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	nAPP2112055203
District RP	
Facility ID	
Application ID	

# **Release Notification**

## **Responsible Party**

,			OGRID 73			
Contact Name Chase Settle		Contact Te	elephone 575-748-1471			
Contact ema	<sup>il</sup> Chase_	Settle@eogre	sources.com	1	Incident # (	(assigned by OCD) nAPP2112055203
Contact mail	ling address	104 S. 4th Str	eet, Artesia,	NM 8		
					Release So	ource
Latitude 32	.42609				Longitude _	-104.54400
			(NAD 83 in d	lecimal de	grees to 5 decim	nal places)
Site Name B	rannigan	ANF Federal	Battery		Site Type B	Battery
Date Release	Discovered	04/13/2021	· · · · · · · · · · · · · · · · · · ·		API# (if appl	
	_	_	T - D	1		
Unit Letter	Section	Township	Range		Coun	.ty
D 06 22S 24E Eddy		У				
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 Oi		Volume Release	ed (bbls) Unkno	wn		Volume Recovered (bbls) 0
Produced	Produced Water Volume Released (bbls)			Volume Recovered (bbls)		
Is the concentration of dissolved chloride in produced water >10,000 mg/l?		e in the	☐ 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 Unknown historical release, no known volume or date. Release area is within the battery berm where oil tanks were. Area discovered 4/13/21, but could not access for investigation due to P&A activities until 4/27/21.						

Received by OCD: 10/1/2021 5:03:50 AM Form C-141 State of New Mexico Page 2 Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the respon	sible party consider this a major release?	
☐ Yes ☑ No			
If YES, was immediate no	otice given to the OCD? By whom? To wh	om? When and by what means (phone, email, etc)?	
	Initial Ro	esponse	
The responsible	party must undertake the following actions immediatel	y unless they could create a safety hazard that would result in injury	
☐ The source of the rele	ease has been stopped.		
☑ The impacted area ha	s been secured to protect human health and	the environment.	
Released materials ha	ave been contained via the use of berms or d	ikes, absorbent pads, or other containment devices.	
All free liquids and re	ecoverable materials have been removed and	l managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:			
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.			
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.			
Printed Name: Chase	Settle	Title: Rep Safety & Environmental Sr	
Signature: Than	o Vettu	Date: 04/30/2021	
email: Chase_Settle	@eogresources.com	Telephone: <u>575-748-1471</u>	
OCD Only			
Received by:		Date:	

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Incident ID	nAPP2112055203
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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?	Unknown (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 X No	
Are the lateral extents of the release within 300 feet of a wetland?	Yes X 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?	X Yes No	
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes 🏻 No	
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	Yes X 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.		
<ul> <li>Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.</li> <li>Field data</li> <li>Data table of soil contaminant concentration data</li> <li>Depth to water determination</li> <li>Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release</li> <li>Boring or excavation logs</li> <li>Photographs including date and GIS information</li> <li>Topographic/Aerial maps</li> <li>Laboratory data including chain of custody</li> </ul>		

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.

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nAPP21120552	03		

Incident ID	nAPP2112055203
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Printed Name: Chase Settle	Title: Rep Safety & Environmental Sr	
Printed Name: Chase Settle Signature: Signature:	Date: 09/30/2021	
email: Chase_Settle@eogresources.com	Telephone: 575-748-1471	
OCD Only		
Received by:	Date:	

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	1 1180 0 0 7 2
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# **Remediation Plan**

Remediation Plan Checklist: Each of the following items must be included in the plan.		
<ul> <li>☑ Detailed description of proposed remediation technique</li> <li>☑ Scaled sitemap with GPS coordinates showing delineation points</li> <li>☑ Estimated volume of material to be remediated</li> <li>☑ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC</li> <li>☑ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)</li> </ul>		
Deferral Requests Only: Each of the following items must be conjugated	firmed 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: The Sittle	Date:09/30/2021	
email: Chase_Settle@eogresources.com	Telephone: 575-748-1471	
OCD Only		
Received by: Chad Hensley	Date:	
Approved with Attached Conditions of A	Approval Denied Deferral Approved	
Signature:	Date: 10/15/2021	

2135 S. Loop 250 W, Midland, Texas 79703 United States www.ghd.com GHD<sup>204</sup>

Our ref: 11228319

**September 24, 2021** 

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

Re: Site Characterization and Remediation Work Plan (Backfill Request)

**Brannigan ANF Federal Battery Release Site** 

**EOG Resources Inc.** 

Incident ID: nAPP2112055203

D-06-22S-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 Remediation Work Plan (Backfill Request) to the New Mexico Oil Conservation Division (NMOCD) District 2 Office. This Report provides documentation of delineation, sampling, analyses, and remedial activities in the affected areas at the EOG Brannigan ANF Federal Battery Release Site (Site). The Site is located in Unit Letter D Section 06 of Township 22 South and Range 24 East in Eddy County, New Mexico. The GPS coordinates for the release site are 32.42609 N latitude and 104.54400 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 Figures 2 and 3, respectively.

# 2. Background Information

A C-141 initial report for this release was submitted to the NMOCD on April 30, 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 Initial Form C-141, Site Assessment/Characterization and Remediation Plan portions of Form C-141 for Incident Number nAPP2112055203 are attached to the front of this report.

## 3. Groundwater and Site Characterization

GHD characterized the Site according to Table 1, Closure Criteria for Soils Impacted by a Release, from New Mexico Administrative Code (NMAC) Title 19, Chapter 15, Part 29, Section 12 (NMAC 19.15.29.12). The release falls under the jurisdiction of the NMOCD District 2 in Artesia, New Mexico.

According to the Site characterization evaluation and 19.15.29.12.C(4)(a)(i) the Site is located within an area of high karst potential so the release must be treated as if it occurred less than 50 feet from groundwater. No other receptors (water wells, playas, wetlands, waterways, lakebeds or ordinance boundaries) were located within each specific boundaries or distance from the Site. No groundwater data could be located within one-half mile of the Site. The Site characterization documentation (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.)
High Karst Potential Area	Unknown, Treated as <50 ft.

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

Constituent	Limits
Chloride	600 mg/kg
TPH (GRO+DRO+MRO)	100 mg/kg
TPH (GRO+DRO)	N/A
Benzene	10mg/kg
BTEX	50 mg/kg

# 4. Initial Soil Delineation Assessment Summary and Findings

On May 18, 2021, GHD Services Inc. (GHD) and EOG's contractor BDS Enterprise, LLC (BDS), on behalf of EOG, installed eight (8) test pits and one (1) hand boring within the former tank battery containment at the site. The test pit and hand boring locations were excavated to approximately three (3) feet below ground surface (bgs) with samples collected from the bottom of the test pits and hand boring.

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. Seven (7) of nine (9) soil samples exceeded applicable NMAC Table 3.1 Closure Criteria: TP-1, TP-2, TP-3, TP-5, TP-6, TP-7 and HA-1. Figure 2, Initial Site Assessment: Analytical Results Map, depicts the locations of the initial delineation samples and analytical concentrations. Analytical results are provided in Table 1, on Figure 2, and in the Laboratory Analytical Reports provided in Attachment C.

## 5. Excavation, Waste Management and Confirmation Sampling

Due to the preliminary soil sampling activities exhibiting TPH and Chloride exceedance above the closure criteria in the above Table 3.1 values, GHD and BDS returned to the site on June 7, 2021, to excavate the affected soils. Confirmation soil samples (SW-1, SW-2, SW-3, BH-1, BH-2, BH-3, BH-4, BH-5 and BH-6) were

→ The Power of Commitment

collected on June 9, 2021, after a confirmation sampling notification was submitted to the NMOCD two business days prior. All confirmation samples were taken to HEAL in Albuquerque, New Mexico and analyzed for BTEX by EPA Method 8021B, TPH by Method 8015B Modified, and chloride by EPA Method 300. Analytical results indicated that confirmation soil sample BH-2 through BH-4, BH-6 and SW-1 exhibited TPH concentration above Table 1 closure criteria. Confirmation samples collected represented areas no greater than two hundred (200) square feet. Laboratory Analytical Reports and Chain-of-Custody Documentation are provided in Attachment C. Analytical results are summarized in Attached Table 1.

On June 15, 2021 through June 24, 2021, GHD and Culberson Construction Energy Services (CCI) returned to the site, to conduct further remediation activities. Composite confirmation samples were collected by use of a trackhoe which assisted in scrapping collectable samples off bedrock encountered past three (3) feet bgs. Thirty-four (34) bottom hole (BH-7 through BH-40) and twenty-two (22) sidewall (SW-3 through SW-25) samples were collected from areas representing no more than 200 square feet. Samples were then taken to HEAL in Albuquerque, New Mexico. Analytical results for all samples collected indicated twelve (12) bottom hole (BH-2, BH-3 BH-4, BH-6, BH-7, BH-9 through BH-13, BH-15 and BH-29) and five (5) sidewall (SW-1, SW-5, SW-11, SW-17 and SW-18) samples had Total TPH or chloride concentrations exceeding Table 1 closure criteria. No samples exhibited benzene or BTEX concentrations above Table 1 closure criteria.

On July 8, 2021, GHD and CCI returned to the site after further remediation activities to re-sample the eastern portion of the excavation. Two (2) bottom hole (BH-3A and BH-4A) and three (3) sidewall (SW-1A, SW-5A and SW-11A) samples were collected from areas no greater than 200 square feet and were submitted to HEAL in Albuquerque, New Mexico. Analytical results indicated four (4) samples (BH-4A, SW-1A, SW-5A and SW-11A) still had Total TPH concentrations exceeding Table 1 closure criteria.

GHD and CCI returned to the site on July 16, 2021, to conduct further remediation activities and to re-sample areas that had previously exceeded Table 1 closure criteria. Composite confirmation samples were collected by use of a trackhoe to gather collectable samples from bedrock. The bedrock was swept free of debris before any samples were collected. Twelve (12) bottom hole (BH-2A, BH-4B, BH-6A, BH-7A, BH-9A through BH-13A, BH-15A, BH-29A and BH-41) and six (6) sidewall (SW-1B, SW-5B, SW-11B, SW-17A, SW-18A and SW-26) samples were collected from areas representing no more than 200 square feet. Samples were than taken to HEAL in Albuquerque, New Mexico. Analytical results indicated chloride, TPH, Benzene and BTEX concentrations were below Table 1 closure criteria. All final soil confirmation soil samples collected from the excavation were below Table 1 closure criteria.

Waste Management activities were performed in coordination with EOG directives. EOG obtained regulatory approval via the successful processing of Form C-138 Request for Approval to Accept Solid Waste. The waste was approved for acceptance at the OCD-permitted (WM-1-035), Lea Land, LLC facility located at MM64, Highway 62/180 East, Carlsbad, NM, 88220. Approximately 4,741 tons of impacted soil and rock were disposed at Lea Land, LLC, the waste manifest from June 8 through July 26, 2021. Shipping manifests are available upon request and aren't included in this report due to size of the file. A Daily Disposal Summary is provided as Table 2. The Approved C-138 is provided in Attachment D.

## 6. nAPP2112055203 Proposed Work Plan

To conclude, all composite confirmation samples were analyzed for BTEX by EPA Method 8021B, TPH by Method 8015B Modified, and chloride by EPA Method 300. Confirmation sample locations represented areas no greater than 200 square feet and final confirmation samples exhibited concentrations below Table 1 closure criteria. The excavation remains un-backfilled. Photos of excavation are provided in attachment B.

Site Characterization, soil delineation, and remediation activities for incident number nAPP2112055203 have been performed in accordance with applicable NMOCD guidance and regulations. Based upon supporting documentation provided in this report, GHD, on behalf of EOG, respectfully requests to backfill the excavation with clean non-impacted material so site reclamation can be completed.

