Client: GHD Midland

Project: Roden GD Federal

Sample ID: **MB-64803**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **64803**	RunNo: **84894**
Prep Date: **12/30/2021**	Analysis Date: **12/30/2021**	SeqNo: **2986415** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-64803**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **64803**	RunNo: **84894**
Prep Date: **12/30/2021**	Analysis Date: **12/30/2021**	SeqNo: **2986416** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2112D36**

03-Jan-22

Client: GHD Midland

Project: Roden GD Federal

Sample ID: **LCS-64735**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **64735**	RunNo: **84808**
Prep Date: **12/27/2021**	Analysis Date: **12/28/2021**	SeqNo: **2983329** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	10	50.00	0	103	68.9	135			
Surr: DNOP	5.8		5.000		117	70	130			

Sample ID: **MB-64735**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **64735**	RunNo: **84859**
Prep Date: **12/27/2021**	Analysis Date: **12/29/2021**	SeqNo: **2985227** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.2		10.00		91.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2112D36**

03-Jan-22

Client: GHD Midland

Project: Roden GD Federal

Sample ID: **mb-64725**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **64725**	RunNo: **84821**
Prep Date: **12/23/2021**	Analysis Date: **12/28/2021**	SeqNo: **2983480** 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	880		1000		88.0	70	130			

Sample ID: **lcs-64725**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **64725**	RunNo: **84821**
Prep Date: **12/23/2021**	Analysis Date: **12/28/2021**	SeqNo: **2983482** 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	102	78.6	131			
Surr: BFB	1100		1000		108	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2112D36**

03-Jan-22

Client: GHD Midland

Project: Roden GD Federal

Sample ID: **mb-64725**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **64725**	RunNo: **84821**
Prep Date: **12/23/2021**	Analysis Date: **12/28/2021**	SeqNo: **2983529** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.78		1.000		78.2	70	130			

Sample ID: **lcs-64725**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **64725**	RunNo: **84821**
Prep Date: **12/23/2021**	Analysis Date: **12/28/2021**	SeqNo: **2983531** Units: **mg/Kg**

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	89.0	80	120			
Ethylbenzene	0.88	0.050	1.000	0	88.3	80	120			
Xylenes, Total	2.6	0.10	3.000	0	86.0	80	120			
Surr: 4-Bromofluorobenzene	0.77		1.000		77.4	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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 2112D36 | RcptNo: 1

Received By: Isaiah Ortiz 12/23/2021 7:40:00 AM I_OL

Completed By: Isaiah Ortiz 12/23/2021 9:00:34 AM I_OL

Reviewed By: KPA 12/23/21 KPA 12/23/21

Chain of Custody

1. Is Chain of Custody complete? JM 12/23/21 — Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

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

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

Adjusted? _____

Checked by: KPA 12/23/21

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	0.9	Good	Not Present			
2	4.7	Good	Not Present			

Chain-of-Custody Record

Client: XTO

Mailing Address: 324 W. Main St Suite 108
Artesia NM

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 5 Days

Project Name: Rodeo GD Federal

Project #: 11230055

Project Manager: Becky Haskell

Sampler: LM

On Ice: ☒ Yes ☐ No

# of Coolers: 2 1.0°C -0.1 (CF) 0.9°C

Cooler Temp (including CF) 4.8°C -0.1 (CF) 4.7°C (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2117D36	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Chloride E 300
12/20/21	1435	S	SB-1-5'	1		001	X	X									X
	1440		SB-1-10'			002	X	X									X
	1445		SB-1-15'			003	X	X									X
	1450		SB-1-20'			004	X	X									X
	1455		SB-1-25'			005	X	X									X
	1500		SB-1-30'			006	X	X									X
	1505		SB-1-35'			007	X	X									X
	1510		SB-1-40'			008	X	X									X
	1515		SB-1-45'			009	X	X									X
	1530		SB-1-50'			010	X	X									X
	1545		SB-1-55'			011	X	X									X

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
12/22/21	1200				12/22/21	1200
12/22/21	1900			courier	12/23/21	0740

Remarks:

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

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

Operator:	OGRID:
EOG RESOURCES INC P.O. Box 2267 Midland, TX 79702	7377
	Action Number: 90256
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Remediation Plan Approved with Conditions. Please track and report volumes of microbial strain injected into the subsurface. OCD recommends confirmation sampling occur 60 days after last injection event. Please advance confirmation soil borings adequately between injection points.	3/18/2022