→ The Power of Commitment

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

Sincerely,

**GHD** 

Becky Haskell

Senior Project Manager

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

Thomas Clayon

BH/tl/1

Encl. Figure 1 – Site Location Map

Rebecca Haskell

Figure 2 - Initial Site Assessment: Analytical Results Map

Figure 3 - Confirmation Sampling: Soil Analytical Results Map

Table 1 – Summary of Soil Analytical Data

Table 2 - Daily Disposal Summary

Attachment A – Site Characterization Documentation

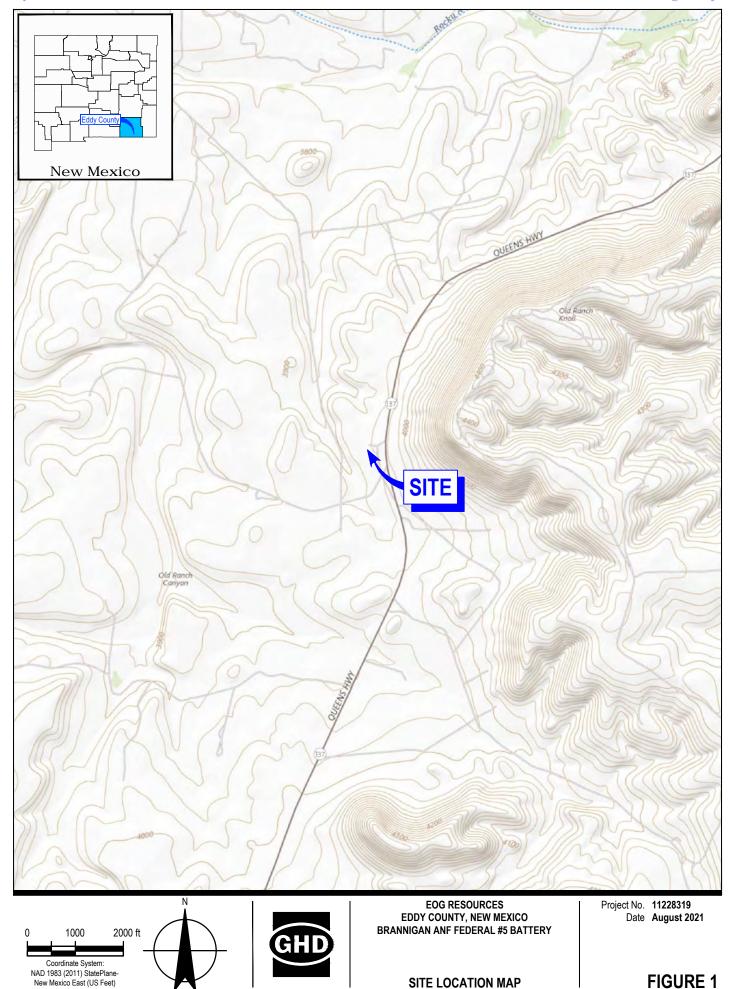
Attachment B – Photographic Log

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

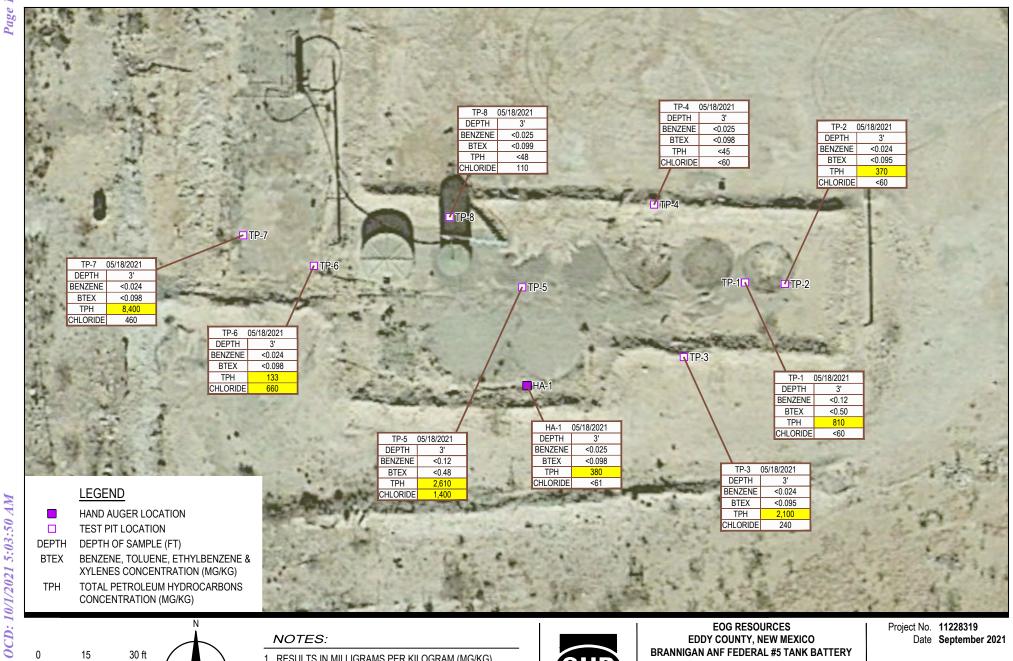
Attachment D - Approved C-138

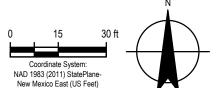
cc: Chase Settle

Figures









#### NOTES:

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

**EDDY COUNTY, NEW MEXICO BRANNIGAN ANF FEDERAL #5 TANK BATTERY** 

> **INITIAL SITE ASSESSMENT: ANALYTICAL RESULTS MAP**

Date September 2021

FIGURE 2



Coordinate System

NAD 1983 (2011) StatePlane

New Mexico East (US Feet)

< 0.025 6/9/2021 -<60 < 0.025 < 0.098 <49 <60 **⊲60** <0.025 <60 7/8/2021 < 0.099 ≤0.025 <0.099 <60⁻ ≤0.025 ≤0.099 < 0.023 <60 < 0.092 <46 <0.025 <60 ≤0.099 **≪60** 6/9/2021 ≤0.025 7/16/2021 <0.023 <0.094 <48 <60 6/45/21 ≤0.024 ≤0:097 **~60** 7/16/21 < 0.023 < 0.091 <60 <49 6/15/21 < 0.023 < 0.094 6/15/21 <0:025 ≈0:099 <60 <0.024 <0.098 <60 ≤0.025 **<60** < 0.094 <60 6/15/21 ≤0:025 ~59 <60 6/15/21 =0.024 280 < 0.093 <47 <49 6/15/21 67 ≤0.024 140 ≤0.099 6/45/21 6-7 ≤0:025 1.390 69 <0.023 <59 6/16/21 < 0.024 < 0.095 <60 <48 <0.025 < 0.10 <47 <60 < 0.024 <0.096 <61 6/16/21 < 0.12 < 0.46 <60 6/17/21 <0.025 <0.098 <60 6/17/21 < 0.024 < 0.097 3-4' 66 6/17/21 3-4' <0.023 <0.092 <60 6/18/21 < 0.024 < 0.096 <59 6/18/21 <0.024 <0.095 6/18/21 <0.024 <0.095 <48 81 6/18/21 <0.023 <0.094 <48 <60 < 0.024 < 0.097 <60 < 0.025 <0.098 6/21/21 5.5-6.5 360 580 7/16/21 6.5' <0.023 <48 <60 6/21/21 <0.025 < 0.099 <47 <60 <0.025 < 0.010 <47 <60 <0.024 <0.097 <60 < 0.024 < 0.094 <60 6/21/21 <0.025 <0.098 <48 <60 6/24/21 <0.024 <0.097 <47 160 6/24/21 <0.024 < 0.095 <47 300 < 0.024 < 0.097 6/24/21 300 6/24/21 < 0.025 < 0.099 <49 370 6/24/21 < 0.024 <0.098 6.5 420 6/24/21 < 0.024 < 0.095 <43 310 7/16/21 EOG RESOURCES Project No. 11228319 **EDDY COUNTY, NEW MEXICO** Date September 2021

Table I Closure Criteria for Soils <50 feet Depth to

Filename: \lghdnet\ghd\US\Midland\Projects\1562\11228319\Digital\_Design\ACAD 2018\Figures\RPT001\11228319-GHD-0000-RPT-EN-0102\_DL-001.dwg
Plot Date: 24 September 2021 8:39 AM

1. RESULTS IN MILLIGRAMS PER KILOGRAM (MG/KG).

3. YELLOW SHADED CELLS INDICATE EXCEEDANCE

2. SEE TABLE 1 FOR FULL ANALYTICAL RESULTS/DETAILS.

SURFACE SAMPLE POINT EXCAVATED

INDICATES SIDE WALL COMPOSITE SAMPLE

INDICATES SIDE WALL COMPOSITE SAMPLE

INDICATES SIDE WALL COMPOSITE SAMPLE

Data Source: Image © 2021 Google - Imagery Date: December 21, 2019 Lat/Long: 32.20029° North, 104.15024° West

FIGURE 3

**BRANNIGAN ANF FEDERAL #5 BATTERY** 

**CONFIRMATION SAMPLING:** 

**SOIL ANALYTICAL RESULTS MAP** 

Tables

Page 1 of 4

# Table 1 Summary of Soil Analytical Data Brannigan ANF Federal 5 Battery EOG Resources Eddy County, New Mexico

										TPH		
	Sample	Depth	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	GRO (C6-C10)	DRO (C10-C28)	MRO (C28- C35)	Total GRO/DRO/MRO	Chloride
Sample ID	Date	(feet bgs)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
			40		Table I C	losure Criteria		et Depth to Gro		.29 NMAC	400 116	C00 ///
			10 mg/Kg		Initial Assessme	nt Samples - Ra	50 mg/Kg				100 mg/Kg	600 mg/Kg
TP-1	5/18/21	3	<0.12	<0.25	<0.25	<0.50	<0.50	<25	330	480	810	<60
TP-2	5/18/21	3	<0.024	<0.048	<0.048	<0.095	<0.095	<4.8	150	220	370	<60
		-								-		
TP-3	5/18/21	3	<0.024	<0.048	<0.048	<0.095	<0.095	<4.8	600	1,500	2,100	240
TP-4	5/18/21	3	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<9.0	<45	<45	<60
TP-5	5/18/21	3	<0.12	<0.24	<0.24	<0.48	<0.48	60	1,700	850	2,610	1,400
TP-6	5/18/21	3	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	48	85	133	660
TP-7	5/18/21	3	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	4,600	3,800	8,400	460
TP-8	5/18/21	3	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<9.6	<48	<48	110
HA-1	5/18/21	3	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	110	270	380	<61
					Confire	mation Samples				_		
BH-1	6/9/2021	11'	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<9.7	<48	<48	130
BH-2	6/9/2021	3-4	0.12	0.25	0.25	<del>0.49</del>	0.49	-25	210	250	460	<del></del>
BH-2A	7/16/2021	11'	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<9.8	<49	<49	<60
BH-3	6/9/2021	34	≤ <del>0.02</del> 5	<u> </u>	<u>≤0.050</u>	<del></del>	<u>√99.099</u>	5.0	97	160	257	60
BH-3A	7/8/2021	11'	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<9.8	<49	<49	<60
BH-4	6/9/2021	34	<del>≤0.02</del> 5	<del>0.04</del> 9	<del>&lt;0.04</del> 9	<del>20.099</del>	<del></del>	4.9	300	480	780	
BH-4A	7/8/ <del>20</del> 21	10	≤ <del>0.02</del> 5	<del>0.0</del> 50	<del>0.0</del> 50	<del></del>	<del></del>	₹5.0	180	160	340	
BH-4B	7/16/2021	11'	<0.023	<0.046	<0.046	<0.092	<0.092	<4.6	<9.3	<46	<46	<60
BH-5	6/9/2021	11'	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<9.3	<46	<46	<60
BH-6	6/9/2021	34	≥0.025	<del></del>	<del>20.050</del>	<del>≤0.099</del>	£ <del>0.099</del>	5.0	320	310	630	<del></del>
BH-6A	7/16/2021	11	<0.023	<0.047	<0.047	<0.094	<0.094	<4.7	<9.6	<48	<48	<60
BH-7	_6 <del>/15</del> /21	6-7	0.024	0.049	<del>&lt;0.04</del> 9	0.097	<del>0.097</del>	4.9	1 <del>,900</del>	1,100	3,000	<del>\</del>
BH-7A	7/16/21	11'	<0.023	<0.046	<0.046	<0.091	<0.091	<4.6	<9.8	<49	<49	<60
BH-8	6/15/21	11'	<0.023	<0.047	<0.047	<0.094	<0.094	<4.7	<9.0	<45	<45	160
BH-9	6/15/21	<del></del>	0.025	<del>0.05</del> 0	<del>-0.05</del> 0	<del>0.099</del>	<del>0.099</del>	5.0	210	160	370	
BH-9A	7/16/21	11'	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	<9.8	<49	<49	<60
BH-10	6/15/21		0.025	<del>0.0</del> 50	<del>0.05</del> 0	0.099	0.099	5.0	310	270	580	<del>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</del>
BH-10A	7/16/21	11'	<0.023	<0.047	<0.047	<0.094	<0.094	<4.7	<9.5	<48	<48	<60
BH-11	6/15/21		0.025	<del>0.05</del> 0	€0.050	<del>0.09</del> 9	-0.099	<del></del>	170	110	280	<del></del>

### Table 1 Summary of Soil Analytical Data Brannigan ANF Federal 5 Battery **EOG Resources Eddy County, New Mexico**

	Table 1 Summary of Soil Analytical Data Brannigan ANF Federal 5 Battery EOG Resources Eddy County, New Mexico  Sample ID  Sample Depth Date  Depth Date  Depth Depth (feet bgs)  MRO (C28- GRO/DRO/MRO  Toluene  Ethylbenzene  Xylenes  BTEX GRO DRO MRO (C28- Total GRO/DRO/MRO  Chloride (C6-C10) (C10-C28) C35)  GRO/DRO/MRO  Table I Cleave Criteria for Seille, 50 for Depth to Groundwater 10 15 20 NMAC												
			Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	GRO	DRO	MRO (C28-		Chloride	
Sample ID	Sample Date	Depth (feet bgs)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(C6-C10) (mg/Kg)	(C10-C28) (mg/Kg)	(mg/Kg)	GRO/DRO/MRO (mg/Kg)	(mg/Kg)	
	Dute	(reet bgs)	(1119/119)	(9/119/				eet Depth to Gro			(9/.13/	(9/119/	
			10 mg/Kg		į		50 mg/Kg				100 mg/Kg	600 mg/Kg	
BH-11A	7/16/21	11'	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<9.4	<47	<47	<60	
BH-12	6/15/21	<del>8.7</del>	0.024	0.049	<del>0.04</del> 9	<del>0.098</del>	0.098	4.9	320	230	550	280	
BH-12A	7/16/21	11'	<0.023	<0.047	<0.047	<0.093	<0.093	<4.7	<9.4	<47	<47	<49	
BH-13	6/15/21	<del></del>	0.024	0.048	0.048	0.097	<del>0.097</del>	4.8	1,100	730	1,830	140	
BH-13A	7/16/21	11'	<0.023	<0.046	<0.046	<0.092	<0.092	<4.6	<9.8	<49	<49	<60	
BH-14	6/15/21	3-4'	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	12	<49	12	<60	
BH-15	6/15/21	<del>8</del>	0.025	0.049	<del>-0.04</del> 9	0.099	<del>0.099</del>	4.9	860	530	1,390		
BH-15A	7/16/21	11'	<0.023	<0.046	<0.046	<0.091	<0.091	<4.6	<9.7	<49	<49	<59	
BH-16	6/16/21	11'	<0.024	<0.047	<0.047	<0.095	<0.095	<4.7	<9.6	<48	<48	<60	
BH-17	6/16/21	6.5'	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<9.4	<47	<47	<60	
BH-18	6/16/21	6.5'	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.7	<48	<48	<61	
BH-19	6/16/21	6.5'	<0.12	<0.23	<0.23	<0.46	<0.46	<23	10	<41	10	<60	
BH-20	6/17/21	11'	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<9.2	<46	<46	<60	
BH-21	6/17/21	3-4'	<0.024	<0.048	<0.048	<0.097	<0.097	4.8	13	<50	13	66	
BH-22	6/17/21	3-4'	<0.023	<0.046	<0.046	<0.092	<0.092	<4.6	12	<48	12	<60	
BH-23	6/18/21	11'	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.7	<48	<48	<59	
BH-24	6/18/21	6.5'	<0.024	<0.048	<0.048	<0.095	<0.095	<4.8	<9.7	<49	<49	<60	
BH-25	6/18/21	11'	<0.024	<0.047	<0.047	<0.095	<0.095	<4.7	<9.5	<48	<48	81	
BH-26	6/18/21	11'	<0.023	<0.047	<0.047	<0.094	<0.094	<4.7	<9.6	<48	<48	<60	
BH-27	6/18/21	11'	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<10	<50	<50	<60	
BH-28	6/21/21	5.5-6.5'	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	11	<49	11	360	
BH-29	6/21/21		0.024	<del>0.04</del> 9	0.049	0.098	-0.098	4.9	-55	-87	142	580	
BH-29A	7/16/21	6.5'	<0.023	<0.047	<0.047	<0.094	<0.094	<4.7	<9.7	<48	<48	<60	
BH-30	6/21/21	11'	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<9.5	<47	<47	<60	
BH-31	6/21/21	11'	<0.025	<0.050	<0.050	<0.010	<0.010	<5.0	<9.4	<47	<47	<60	
BH-32	6/21/21	11'	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<9.8	<49	<49	<60	
BH-33	6/21/21	11'	<0.024	<0.047	<0.047	<0.094	<0.094	<4.7	<9.7	<48	<48	<60	
BH-34	6/21/21	11'	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<9.6	<48	<48	<60	

### Table 1 Summary of Soil Analytical Data Brannigan ANF Federal 5 Battery **EOG Resources Eddy County, New Mexico**

	Table 1 Summary of Soil Analytical Data Brannigan ANF Federal 5 Battery EOG Resources Eddy County, New Mexico  Sample ID  Sample Date  Sample Depth (feet bgs)  (mg/Kg)  (m											
			Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	GRO	DRO	MRO (C28-		Chloride
Sample ID	Sample	Depth	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(C6-C10) (mg/Kg)	(C10-C28) (mg/Kg)	(mg/Kg)	GRO/DRO/MRO (mg/Kg)	(mg/Kg)
	Date	(feet bgs)	(ilig/Rg)	(ilig/itg)				et Depth to Gro			(ilig/Rg)	(mg/Rg)
			10 mg/Kg				50 mg/Kg				100 mg/Kg	600 mg/Kg
BH-35	6/24/21	11'	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<9.5	<47	<47	160
BH-36	6/24/21	6.5'	<0.024	<0.047	<0.047	<0.095	<0.095	<4.7	<9.4	<47	<47	300
BH-37	6/24/21	6.5'	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<9.6	<48	<48	300
BH-38	6/24/21	11'	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<9.7	<49	<49	370
BH-39	6/24/21	6.5'	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	26	<44	26	420
BH-40	6/24/21	6.5'	<0.024	<0.047	<0.047	<0.095	<0.095	<4.7	<8.7	<43	<43	310
BH-41	7/16/21	11'	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<9.6	<48	<48	<60
<u> </u>	17.10/21	• •	10.020	10.000		wall Samples	40.10	10.0	10.0	1.0	1.0	100
<del>SW-1</del>	6/9 <del>/20</del> 21		<del></del>	<del></del>	<del>40.050</del>	<del></del>	<del>20.099</del>	5.0	120	220	340	130
SW-1A	7/8 <del>/20</del> 21		€0.025	≤0.049	<del>∠0.04</del> 9	<del>-0.09</del> 9	<del>0.099</del>	4.9	180	210	390	
SW-1B	7/16/2021	-	<0.023	<0.046	<0.046	<0.091	<0.091	<4.6	<9.9	<49	<49	<59
SW-2	6/9/2021	-	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	24	<48	24	<60
SW-3	6/9/2021	-	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	12	<50	12	<60
SW-4	6/15/21	-	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<9.1	<46	<46	89
<del>SW-</del> 5	6/15/21		0.024	0.049	<del>-0.04</del> 9	<del>0.098</del>	<del>0.098</del>	4.9	120	180	300	220
<del>SW</del> -5A	<del>7/8/2</del> 1		0.025	<del>0.04</del> 9	<del>0.049</del>	<del>-0.098</del>	<del>0.098</del>	4.9	160	150	310	170
SW-5B	7/16/21	-	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<9.9	<49	<49	<60
SW-6	6/15/21	-	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	14	<44	14	140
SW-7	6/15/21	-	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<9.2	<46	<46	67
SW-8	6/15/21	-	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<9.9	<49	<49	130
SW-9	6/15/21	-	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<9.3	<46	<46	140
SW-10	6/16/21	-	<0.023	<0.047	<0.047	<0.093	<0.093	<4.7	<9.3	<47	<47	150
<del>SW-1</del> 1	6/16/21		<del>0.12</del>	0.24	<del>0.24</del>	<del>0.48</del>	0.48	-24	240	120	360	200
<del>SW-11</del> A	7/8/21		<del>0.12</del>	0.25	0.25	0.49	0.49	25	120	260	380	78
SW-11B	7/16/21	<u>-</u>	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	<9.2	<46	<46	<60
SW-12	6/16/21	-	<0.12	<0.25	<0.25	<0.50	<0.50	<25	39	<47	39	200
SW-13	6/17/21	-	<0.024	<0.048	<0.048	<0.095	<0.095	<4.8	15	<50	15	100
SW-14	6/18/21	-	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	25	<49	25	560
SW-15	6/18/21	-	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<9.9	<49	<49	<60

# Table 1 Summary of Soil Analytical Data Brannigan ANF Federal 5 Battery EOG Resources Eddy County, New Mexico

										TPH		
	Sample	Depth	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	GRO (C6-C10)	DRO (C10-C28)	MRO (C28- C35)	Total GRO/DRO/MRO	Chloride
Sample ID	Date	(feet bgs)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
					Table I C	Closure Criteria	for Soils <50 fe	et Depth to Gro	undwater 19.15	.29 NMAC		
			10 mg/Kg				50 mg/Kg				100 mg/Kg	600 mg/Kg
SW-16	6/18/21	-	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<9.9	<49	<49	460
<del>SW-17</del>	6/18/21		0.024	0.048	€0.048	0.097	0.097	4.8	- 63	120	183	400
SW-17A	7/16/21	-	<0.023	<0.047	<0.047	<0.093	<0.093	<4.7	<9.8	<49	<49	140
<del>SW-18</del>	6/18/21		0.025	0.049	<del>0.04</del> 9	0.099	0.099	4.9	9.6	<del></del>	48	990
SW-18A	7/16/21	-	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.6	<48	<48	100
SW-19	6/18/21	-	<0.024	<0.047	<0.047	<0.094	<0.094	<4.7	<10	<50	<50	96
SW-19	6/21/21	-	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.4	<47	<47	190
SW-20	6/21/21	-	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<9.7	<48	<48	80
SW-21	6/21/21	-	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<10	<50	<50	170
SW-22	6/21/21	-	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<9.7	<49	<49	140
SW-23	6/23/21	-	<0.025	<0.049	<0.049	<0.097	<0.097	<4.9	<9.3	<47	<47	<60
SW-24	6/23/21	-	<0.024	<0.047	<0.047	<0.095	<0.095	<4.7	27	<48	27	150
SW-25	6/23/21	-	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	11	<47	11	83
SW-26	7/16/21	-	<0.024	<0.047	<0.047	<0.094	<0.094	<4.7	<9.7	<49	<49	<60

- 1. Values reported in mg/kg
- 2. < = Value Less than Reporting Limit (RL)
- 3. Bold Indicates Analyte Detected
- 4 BTEX analyses by EPA Method SW 8021B.

B-BH-2 Sample Point Excavated

- 5. TPH analyses by EPA Method SW 8015 Mod.
- 6. GRO/DRO/MRO = Gasoline/Diesel/Motor Oil
- 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.

Table 2
Daily Disposal Summary
Brannigan ANF Federal #5 Battery
EOG Resources
Eddy, County, New Mexico

Date of	Total Pounds	Total Tons
Disposal	Disposed	Disposed
6/8/2021	158,240	79.12
6/9/2021	116,120	58.06
6/15/2021	338,040	169.02
6/16/2021	338,360	169.18
6/17/2021	862,840	431.42
6/18/2021	1,094,860	547.43
6/21/2021	1,216,640	608.32
6/22/2021	1,035,140	517.57
6/23/2021	1,111,340	555.67
7/13/2021	325,840	162.92
7/14/2021	406,860	203.43
7/15/2021	339,820	169.91
7/16/2021	456,940	228.47
7/19/2021	398,620	199.31
7/21/2021	274,440	137.22
7/22/2021	334,200	167.10
7/23/2021	497,580	248.79
7/26/2021	175,180	87.59
Project Total	9,481,060	4,740.53

# Attachment A Site Characterization Documentation

# **Brannigan ANF Federal #5 Battery**

Karst Potential Map

Legend

Brannigan ANF Federal #5 Battery

High

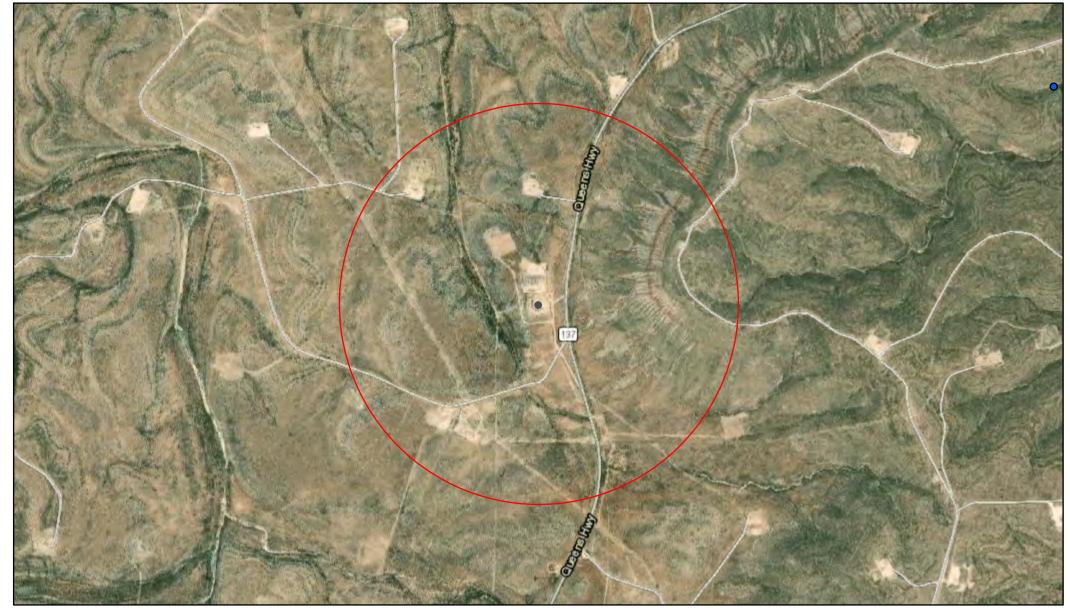
Low

Medium

Brannigan ANF Federal #5 Battery



# Brannigan ANF Federal #5 Battery

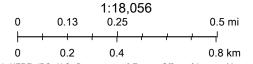


7/4/2021 3:31:13 PM

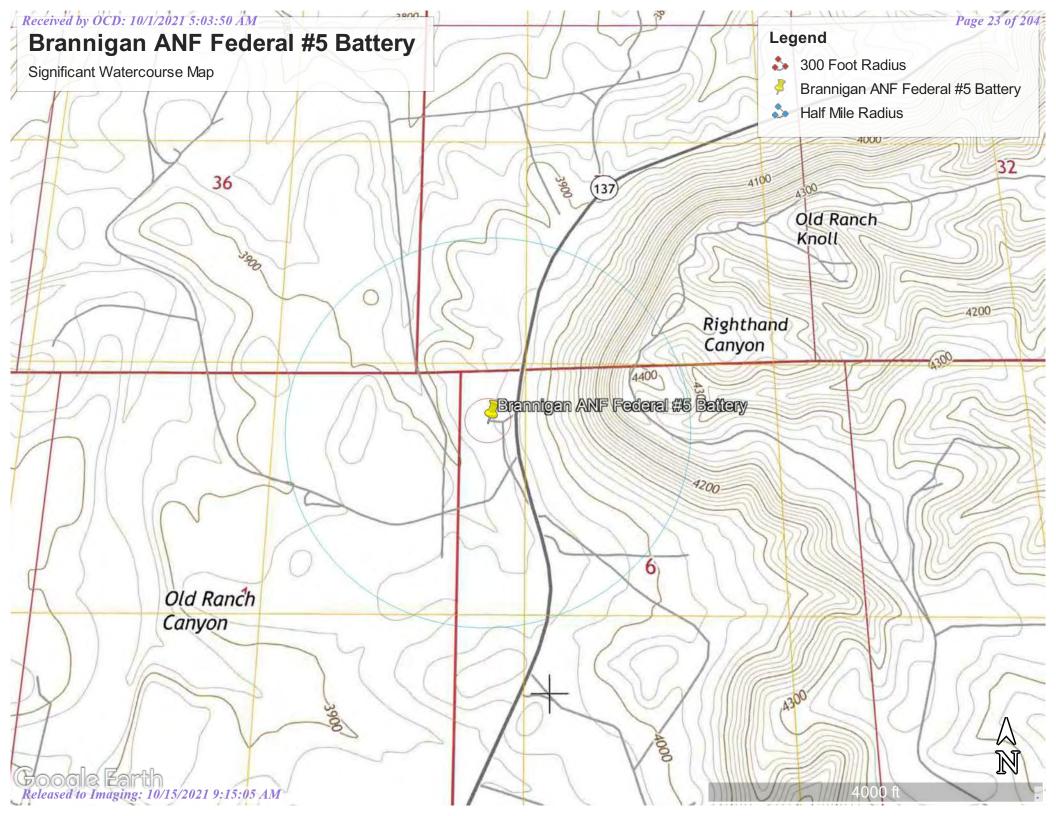
GIS WATERS PODs OSE District Boundary

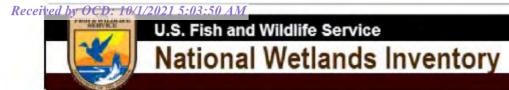
Active

SiteBoundaries

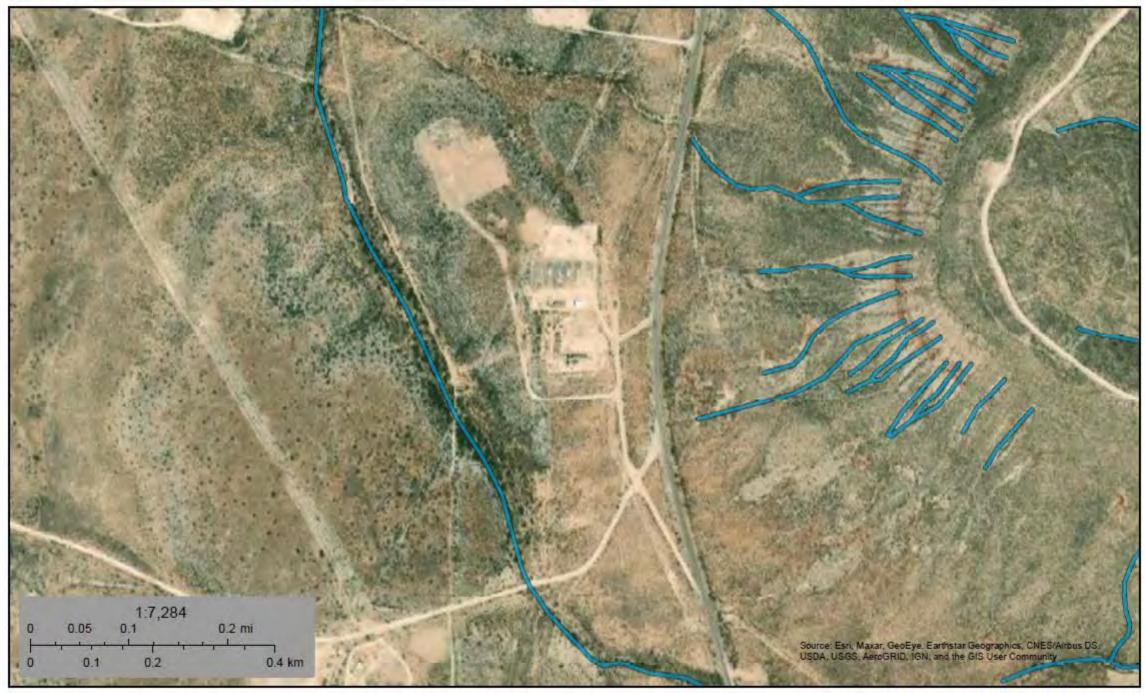


Esri, HERE, iPC, U.S. Department of Energy Office of Legacy Management, Esri, HERE, Garmin, iPC, Maxar





# Brannigan ANF Federal #5 Battery



July 4, 2021

Wetlands

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Pond

Freshwater Forested/Shrub Wetland

Lake

0

Other

04101

Riverine

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

# National Flood Hazard Layer FIRMette



Legend

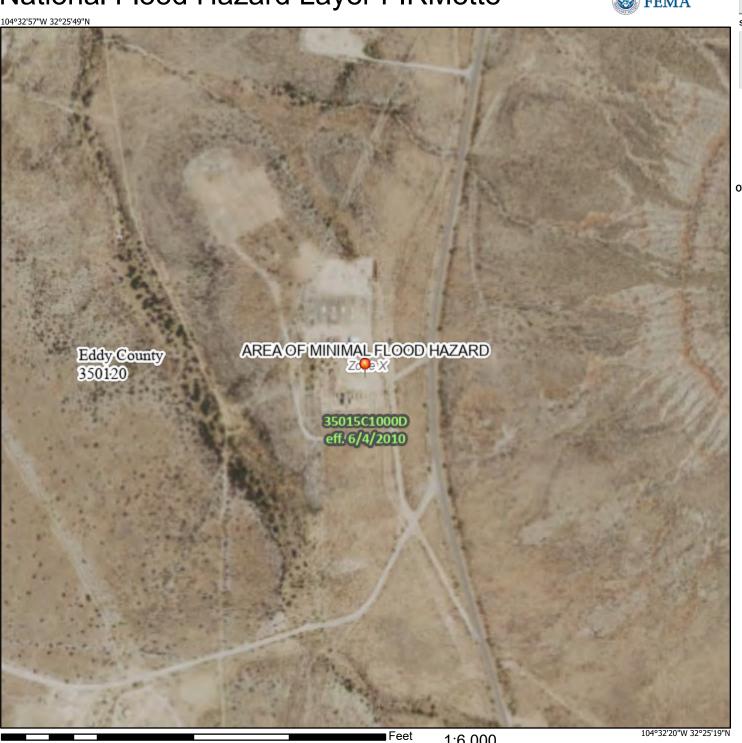
SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT Without Base Flood Elevation (BFE) With BFE or Depth Zone AE, AO, AH, VE, AR SPECIAL FLOOD HAZARD AREAS Regulatory Floodway 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or 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 OTHER AREAS OF Area with Flood Risk due to Levee Zone D FLOOD HAZARD NO SCREEN Area of Minimal Flood Hazard Zone X Effective LOMRs OTHER AREAS Area of Undetermined Flood Hazard Zone D - - - Channel, Culvert, or Storm Sewer **GENERAL** STRUCTURES | LILLI Levee, Dike, or Floodwall 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 OTHER **Profile Baseline FEATURES** Hydrographic Feature Digital Data Available No Digital Data Available MAP PANELS Unmapped The pin displayed on the map is an approximate point selected by the user and does not represent

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

an authoritative property location.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/2/2021 at 3:17 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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



ORelease To Imaging: 10/15/2021 09:915:05 AM

# Attachment B Photographic Log

Photo 1: Looking East



Photo 2: Looking Southeast





Site Photograph EOG Brannigan ANF Federal Battery Release Site.

GHD | Report for EOG | 11228319

Photo 3: Looking West



Photo 4: Looking Northeast





Site Photograph EOG Brannigan ANF Federal Battery Release Site.

GHD | Report for EOG | 11228319

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



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

OrderNo.: 2105798

May 24, 2021

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

FAX:

RE: Brannigan ANF Federal 5 Battery

Dear Tom Larson:

Hall Environmental Analysis Laboratory received 9 sample(s) on 5/19/2021 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

anded

4901 Hawkins NE

Albuquerque, NM 87109

**CLIENT:** 

## **Analytical Report**

Lab Order: 2105798

Date Reported: 5/24/2021

2105798

## Hall Environmental Analysis Laboratory, Inc.

Lab Order:

**Project:** Brannigan ANF Federal 5 Battery

**GHD** 

**Lab ID:** 2105798-001 **Collection Date:** 5/18/2021 8:10:00 AM

Client Sample ID: TP1 Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Anal	yst: <b>VP</b>
Chloride	ND	60		mg/Kg	20	5/20/2021 1:51:34 F	PM 60151
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Anal	yst: <b>SB</b>
Diesel Range Organics (DRO)	330	46		mg/Kg	5	5/20/2021 1:29:51 P	PM 60136
Motor Oil Range Organics (MRO)	480	230		mg/Kg	5	5/20/2021 1:29:51 F	PM 60136
Surr: DNOP	121	70-130		%Rec	5	5/20/2021 1:29:51 P	PM 60136
EPA METHOD 8015D: GASOLINE RANGE						Anal	yst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	25	D	mg/Kg	5	5/21/2021 2:41:29 A	M 60129
Surr: BFB	102	70-130	D	%Rec	5	5/21/2021 2:41:29 A	M 60129
EPA METHOD 8021B: VOLATILES						Anal	yst: <b>NSB</b>
Benzene	ND	0.12	D	mg/Kg	5	5/21/2021 2:41:29 A	M 60129
Toluene	ND	0.25	D	mg/Kg	5	5/21/2021 2:41:29 A	M 60129
Ethylbenzene	ND	0.25	D	mg/Kg	5	5/21/2021 2:41:29 A	M 60129
Xylenes, Total	ND	0.50	D	mg/Kg	5	5/21/2021 2:41:29 A	M 60129
Surr: 4-Bromofluorobenzene	108	70-130	D	%Rec	5	5/21/2021 2:41:29 A	M 60129

**Lab ID:** 2105798-002 **Collection Date:** 5/18/2021 8:15:00 AM

Client Sample ID: TP2 Matrix: SOIL

Analyses	Result	RL (	Qual Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS					Analys	st: <b>VP</b>
Chloride	ND	60	mg/Kg	20	5/20/2021 2:03:59 PM	60151
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analys	st: SB
Diesel Range Organics (DRO)	150	9.0	mg/Kg	1	5/20/2021 1:49:21 PM	60136
Motor Oil Range Organics (MRO)	220	45	mg/Kg	1	5/20/2021 1:49:21 PM	60136
Surr: DNOP	123	70-130	%Rec	1	5/20/2021 1:49:21 PM	60136
EPA METHOD 8015D: GASOLINE RANGE					Analys	st: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	5/21/2021 3:04:53 AM	60129
Surr: BFB	101	70-130	%Rec	1	5/21/2021 3:04:53 AM	60129
EPA METHOD 8021B: VOLATILES					Analys	st: NSB
Benzene	ND	0.024	mg/Kg	1	5/21/2021 3:04:53 AM	60129
Toluene	ND	0.048	mg/Kg	1	5/21/2021 3:04:53 AM	60129
Ethylbenzene	ND	0.048	mg/Kg	1	5/21/2021 3:04:53 AM	60129
Xylenes, Total	ND	0.095	mg/Kg	1	5/21/2021 3:04:53 AM	60129
Surr: 4-Bromofluorobenzene	110	70-130	%Rec	1	5/21/2021 3:04:53 AM	60129

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

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Lab Order: 2105798

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 5/24/2021

CLIENT: GHD Lab Order: 2105798

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2105798-003 **Collection Date:** 5/18/2021 8:20:00 AM

Client Sample ID: TP3 Matrix: SOIL

Result **RL Oual Units DF** Date Analyzed **Analyses Batch ID EPA METHOD 300.0: ANIONS** Analyst: VP 5/20/2021 2:16:23 PM Chloride 240 60 mg/Kg 60151 20 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: SB Diesel Range Organics (DRO) 5/20/2021 10:20:57 AM 60136 600 92 mg/Kg 10 Motor Oil Range Organics (MRO) 1500 460 mg/Kg 5/20/2021 10:20:57 AM 60136 10 Surr: DNOP 0 70-130 %Rec 10 5/20/2021 10:20:57 AM 60136 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 4.8 mg/Kg 1 5/21/2021 3:28:16 AM 60129 Surr: BFB 99.6 70-130 %Rec 1 5/21/2021 3:28:16 AM 60129 **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 0.024 mg/Kg 5/21/2021 3:28:16 AM 60129 Toluene ND 0.048 mg/Kg 5/21/2021 3:28:16 AM 60129 Ethylbenzene ND 0.048 mg/Kg 1 5/21/2021 3:28:16 AM 60129 Xylenes, Total ND 0.095 mg/Kg 5/21/2021 3:28:16 AM 60129 Surr: 4-Bromofluorobenzene 108 70-130 %Rec 5/21/2021 3:28:16 AM 60129

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

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Lab Order: 2105798

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 5/24/2021

CLIENT: GHD Lab Order: 2105798

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2105798-004 **Collection Date:** 5/18/2021 8:30:00 AM

Client Sample ID: TP4 Matrix: SOIL

Analyses	Result	RL Qu	ıal Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS					Analy	rst: <b>VP</b>
Chloride	ND	60	mg/Kg	20	5/20/2021 2:28:47 Pf	M 60151
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analy	st: SB
Diesel Range Organics (DRO)	ND	9.0	mg/Kg	1	5/20/2021 10:33:08 A	M 60136
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	5/20/2021 10:33:08 /	M 60136
Surr: DNOP	114	70-130	%Rec	1	5/20/2021 10:33:08 /	M 60136
EPA METHOD 8015D: GASOLINE RANGE					Analy	st: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	5/21/2021 3:51:47 Al	M 60129
Surr: BFB	99.8	70-130	%Rec	1	5/21/2021 3:51:47 Al	M 60129
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.025	mg/Kg	1	5/21/2021 3:51:47 Al	M 60129
Toluene	ND	0.049	mg/Kg	1	5/21/2021 3:51:47 Al	M 60129
Ethylbenzene	ND	0.049	mg/Kg	1	5/21/2021 3:51:47 Al	M 60129
Xylenes, Total	ND	0.098	mg/Kg	1	5/21/2021 3:51:47 Al	M 60129
Surr: 4-Bromofluorobenzene	109	70-130	%Rec	1	5/21/2021 3:51:47 Al	M 60129

**Lab ID:** 2105798-005 **Collection Date:** 5/18/2021 8:35:00 AM

Client Sample ID: TP5 Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analys	st: <b>VP</b>
Chloride	1400	60		mg/Kg	20	5/20/2021 2:41:12 PM	l 60151
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analys	st: SB
Diesel Range Organics (DRO)	1700	48		mg/Kg	5	5/20/2021 2:51:03 PM	60136
Motor Oil Range Organics (MRO)	850	240		mg/Kg	5	5/20/2021 2:51:03 PM	60136
Surr: DNOP	123	70-130		%Rec	5	5/20/2021 2:51:03 PM	60136
EPA METHOD 8015D: GASOLINE RANGE						Analys	st: NSB
Gasoline Range Organics (GRO)	60	24		mg/Kg	5	5/21/2021 9:51:44 AM	60129
Surr: BFB	213	70-130	S	%Rec	5	5/21/2021 9:51:44 AM	60129
EPA METHOD 8021B: VOLATILES						Analys	st: NSB
Benzene	ND	0.12		mg/Kg	5	5/21/2021 9:51:44 AM	60129
Toluene	ND	0.24		mg/Kg	5	5/21/2021 9:51:44 AM	60129
Ethylbenzene	ND	0.24		mg/Kg	5	5/21/2021 9:51:44 AM	60129
Xylenes, Total	ND	0.48		mg/Kg	5	5/21/2021 9:51:44 AM	60129
Surr: 4-Bromofluorobenzene	117	70-130		%Rec	5	5/21/2021 9:51:44 AM	60129

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

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Lab Order: 2105798

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 5/24/2021

CLIENT: GHD Lab Order: 2105798

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2105798-006 **Collection Date:** 5/18/2021 8:40:00 AM

Client Sample ID: TP6 Matrix: SOIL

Result **RL Oual Units DF** Date Analyzed **Analyses Batch ID EPA METHOD 300.0: ANIONS** Analyst: VP Chloride 5/20/2021 2:53:36 PM 660 59 60151 mg/Kg 20 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: SB Diesel Range Organics (DRO) 5/20/2021 11:21:41 AM 60136 48 9.6 mg/Kg Motor Oil Range Organics (MRO) 85 5/20/2021 11:21:41 AM 60136 48 mg/Kg 1 Surr: DNOP 127 70-130 %Rec 5/20/2021 11:21:41 AM 60136 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 4.9 mg/Kg 1 5/21/2021 10:38:41 AM 60129 Surr: BFB 103 70-130 %Rec 1 5/21/2021 10:38:41 AM 60129 **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 5/21/2021 10:38:41 AM 60129 0.024 mg/Kg Toluene ND 0.049 mg/Kg 5/21/2021 10:38:41 AM 60129 Ethylbenzene ND 0.049 mg/Kg 1 5/21/2021 10:38:41 AM 60129 Xylenes, Total ND 0.098 mg/Kg 5/21/2021 10:38:41 AM 60129 Surr: 4-Bromofluorobenzene 116 70-130 %Rec 5/21/2021 10:38:41 AM 60129

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

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Lab Order: **2105798**Date Reported: **5/24/2021** 

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 2105798

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2105798-007 **Collection Date:** 5/18/2021 8:50:00 AM

Client Sample ID: TP7 Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Ba	tch ID
EPA METHOD 300.0: ANIONS						Ana	alyst:	VP
Chloride	460	60		mg/Kg	20	5/20/2021 3:06:00	PM	60151
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Ana	alyst:	SB
Diesel Range Organics (DRO)	4600	90		mg/Kg	10	5/20/2021 11:13:10	MA C	60136
Motor Oil Range Organics (MRO)	3800	450		mg/Kg	10	5/20/2021 11:13:10	) AM	60136
Surr: DNOP	0	70-130	S	%Rec	10	5/20/2021 11:13:10	MA (	60136
EPA METHOD 8015D: GASOLINE RANGE						Ana	alyst:	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/21/2021 11:02:12	2 AM	60129
Surr: BFB	119	70-130		%Rec	1	5/21/2021 11:02:12	2 AM	60129
EPA METHOD 8021B: VOLATILES						Ana	alyst:	NSB
Benzene	ND	0.024		mg/Kg	1	5/21/2021 11:02:12	2 AM	60129
Toluene	ND	0.049		mg/Kg	1	5/21/2021 11:02:12	2 AM	60129
Ethylbenzene	ND	0.049		mg/Kg	1	5/21/2021 11:02:12	2 AM	60129
Xylenes, Total	ND	0.098		mg/Kg	1	5/21/2021 11:02:12	2 AM	60129
Surr: 4-Bromofluorobenzene	118	70-130		%Rec	1	5/21/2021 11:02:12	2 AM	60129

**Lab ID:** 2105798-008 **Collection Date:** 5/18/2021 9:00:00 AM

Client Sample ID: TP8 Matrix: SOIL

Analyses	Result	RL	Qual Units	DF	Date Analyzed H	Batch ID
EPA METHOD 300.0: ANIONS					Analys	st: <b>VP</b>
Chloride	110	60	mg/Kg	20	5/20/2021 3:18:25 PM	60151
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analys	st: SB
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	5/20/2021 10:42:49 AM	M 60136
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	5/20/2021 10:42:49 AM	M 60136
Surr: DNOP	126	70-130	%Rec	1	5/20/2021 10:42:49 AM	M 60136
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	5/21/2021 1:11:11 PM	60129
Surr: BFB	89.3	70-130	%Rec	1	5/21/2021 1:11:11 PM	60129
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.025	mg/Kg	1	5/21/2021 1:11:11 PM	60129
Toluene	ND	0.049	mg/Kg	1	5/21/2021 1:11:11 PM	60129
Ethylbenzene	ND	0.049	mg/Kg	1	5/21/2021 1:11:11 PM	60129
Xylenes, Total	ND	0.099	mg/Kg	1	5/21/2021 1:11:11 PM	60129
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	5/21/2021 1:11:11 PM	60129

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

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- 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

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Lab Order: 2105798

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 5/24/2021

CLIENT: GHD Lab Order: 2105798

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2105798-009 **Collection Date:** 5/18/2021 9:20:00 AM

Client Sample ID: HA1 Matrix: SOIL

Chent Sample ID: HAI	Matrix: SOIL					
Analyses	Result	RL (	Qual Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS					Ana	lyst: <b>VP</b>
Chloride	ND	61	mg/Kg	20	5/20/2021 8:16:11 F	PM 60159
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Ana	lyst: SB
Diesel Range Organics (DRO)	110	8.2	mg/Kg	1	5/20/2021 11:31:26	AM 60136
Motor Oil Range Organics (MRO)	270	41	mg/Kg	1	5/20/2021 11:31:26	AM 60136
Surr: DNOP	102	70-130	%Rec	1	5/20/2021 11:31:26	AM 60136
EPA METHOD 8015D: GASOLINE RANGE					Ana	lyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	5/21/2021 1:34:46 F	PM 60129
Surr: BFB	88.6	70-130	%Rec	1	5/21/2021 1:34:46 F	PM 60129
EPA METHOD 8021B: VOLATILES					Ana	lyst: NSB
Benzene	ND	0.025	mg/Kg	1	5/21/2021 1:34:46 F	PM 60129
Toluene	ND	0.049	mg/Kg	1	5/21/2021 1:34:46 F	PM 60129
Ethylbenzene	ND	0.049	mg/Kg	1	5/21/2021 1:34:46 F	PM 60129
Xylenes, Total	ND	0.098	mg/Kg	1	5/21/2021 1:34:46 F	PM 60129
Surr: 4-Bromofluorobenzene	99.9	70-130	%Rec	1	5/21/2021 1:34:46 F	PM 60129

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

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

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### Hall Environmental Analysis Laboratory, Inc.

WO#: **2105798** 

24-May-21

Client: GHD

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: MB-60151 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: **PBS** Batch ID: **60151** RunNo: **77526** 

Prep Date: 5/20/2021 Analysis Date: 5/20/2021 SeqNo: 2752461 Units: mq/Kq

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

Chloride ND 1.5

Sample ID: LCS-60151 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 60151 RunNo: 77526

Prep Date: 5/20/2021 Analysis Date: 5/20/2021 SeqNo: 2752462 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 92.7 90 110

Sample ID: MB-60159 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 60159 RunNo: 77526

Prep Date: 5/20/2021 Analysis Date: 5/20/2021 SeqNo: 2752497 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-60159 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 60159 RunNo: 77526

Prep Date: 5/20/2021 Analysis Date: 5/20/2021 SeqNo: 2752498 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

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## Hall Environmental Analysis Laboratory, Inc.

WO#: 2105798

24-May-21

**Client: GHD** 

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: MB-60136 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics PBS Client ID: Batch ID: 60136 RunNo: 77529 Prep Date: 5/19/2021 Analysis Date: 5/20/2021 SeqNo: 2751569 Units: mg/Kg PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte Result Diesel Range Organics (DRO) ND 10 ND 50

Motor Oil Range Organics (MRO)

Surr: DNOP 9.6 10.00 96.0 70 130

Sample ID: LCS-60136 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 60136 RunNo: 77529

Prep Date: 5/19/2021 Analysis Date: 5/20/2021 SeqNo: 2751642 Units: mg/Kg

%REC Analyte PQL SPK value SPK Ref Val LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 48 10 50.00 95.1 68.9 141 Surr: DNOP 4.7 5.000 94.9 70 130

#### Qualifiers:

- Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix

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

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **2105798 24-May-21** 

Client: GHD

Surr: BFB

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: mb-60129 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 60129 RunNo: 77537

Prep Date: 5/19/2021 Analysis Date: 5/20/2021 SeqNo: 2752247 Units: mg/Kg

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

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 990 1000 99.4 70 130

Sample ID: Ics-60129 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 60129 RunNo: 77537

1100

Prep Date: 5/19/2021 Analysis Date: 5/20/2021 SeqNo: 2752248 Units: mg/Kg

1000

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 22 5.0 25.00 0 89.8 78.6 131

106

70

130

#### Qualifiers:

- Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

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

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## Hall Environmental Analysis Laboratory, Inc.

1.1

WO#: **2105798** 

24-May-21

Client: GHD

Surr: 4-Bromofluorobenzene

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: mb-60129 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: PBS Batch ID: 60129 RunNo: 77537

Prep Date: 5/19/2021 Analysis Date: 5/20/2021 SeqNo: 2752291 Units: mg/Kg

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

 Benzene
 ND
 0.025

 Toluene
 ND
 0.050

 Ethylbenzene
 ND
 0.050

 Xylenes, Total
 ND
 0.10

 Surr: 4-Bromofluorobenzene
 1.1
 1.000
 108
 70
 130

1.000

Sample ID: LCS-60129	SampT	Гуре: <b>LC</b>	s	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batcl	h ID: <b>60</b>	129	F	RunNo: 7	7537				
Prep Date: 5/19/2021	Analysis D	Date: <b>5/</b>	20/2021	9	SeqNo: 2	752292	Units: mg/K	ίg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	95.5	80	120			
Toluene	0.98	0.050	1.000	0	97.6	80	120			
Ethylbenzene	0.97	0.050	1.000	0	97.3	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.4	80	120			

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

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 10 of 10



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com

# Sample Log-In Check List

Client Name: GHD	Work Order N	umber: 2105798		RcptNo: 1
Received By: Juan Rojas	5/19/2021 7:28:0	00 AM	Juan Say	
Completed By: Cheyenne Cason	5/19/2021 7:54;4	47 AM	(lead	
Reviewed By: JR 1/19/2/			Comment	
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 sampl	es?	Yes 🗸	No 🗌	NA 🗌
4. Were all samples received at a temperat	ure 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 te	st(s)?	Yes 🔽	No 🗌	
7. Are samples (except VOA and ONG) pro	perly 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 br	oken?	Yes	No 🗸	# of preserved
11. Does paperwork match bottle labels?		Yes 🔽	No 🗆	bottles checked for pH:
(Note discrepancies on chain of custody)	10 110		And ED	(<2 or >12 unless noted) Adjusted?
<ul><li>2. Are matrices correctly identified on Chain</li><li>3. Is it clear what analyses were requested?</li></ul>	The state of the s	Yes 🗸	No 🗌	Adjusted
14. Were all holding times able to be met?		Yes 🗹	No 🗆	Checked by: SPA 5.19
(If no, notify customer for authorization.)  Special Handling (if applicable)				
15. Was client notified of all discrepancies w	ith this order?	Yes 🗌	No 🗌	NA 🔽
Person Notified:		ite:		
By Whom:	Via		Phone  Fax	In Person
Regarding:	V.0			
Client Instructions:				
16. Additional remarks:				
17. Cooler Information Cooler No Temp °C Condition 1 0.0 Good	Seal Intact Seal No	Seal Date	Signed By	

L CB Atsic Murran	Project #: 1728319 Project Manager:	ANE Fellenel 45 Billion 3319	1 10	901 Ha	######################################	HALL   ANAL) www.halle kins NE - / 345-3975 An	Fax allysis	MALYSIS LABC NAM.hallenvironmental.com ns NE - Albuquerque, NM 8 5-3975 Fax 505-345-41 Analysis Request	HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com kins NE - Albuquerque, NM 87109 345-3975 Fax 505-345-4107 Analysis Request	TORY	ived by OCD: 10/1/2021 5:03
(Full Validation)	Sampler:  Sampler:  On Ice:  # of Coolers:   Cooler Temp(including cF):   Container   Type and # Type	Course D No D No	BTEX / MTBE / TMB's (8021)	8081 Pesticides/8082 PCB's	EDB (Method 504.1) PAHs by 8310 or 8270SIMS	RCRA 8 Metals	S260 (VOA) 8260 (VOA)	(AOV-ima2) 07S8	Total Coliform (Present/Absent		3:50 AM
Á &	Jus	1001	× ×						2		
P3		503	Ħ								
Sd.		co4			\.						
56		900									
50		908 908									
	>	cod	<del>}</del>						>		
Time: Relinquished by:  Received by:  Receiv	Received by: Via:	Date Time  5/18/3/ 1/0/5  Date Time	Remarks:		Please of the slowy w	The state of the	13 to 13	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	mine@ GH 11stel abs	GHD.com abore Sc.Hle	Page 42 of



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

OrderNo.: 2106657

June 22, 2021

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

FAX:

RE: Brannigan ANF Federal Battery 5

Dear Tom Larson:

Hall Environmental Analysis Laboratory received 9 sample(s) on 6/11/2021 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

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order: **2106657** 

Date Reported: 6/22/2021

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 2106657

**Project:** Brannigan ANF Federal Battery 5

**Lab ID:** 2106657-001 **Collection Date:** 6/9/2021 8:35:00 AM

Client Sample ID: SW-2 Matrix: SOIL

Analyses	Result	RL	Qual Units	DF	Date Analyzed B	atch ID
EPA METHOD 300.0: ANIONS					Analys	t: <b>VP</b>
Chloride	ND	60	mg/Kg	20	6/15/2021 1:56:27 AM	60599
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analys	t: <b>SB</b>
Diesel Range Organics (DRO)	24	9.7	mg/Kg	1	6/16/2021 2:39:00 AM	60589
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	6/16/2021 2:39:00 AM	60589
Surr: DNOP	98.2	70-130	%Rec	1	6/16/2021 2:39:00 AM	60589
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/14/2021 9:05:29 AM	60586
Surr: BFB	112	70-130	%Rec	1	6/14/2021 9:05:29 AM	60586
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.025	mg/Kg	1	6/14/2021 9:05:29 AM	60586
Toluene	ND	0.049	mg/Kg	1	6/14/2021 9:05:29 AM	60586
Ethylbenzene	ND	0.049	mg/Kg	1	6/14/2021 9:05:29 AM	60586
Xylenes, Total	ND	0.098	mg/Kg	1	6/14/2021 9:05:29 AM	60586
Surr: 4-Bromofluorobenzene	105	70-130	%Rec	1	6/14/2021 9:05:29 AM	60586

**Lab ID:** 2106657-002 **Collection Date:** 6/9/2021 8:40:00 AM

Client Sample ID: SW-3 Matrix: SOIL

Analyses	Result	RL Q	Qual Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS					Analy	st: <b>VP</b>
Chloride	ND	60	mg/Kg	20	6/15/2021 2:08:52 AM	A 60599
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analy	st: SB
Diesel Range Organics (DRO)	12	9.9	mg/Kg	1	6/16/2021 3:52:27 Al	И 60589
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	6/16/2021 3:52:27 Al	A 60589
Surr: DNOP	109	70-130	%Rec	1	6/16/2021 3:52:27 Al	M 60589
EPA METHOD 8015D: GASOLINE RANGE					Analy	st: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/14/2021 10:26:32 A	M 60586
Surr: BFB	103	70-130	%Rec	1	6/14/2021 10:26:32 A	M 60586
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.024	mg/Kg	1	6/14/2021 10:26:32 A	M 60586
Toluene	ND	0.049	mg/Kg	1	6/14/2021 10:26:32 A	M 60586
Ethylbenzene	ND	0.049	mg/Kg	1	6/14/2021 10:26:32 A	M 60586
Xylenes, Total	ND	0.097	mg/Kg	1	6/14/2021 10:26:32 A	M 60586
Surr: 4-Bromofluorobenzene	97.7	70-130	%Rec	1	6/14/2021 10:26:32 A	M 60586

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

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Lab Order: 2106657

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/22/2021

CLIENT: GHD Lab Order: 2106657

**Project:** Brannigan ANF Federal Battery 5

**Lab ID:** 2106657-003 **Collection Date:** 6/9/2021 8:50:00 AM

Client Sample ID: BH-2 Matrix: SOIL

Result **RL Oual Units DF** Date Analyzed **Analyses Batch ID EPA METHOD 300.0: ANIONS** Analyst: VP Chloride ND 60 6/15/2021 2:21:17 AM 60599 mg/Kg **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: SB Diesel Range Organics (DRO) 6/16/2021 4:16:54 AM 210 9.3 mg/Kg 60589 Motor Oil Range Organics (MRO) 250 6/16/2021 4:16:54 AM 47 mg/Kg 1 60589 Surr: DNOP 110 70-130 %Rec 6/16/2021 4:16:54 AM 60589 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 25 mg/Kg 5 6/14/2021 11:37:14 AM 60586 Surr: BFB 104 70-130 %Rec 5 6/14/2021 11:37:14 AM 60586 **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 0.12 mg/Kg 5 6/14/2021 11:37:14 AM 60586 Toluene ND 0.25 mg/Kg 5 6/14/2021 11:37:14 AM 60586 Ethylbenzene ND 0.25 mg/Kg 5 6/14/2021 11:37:14 AM 60586 Xylenes, Total ND 0.49 mg/Kg 6/14/2021 11:37:14 AM 60586 Surr: 4-Bromofluorobenzene 97.0 70-130 %Rec 6/14/2021 11:37:14 AM 60586

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

Page 2 of 10

**CLIENT:** 

### **Analytical Report**

Lab Order: **2106657**Date Reported: **6/22/2021** 

# Hall Environmental Analysis Laboratory, Inc.

2106657

Lab Order:

**Project:** Brannigan ANF Federal Battery 5

**GHD** 

**Lab ID:** 2106657-004 **Collection Date:** 6/9/2021 8:55:00 AM

Client Sample ID: BH-3 Matrix: SOIL

Analyses	Result	RL (	Qual Units	DF	Date Analyzed I	Batch ID
EPA METHOD 300.0: ANIONS					Analys	st: <b>VP</b>
Chloride	ND	60	mg/Kg	20	6/15/2021 2:33:42 AM	60599
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analys	st: SB
Diesel Range Organics (DRO)	97	9.6	mg/Kg	1	6/16/2021 4:41:18 AM	60589
Motor Oil Range Organics (MRO)	160	48	mg/Kg	1	6/16/2021 4:41:18 AM	60589
Surr: DNOP	108	70-130	%Rec	1	6/16/2021 4:41:18 AM	60589
EPA METHOD 8015D: GASOLINE RANGE					Analys	st: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	6/14/2021 12:00:47 Pf	M 60586
Surr: BFB	106	70-130	%Rec	1	6/14/2021 12:00:47 Pf	M 60586
EPA METHOD 8021B: VOLATILES					Analys	st: NSB
Benzene	ND	0.025	mg/Kg	1	6/14/2021 12:00:47 Pf	M 60586
Toluene	ND	0.050	mg/Kg	1	6/14/2021 12:00:47 Pf	M 60586
Ethylbenzene	ND	0.050	mg/Kg	1	6/14/2021 12:00:47 PI	M 60586
Xylenes, Total	ND	0.099	mg/Kg	1	6/14/2021 12:00:47 PI	M 60586
Surr: 4-Bromofluorobenzene	99.6	70-130	%Rec	1	6/14/2021 12:00:47 PI	M 60586

**Lab ID:** 2106657-005 **Collection Date:** 6/9/2021 9:00:00 AM

Client Sample ID: BH-4 Matrix: SOIL

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Bat	tch ID
EPA METHOD 300.0: ANIONS					Ana	alyst:	VP
Chloride	ND	60	mg/Kg	20	6/15/2021 2:46:07	AM	60599
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Ana	alyst:	SB
Diesel Range Organics (DRO)	300	9.5	mg/Kg	1	6/16/2021 5:05:41	AM	60589
Motor Oil Range Organics (MRO)	480	48	mg/Kg	1	6/16/2021 5:05:41	AM	60589
Surr: DNOP	108	70-130	%Rec	1	6/16/2021 5:05:41	AM	60589
EPA METHOD 8015D: GASOLINE RANGE					Ana	alyst:	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/14/2021 12:24:2	1 PM	60586
Surr: BFB	114	70-130	%Rec	1	6/14/2021 12:24:2	1 PM	60586
<b>EPA METHOD 8021B: VOLATILES</b>					Ana	alyst:	NSB
Benzene	ND	0.025	mg/Kg	1	6/14/2021 12:24:2	1 PM	60586
Toluene	ND	0.049	mg/Kg	1	6/14/2021 12:24:2	1 PM	60586
Ethylbenzene	ND	0.049	mg/Kg	1	6/14/2021 12:24:2	1 PM	60586
Xylenes, Total	ND	0.099	mg/Kg	1	6/14/2021 12:24:2	1 PM	60586
Surr: 4-Bromofluorobenzene	97.5	70-130	%Rec	1	6/14/2021 12:24:2	1 PM	60586

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

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Lab Order: **2106657** 

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/22/2021

2106657

Lab Order:

CLIENT: GHD

Project: Brannigan ANF Federal Battery 5

**Lab ID:** 2106657-006 **Collection Date:** 6/9/2021 2:00:00 PM

Client Sample ID: BH-1 Matrix: SOIL

Result **RL Oual Units DF** Date Analyzed **Analyses Batch ID EPA METHOD 300.0: ANIONS** Analyst: VP Chloride 130 61 6/15/2021 2:58:32 AM 60599 mg/Kg **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: SB Diesel Range Organics (DRO) ND 9.7 mg/Kg 6/15/2021 3:08:48 AM 60589 Motor Oil Range Organics (MRO) ND 6/15/2021 3:08:48 AM 48 mg/Kg 1 60589 Surr: DNOP 97.9 70-130 %Rec 6/15/2021 3:08:48 AM 60589 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 5.0 mg/Kg 1 6/14/2021 12:47:57 PM 60586 Surr: BFB 107 70-130 %Rec 1 6/14/2021 12:47:57 PM 60586 **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 0.025 mg/Kg 6/14/2021 12:47:57 PM 60586 Toluene ND 0.050 mg/Kg 6/14/2021 12:47:57 PM 60586 Ethylbenzene ND 0.050 mg/Kg 6/14/2021 12:47:57 PM 60586 1 Xylenes, Total ND 0.099 mg/Kg 6/14/2021 12:47:57 PM 60586 Surr: 4-Bromofluorobenzene 102 70-130 %Rec 6/14/2021 12:47:57 PM 60586

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

Page 4 of 10

**CLIENT:** 

### **Analytical Report**

Lab Order: **2106657**Date Reported: **6/22/2021** 

# Hall Environmental Analysis Laboratory, Inc.

**Lab Order:** 2106657

**Project:** Brannigan ANF Federal Battery 5

**GHD** 

**Lab ID:** 2106657-007 **Collection Date:** 6/9/2021 2:05:00 PM

Client Sample ID: SW-1 Matrix: SOIL

Analyses	Result	RL	Qual Units	DF	Date Analyzed B	atch ID
EPA METHOD 300.0: ANIONS					Analys	t: <b>VP</b>
Chloride	130	60	mg/Kg	20	6/15/2021 3:43:15 PM	60600
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Analys	t: <b>SB</b>
Diesel Range Organics (DRO)	120	9.3	mg/Kg	1	6/16/2021 5:53:40 AM	60589
Motor Oil Range Organics (MRO)	220	47	mg/Kg	1	6/16/2021 5:53:40 AM	60589
Surr: DNOP	106	70-130	%Rec	1	6/16/2021 5:53:40 AM	60589
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	6/14/2021 1:11:37 PM	60586
Surr: BFB	112	70-130	%Rec	1	6/14/2021 1:11:37 PM	60586
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.025	mg/Kg	1	6/14/2021 1:11:37 PM	60586
Toluene	ND	0.050	mg/Kg	1	6/14/2021 1:11:37 PM	60586
Ethylbenzene	ND	0.050	mg/Kg	1	6/14/2021 1:11:37 PM	60586
Xylenes, Total	ND	0.099	mg/Kg	1	6/14/2021 1:11:37 PM	60586
Surr: 4-Bromofluorobenzene	103	70-130	%Rec	1	6/14/2021 1:11:37 PM	60586

**Lab ID:** 2106657-008 **Collection Date:** 6/9/2021 2:10:00 PM

Client Sample ID: BH-5 Matrix: SOIL

Analyses	Result	RL Q	Qual Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS					Analy	st: <b>VP</b>
Chloride	ND	60	mg/Kg	20	6/15/2021 4:45:16 PI	M 60600
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analy	st: SB
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	6/16/2021 6:17:37 Al	M 60589
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	6/16/2021 6:17:37 Al	M 60589
Surr: DNOP	108	70-130	%Rec	1	6/16/2021 6:17:37 Al	M 60589
EPA METHOD 8015D: GASOLINE RANGE					Analy	st: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/14/2021 1:35:26 PI	M 60586
Surr: BFB	108	70-130	%Rec	1	6/14/2021 1:35:26 PI	M 60586
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.025	mg/Kg	1	6/14/2021 1:35:26 PI	M 60586
Toluene	ND	0.049	mg/Kg	1	6/14/2021 1:35:26 PI	M 60586
Ethylbenzene	ND	0.049	mg/Kg	1	6/14/2021 1:35:26 PI	M 60586
Xylenes, Total	ND	0.099	mg/Kg	1	6/14/2021 1:35:26 PI	M 60586
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	1	6/14/2021 1:35:26 PI	M 60586

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

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Lab Order: 2106657

Date Reported: 6/22/2021

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 2106657

**Project:** Brannigan ANF Federal Battery 5

**Lab ID:** 2106657-009 **Collection Date:** 6/9/2021 2:20:00 PM

Client Sample ID: BH-6 Matrix: SOIL

Result **RL Oual Units DF** Date Analyzed **Analyses Batch ID EPA METHOD 300.0: ANIONS** Analyst: VP Chloride ND 60 6/15/2021 5:22:30 PM 60600 mg/Kg 20 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: SB Diesel Range Organics (DRO) 320 9.9 mg/Kg 6/16/2021 6:41:34 AM 60589 Motor Oil Range Organics (MRO) 310 6/16/2021 6:41:34 AM 49 mg/Kg 1 60589 Surr: DNOP 88.8 70-130 %Rec 6/16/2021 6:41:34 AM 60589 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 5.0 mg/Kg 1 6/14/2021 1:59:15 PM 60586 Surr: BFB 124 70-130 %Rec 1 6/14/2021 1:59:15 PM 60586 **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 0.025 mg/Kg 6/14/2021 1:59:15 PM 60586 Toluene ND 0.050 mg/Kg 6/14/2021 1:59:15 PM 60586 Ethylbenzene ND 0.050 mg/Kg 6/14/2021 1:59:15 PM 60586 1 Xylenes, Total ND 0.099 mg/Kg 6/14/2021 1:59:15 PM 60586 Surr: 4-Bromofluorobenzene 104 70-130 %Rec 6/14/2021 1:59:15 PM 60586

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

Page 6 of 10

### Hall Environmental Analysis Laboratory, Inc.

2106657 22-Jun-21

WO#:

Client: GHD

**Project:** Brannigan ANF Federal Battery 5

Sample ID: MB-60599 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 60599 RunNo: 79065

Prep Date: 6/14/2021 Analysis Date: 6/14/2021 SeqNo: 2774558 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-60599 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 60599 RunNo: 79065

Prep Date: 6/14/2021 Analysis Date: 6/14/2021 SeqNo: 2774559 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 95.8 90 110

Sample ID: MB-60600 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 60600 RunNo: 79075

Prep Date: 6/14/2021 Analysis Date: 6/15/2021 SeqNo: 2776323 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-60600 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 60600 RunNo: 79075

Prep Date: 6/14/2021 Analysis Date: 6/15/2021 SeqNo: 2776324 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 91.8 90 110

### Qualifiers:

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

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

Page 7 of 10

### Hall Environmental Analysis Laboratory, Inc.

WO#: **2106657** 

22-Jun-21

Client: GHD

**Project:** Brannigan ANF Federal Battery 5

Sample ID: MB-60589 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 60589 RunNo: 79088

Prep Date: 6/12/2021 Analysis Date: 6/14/2021 SeqNo: 2779775 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO) ND 10

Motor Oil Range Organics (MRO)

ND

50

Surr: DNOP 11 10.00 108 70 130

Sample ID: LCS-60589 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 60589 RunNo: 79088

Prep Date: 6/12/2021 Analysis Date: 6/16/2021 SeqNo: 2779802 Units: mg/Kg

Analyte PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 10 68.9 53 50.00 106 141 Surr: DNOP 5.9 5.000 118 70 130

Sample ID: 2106657-001AMS SampType: MS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: **SW-2** Batch ID: **60589** RunNo: **79088** 

Prep Date: 6/12/2021 Analysis Date: 6/16/2021 SeqNo: 2779804 Units: mg/Kg

HighLimit Result PQL SPK value SPK Ref Val %REC LowLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 72 25.02 15 9.7 48.40 96.7 184 Surr: DNOP 5.0 4.840 103 70 130

Sample ID: 2106657-001AMSD SampType: MSD TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: **SW-2** Batch ID: **60589** RunNo: **79088** 

Prep Date: 6/12/2021 Analysis Date: 6/16/2021 SeqNo: 2779805 Units: mg/Kg

%RPD Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit **RPDLimit** Analyte Diesel Range Organics (DRO) 68 9.5 47.44 25.02 89.8 15 184 8.44 23.9 Surr: DNOP 5.0 4.744 105 70 130 0 0

### Qualifiers:

Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 8 of 10

Qual

### Hall Environmental Analysis Laboratory, Inc.

WO#: **2106657 22-Jun-21** 

Client: GHD

**Project:** Brannigan ANF Federal Battery 5

Sample ID: mb-60586 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: **PBS** Batch ID: **60586** RunNo: **79064** 

Prep Date: 6/12/2021 Analysis Date: 6/14/2021 SeqNo: 2774399 Units: mg/Kg

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

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 1100 1000 115 70 130

Sample ID: Ics-60586 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 60586 RunNo: 79064

Prep Date: 6/12/2021 Analysis Date: 6/14/2021 SeqNo: 2774400 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 5.0 25.00 O 108 78.6 131

 Surr: BFB
 1300
 1000
 126
 70
 130

Sample ID: 2106657-001ams SampType: MS TestCode: EPA Method 8015D: Gasoline Range

Client ID: **SW-2** Batch ID: **60586** RunNo: **79064** 

Prep Date: 6/12/2021 Analysis Date: 6/14/2021 SeqNo: 2774402 Units: mg/Kg

Result SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte PQL LowLimit HighLimit Qual Gasoline Range Organics (GRO) 26 4.9 24.58 0 108 61.3 114 Surr: BFB 983.3 1200 125 70 130

Sample ID: 2106657-001amsd SampType: MSD TestCode: EPA Method 8015D: Gasoline Range

Client ID: **SW-2** Batch ID: **60586** RunNo: **79064** 

Prep Date: 6/12/2021 Analysis Date: 6/14/2021 SeqNo: 2774403 Units: mg/Kg

SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Result PQL LowLimit Qual Gasoline Range Organics (GRO) 26 4.9 24.58 107 61.3 0.447 114 20 Surr: BFB 1200 983.3 124 70 130 0 0

### Qualifiers:

Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical 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

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### Hall Environmental Analysis Laboratory, Inc.

WO#: 2106657 22-Jun-21

**Client: GHD** 

**Project:** Brannigan ANF Federal Battery 5

Sample ID: mb-60586 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: PBS Batch ID: 60586 RunNo: 79064

Prep Date: 6/12/2021 Analysis Date: 6/14/2021 SeqNo: 2774447 Units: mg/Kg

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

Benzene ND 0.025 Toluene ND 0.050 0.050 Ethylbenzene ND Xylenes, Total ND 0.10

Surr: 4-Bromofluorobenzene 1.1 1.000 109 70 130

Sample ID: LCS-60586 SampType: LCS TestCode: EPA Method 8021B: Volatiles

Client ID: LCSS Batch ID: 60586 RunNo: 79064

Prep Date: 6/12/2021	Analysis [	Date: <b>6/</b>	14/2021	5	SeqNo: 2	774448	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	98.3	80	120			
Toluene	0.99	0.050	1.000	0	99.3	80	120			
Ethylbenzene	0.99	0.050	1.000	0	98.8	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.2	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		110	70	130			

Sample ID: 2106657-002ams SampType: MS TestCode: EPA Method 8021B: Volatiles Client ID: SW-3 Batch ID: 60586 RunNo: 79064 Prep Date: 6/12/2021 Analysis Date: 6/14/2021 SeqNo: 2774451 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual n

104 80 1.0 0.025 0.9852 120 Benzene Toluene 1.0 0.049 0.9852 0 106 80 120 0.9852 0 108 80 Ethylbenzene 1.1 0.049 120 Xylenes, Total 3.2 0.099 2.956 0 108 80 120 Surr: 4-Bromofluorobenzene 0.9852 1.0 103 70 130

TestCode: EPA Method 8021B: Volatiles Sample ID: 2106657-002amsd SampType: MSD

Batch ID: 60586 RunNo: 79064 Client ID: SW-3

Prep Date: 6/12/2021	Analysis [	Analysis Date: 6/14/2021			SeqNo: 2	774452	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.024	0.9756	0	103	80	120	1.98	20	
Toluene	1.0	0.049	0.9756	0	106	80	120	1.55	20	
Ethylbenzene	1.0	0.049	0.9756	0	106	80	120	2.78	20	
Xylenes, Total	3.1	0.098	2.927	0	106	80	120	2.86	20	
Surr: 4-Bromofluorobenzene	0.99		0.9756		102	70	130	0	0	

### Qualifiers:

Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

Value above quantitation range

Analyte detected below quantitation limits

Sample pH Not In Range

RL Reporting Limit Page 10 of 10



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com

# Sample Log-In Check List

Client Name:	GHD	Work Order N	umber: 2106657		RcptNo:	
Received By:	Juan Rojas	6/11/2021 7:45:	00 AM	Juan Eng		
Completed By:	Sean Livingston	6/11/2021 8:41:	46 AM	S. La	-4-	
Reviewed By:	JR 6/11/21			52-01		
Chain of Cus	stody					
1. Is Chain of C	Custody complete?		Yes 🗸	No 🗌	Not Present	
2. How was the	sample delivered?		Courier			
Log In						
	npt made to cool the sam	oles?	Yes 🗸	No 🔲	NA 🗆	
4. Were all sam	ples received at a temper	ature of >0° C to 6.0°C	Yes 🗸	No 🗌	NA 🗆	
5. Sample(s) in	proper container(s)?		Yes 🔽	No 🗌		
6. Sufficient sam	nple volume for indicated	test(s)?	Yes 🗸	No 🗌		
7. Are samples (	(except VOA and ONG) p	roperly preserved?	Yes 🗸	No 🗆		
8. Was preserva	ative added to bottles?		Yes	No 🗹	NA 🗆	
9. Received at le	east 1 vial with headspace	<1/4" for AQ VOA?	Yes	No 🗌	NA 🗹	
10. Were any sar	mple containers received	broken?	Yes	No 🗹	# of preserved	10
	ork match bottle labels? ancies on chain of custod	v)	Yes 🗸	2 2 2	bottles checked for pH:	6 - / 1 · 2   12 unless noted)
	correctly identified on Cha		Yes 🗸	No 🗌	Adjusted?	
	at analyses were requeste		Yes 🗸	No 🗆		
	ing times able to be met? sustomer for authorization.	)	Yes 🗸	No 🗆	Checked by:	
Special Handi	ling (if applicable)					
	otified of all discrepancies	with this order?	Yes 🗌	No 🗆	NA 🔽	
Person	Notified:	D	ate:			
By Who	om:			hone  Fax	In Person	
Regard	ling:				-3.70.74	
Client I	nstructions:					
16. Additional re	emarks:					
17. <u>Cooler Information</u> Cooler No.		Seal Intact   Seal N	o Seal Date	Signed By		

HALL ENVIRONMENTAL	ANALTSIS LABORATORY			The statement	.03																		@ GHD.com	13 - 13 - 13 - 13 - 13 - 13 - 13 - 13 -
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Turn-Around Time:	Project Name:	2	Project #:	11228	Project Manager:		Sampler:	On Ice:	# of Coolers:	Cooler Temp(including cF):	Container Type and #	J. J.								4			Received by:	Received by:
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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com

OrderNo.: 2106909

June 25, 2021

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

FAX

RE: Brannigan ANF Federal 5 Battery

#### Dear Tom Larson:

Hall Environmental Analysis Laboratory received 15 sample(s) on 6/17/2021 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

andy

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order: 2106909

Hall Environmental Analysis Laboratory, Inc.

Date

Date Reported: 6/25/2021

CLIENT: GHD Lab Order: 2106909

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106909-001 **Collection Date:** 6/15/2021 6:10:00 AM

Client Sample ID: BH-7 Matrix: SOIL

Cheme Sumple 12.				11144112		12		
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Ba	tch ID
EPA METHOD 300.0: ANIONS						An	alyst:	VP
Chloride	ND	60		mg/Kg	20	6/20/2021 9:48:09	AM	60753
EPA METHOD 8015D MOD: GASOLINE RANGE						An	alyst:	JMR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/21/2021 1:01:54	AM	60717
Surr: BFB	92.5	70-130		%Rec	1	6/21/2021 1:01:54	AM	60717
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS					An	alyst:	SB
Diesel Range Organics (DRO)	1900	94		mg/Kg	10	6/19/2021 4:25:53	PM	60738
Motor Oil Range Organics (MRO)	1100	470		mg/Kg	10	6/19/2021 4:25:53	PM	60738
Surr: DNOP	0	70-130	S	%Rec	10	6/19/2021 4:25:53	PM	60738
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						An	alyst:	JMR
Benzene	ND	0.024		mg/Kg	1	6/21/2021 1:01:54	AM	60717
Toluene	ND	0.049		mg/Kg	1	6/21/2021 1:01:54	AM	60717
Ethylbenzene	ND	0.049		mg/Kg	1	6/21/2021 1:01:54	AM	60717
Xylenes, Total	ND	0.097		mg/Kg	1	6/21/2021 1:01:54	AM	60717
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	6/21/2021 1:01:54	AM	60717
Surr: 4-Bromofluorobenzene	96.6	70-130		%Rec	1	6/21/2021 1:01:54	AM	60717
Surr: Dibromofluoromethane	82.6	70-130		%Rec	1	6/21/2021 1:01:54	AM	60717
Surr: Toluene-d8	99.0	70-130		%Rec	1	6/21/2021 1:01:54	AM	60717

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 Limi

Page 1 of 21

Lab Order: 2106909

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/25/2021

CLIENT: GHD Lab Order: 2106909

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106909-002 **Collection Date:** 6/15/2021 6:15:00 AM

Client Sample ID: BH-8 Matrix: SOIL

**Analyses** Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 300.0: ANIONS** Analyst: VP Chloride 160 60 mg/Kg 6/20/2021 10:25:23 AM 60753 20 **EPA METHOD 8015D MOD: GASOLINE RANGE** Analyst: JMR Gasoline Range Organics (GRO) ND 4.7 6/21/2021 1:30:31 AM 60717 mg/Kg 1 Surr: BFB 96.6 70-130 %Rec 1 6/21/2021 1:30:31 AM 60717 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: SB Diesel Range Organics (DRO) ND 9.0 mg/Kg 6/19/2021 4:41:59 PM 60738 1 Motor Oil Range Organics (MRO) ND 45 mg/Kg 1 6/19/2021 4:41:59 PM 60738 Surr: DNOP 81.2 70-130 %Rec 6/19/2021 4:41:59 PM 60738 **EPA METHOD 8260B: VOLATILES SHORT LIST** Analyst: JMR Benzene ND 0.023 6/21/2021 1:30:31 AM 60717 mg/Kg 1 Toluene ND 0.047 mg/Kg 1 6/21/2021 1:30:31 AM 60717 Ethylbenzene ND 0.047 mg/Kg 1 6/21/2021 1:30:31 AM 60717 Xylenes, Total ND 0.094 mg/Kg 1 6/21/2021 1:30:31 AM 60717 Surr: 1,2-Dichloroethane-d4 101 70-130 %Rec 1 6/21/2021 1:30:31 AM 60717 Surr: 4-Bromofluorobenzene 99.3 70-130 %Rec 6/21/2021 1:30:31 AM 60717 Surr: Dibromofluoromethane 90.3 70-130 %Rec 6/21/2021 1:30:31 AM 60717 1 Surr: Toluene-d8 99.3 70-130 %Rec 6/21/2021 1:30:31 AM 60717

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

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Lab Order: **2106909** 

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/25/2021

CLIENT: GHD Lab Order: 2106909

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106909-003 **Collection Date:** 6/15/2021 6:20:00 AM

Client Sample ID: BH-9 Matrix: SOIL

Cheme Sumple 12.	mattin, boil								
Analyses	Result	RL	Qual Units	DF	Date Analyzed B	atch ID			
EPA METHOD 300.0: ANIONS					Analys	t: <b>VP</b>			
Chloride	ND	60	mg/Kg	20	6/20/2021 11:02:37 AM	1 60753			
EPA METHOD 8015D MOD: GASOLINE RANGE					Analys	t: JMR			
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	6/21/2021 1:59:14 AM	60717			
Surr: BFB	94.9	70-130	%Rec	1	6/21/2021 1:59:14 AM	60717			
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS				Analys	t: <b>SB</b>			
Diesel Range Organics (DRO)	210	10	mg/Kg	1	6/19/2021 4:57:25 PM	60738			
Motor Oil Range Organics (MRO)	160	50	mg/Kg	1	6/19/2021 4:57:25 PM	60738			
Surr: DNOP	94.5	70-130	%Rec	1	6/19/2021 4:57:25 PM	60738			
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>					Analys	t: <b>JMR</b>			
Benzene	ND	0.025	mg/Kg	1	6/21/2021 1:59:14 AM	60717			
Toluene	ND	0.050	mg/Kg	1	6/21/2021 1:59:14 AM	60717			
Ethylbenzene	ND	0.050	mg/Kg	1	6/21/2021 1:59:14 AM	60717			
Xylenes, Total	ND	0.099	mg/Kg	1	6/21/2021 1:59:14 AM	60717			
Surr: 1,2-Dichloroethane-d4	104	70-130	%Rec	1	6/21/2021 1:59:14 AM	60717			
Surr: 4-Bromofluorobenzene	99.4	70-130	%Rec	1	6/21/2021 1:59:14 AM	60717			
Surr: Dibromofluoromethane	89.9	70-130	%Rec	1	6/21/2021 1:59:14 AM	60717			
Surr: Toluene-d8	102	70-130	%Rec	1	6/21/2021 1:59:14 AM	60717			

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

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Lab Order: **2106909** 

Date Reported: 6/25/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 2106909

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106909-004 **Collection Date:** 6/15/2021 6:25:00 AM

Client Sample ID: BH-10 Matrix: SOIL

- · · · · · · · · · · · · · · · · · · ·						
Analyses	Result	RL Qu	al Units	DF	Date Analyzed B	atch ID
EPA METHOD 300.0: ANIONS					Analys	t: <b>VP</b>
Chloride	ND	60	mg/Kg	20	6/20/2021 11:39:52 AM	1 60753
EPA METHOD 8015D MOD: GASOLINE RANGE					Analys	t: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	6/21/2021 2:27:56 AM	60717
Surr: BFB	97.5	70-130	%Rec	1	6/21/2021 2:27:56 AM	60717
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS				Analys	t: SB
Diesel Range Organics (DRO)	310	10	mg/Kg	1	6/19/2021 5:12:46 PM	60738
Motor Oil Range Organics (MRO)	270	50	mg/Kg	1	6/19/2021 5:12:46 PM	60738
Surr: DNOP	98.2	70-130	%Rec	1	6/19/2021 5:12:46 PM	60738
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>					Analys	t: <b>JMR</b>
Benzene	ND	0.025	mg/Kg	1	6/21/2021 2:27:56 AM	60717
Toluene	ND	0.050	mg/Kg	1	6/21/2021 2:27:56 AM	60717
Ethylbenzene	ND	0.050	mg/Kg	1	6/21/2021 2:27:56 AM	60717
Xylenes, Total	ND	0.099	mg/Kg	1	6/21/2021 2:27:56 AM	60717
Surr: 1,2-Dichloroethane-d4	107	70-130	%Rec	1	6/21/2021 2:27:56 AM	60717
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	1	6/21/2021 2:27:56 AM	60717
Surr: Dibromofluoromethane	87.2	70-130	%Rec	1	6/21/2021 2:27:56 AM	60717
Surr: Toluene-d8	103	70-130	%Rec	1	6/21/2021 2:27:56 AM	60717

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

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

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Lab Order: **2106909**Date Reported: **6/25/2021** 

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 2106909

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106909-005 **Collection Date:** 6/15/2021 6:30:00 AM

Client Sample ID: BH-11 Matrix: SOIL

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS					Analy	st: <b>VP</b>
Chloride	ND	59	mg/Kg	20	6/20/2021 11:52:17 A	M 60753
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analys	st: SB
Diesel Range Organics (DRO)	170	9.4	mg/Kg	1	6/20/2021 5:15:04 AM	60742
Motor Oil Range Organics (MRO)	110	47	mg/Kg	1	6/20/2021 5:15:04 AM	60742
Surr: DNOP	104	70-130	%Rec	1	6/20/2021 5:15:04 AM	60742
EPA METHOD 8015D: GASOLINE RANGE					Analys	st: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	6/22/2021 3:07:59 AM	60719
Surr: BFB	114	70-130	%Rec	1	6/22/2021 3:07:59 AM	60719
EPA METHOD 8021B: VOLATILES					Analys	st: NSB
Benzene	ND	0.025	mg/Kg	1	6/22/2021 3:07:59 AM	60719
Toluene	ND	0.050	mg/Kg	1	6/22/2021 3:07:59 AM	60719
Ethylbenzene	ND	0.050	mg/Kg	1	6/22/2021 3:07:59 AM	60719
Xylenes, Total	ND	0.099	mg/Kg	1	6/22/2021 3:07:59 AM	60719
Surr: 4-Bromofluorobenzene	94.9	70-130	%Rec	1	6/22/2021 3:07:59 AM	60719

**Lab ID:** 2106909-006 **Collection Date:** 6/15/2021 6:35:00 AM

Client Sample ID: SW-4 Matrix: SOIL

Analyses	Result	RL Qu	ual Units	DF	Date Analyzed B	atch ID
EPA METHOD 300.0: ANIONS					Analys	t: <b>VP</b>
Chloride	89	60	mg/Kg	20	6/20/2021 12:04:41 PM	1 60753
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Analys	t: <b>SB</b>
Diesel Range Organics (DRO)	ND	9.1	mg/Kg	1	6/20/2021 6:02:41 AM	60742
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	6/20/2021 6:02:41 AM	60742
Surr: DNOP	102	70-130	%Rec	1	6/20/2021 6:02:41 AM	60742
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/19/2021 11:50:00 PM	1 60719
Surr: BFB	99.6	70-130	%Rec	1	6/19/2021 11:50:00 PM	1 60719
EPA METHOD 8021B: VOLATILES					Analys	t: CCM
Benzene	ND	0.025	mg/Kg	1	6/19/2021 11:50:00 PM	1 60719
Toluene	ND	0.049	mg/Kg	1	6/19/2021 11:50:00 PM	1 60719
Ethylbenzene	ND	0.049	mg/Kg	1	6/19/2021 11:50:00 PM	1 60719
Xylenes, Total	ND	0.099	mg/Kg	1	6/19/2021 11:50:00 PM	1 60719
Surr: 4-Bromofluorobenzene	83.9	70-130	%Rec	1	6/19/2021 11:50:00 PM	1 60719

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

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Lab Order: 2106909

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/25/2021

CLIENT: GHD Lab Order: 2106909

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106909-007 **Collection Date:** 6/15/2021 6:40:00 AM

Client Sample ID: SW-5 Matrix: SOIL

Result **RL Oual Units DF** Date Analyzed **Analyses Batch ID EPA METHOD 300.0: ANIONS** Analyst: VP Chloride 6/20/2021 12:17:06 PM 60753 220 60 mg/Kg **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: SB Diesel Range Organics (DRO) 120 8.2 mg/Kg 6/20/2021 6:26:31 AM 60742 Motor Oil Range Organics (MRO) 180 6/20/2021 6:26:31 AM 60742 41 mg/Kg 1 Surr: DNOP 104 70-130 %Rec 6/20/2021 6:26:31 AM 60742 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: CCM Gasoline Range Organics (GRO) ND 4.9 mg/Kg 1 6/20/2021 12:50:00 AM 60719 Surr: BFB 100 70-130 %Rec 1 6/20/2021 12:50:00 AM 60719 **EPA METHOD 8021B: VOLATILES** Analyst: CCM Benzene ND 6/20/2021 12:50:00 AM 60719 0.024 mg/Kg Toluene ND 0.049 mg/Kg 1 6/20/2021 12:50:00 AM 60719 Ethylbenzene ND 0.049 mg/Kg 1 6/20/2021 12:50:00 AM 60719 Xylenes, Total ND 0.098 mg/Kg 6/20/2021 12:50:00 AM 60719 Surr: 4-Bromofluorobenzene 86.2 70-130 %Rec 6/20/2021 12:50:00 AM 60719

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

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**CLIENT:** 

### **Analytical Report**

Lab Order: **2106909**Date Reported: **6/25/2021** 

# Hall Environmental Analysis Laboratory, Inc.

**Lab Order:** 2106909

**Project:** Brannigan ANF Federal 5 Battery

**GHD** 

**Lab ID:** 2106909-008 **Collection Date:** 6/15/2021 6:45:00 AM

Client Sample ID: SW-6 Matrix: SOIL

Analyses	Result	RL (	Qual Units	DF	Date Analyzed B	Satch ID
EPA METHOD 300.0: ANIONS					Analys	t: <b>VP</b>
Chloride	140	60	mg/Kg	20	6/20/2021 12:29:31 PM	A 60753
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analys	t: SB
Diesel Range Organics (DRO)	14	8.8	mg/Kg	1	6/20/2021 7:14:09 AM	60742
Motor Oil Range Organics (MRO)	ND	44	mg/Kg	1	6/20/2021 7:14:09 AM	60742
Surr: DNOP	108	70-130	%Rec	1	6/20/2021 7:14:09 AM	60742
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/20/2021 1:10:00 AM	60719
Surr: BFB	98.6	70-130	%Rec	1	6/20/2021 1:10:00 AM	60719
EPA METHOD 8021B: VOLATILES					Analys	t: CCM
Benzene	ND	0.025	mg/Kg	1	6/20/2021 1:10:00 AM	60719
Toluene	ND	0.049	mg/Kg	1	6/20/2021 1:10:00 AM	60719
Ethylbenzene	ND	0.049	mg/Kg	1	6/20/2021 1:10:00 AM	60719
Xylenes, Total	ND	0.099	mg/Kg	1	6/20/2021 1:10:00 AM	60719
Surr: 4-Bromofluorobenzene	82.9	70-130	%Rec	1	6/20/2021 1:10:00 AM	60719

**Lab ID:** 2106909-009 **Collection Date:** 6/15/2021 6:50:00 AM

Client Sample ID: SW-7 Matrix: SOIL

Analyses	Result	RL Q	Qual Units	DF	Date Analyzed I	Batch ID
EPA METHOD 300.0: ANIONS					Analys	st: <b>VP</b>
Chloride	67	60	mg/Kg	20	6/20/2021 12:41:55 PI	M 60753
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analys	st: SB
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	6/20/2021 7:38:00 AM	60742
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	6/20/2021 7:38:00 AM	60742
Surr: DNOP	87.2	70-130	%Rec	1	6/20/2021 7:38:00 AM	60742
EPA METHOD 8015D: GASOLINE RANGE					Analys	st: CCM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	6/20/2021 1:29:00 AM	60719
Surr: BFB	101	70-130	%Rec	1	6/20/2021 1:29:00 AM	60719
EPA METHOD 8021B: VOLATILES					Analys	st: CCM
Benzene	ND	0.025	mg/Kg	1	6/20/2021 1:29:00 AM	60719
Toluene	ND	0.050	mg/Kg	1	6/20/2021 1:29:00 AM	60719
Ethylbenzene	ND	0.050	mg/Kg	1	6/20/2021 1:29:00 AM	60719
Xylenes, Total	ND	0.099	mg/Kg	1	6/20/2021 1:29:00 AM	60719
Surr: 4-Bromofluorobenzene	85.9	70-130	%Rec	1	6/20/2021 1:29:00 AM	60719

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

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Lab Order: 2106909

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/25/2021

CLIENT: GHD Lab Order: 2106909

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106909-010 **Collection Date:** 6/15/2021 6:55:00 AM

Client Sample ID: BH-12 Matrix: SOIL

Result **RL Oual Units DF** Date Analyzed **Analyses Batch ID EPA METHOD 300.0: ANIONS** Analyst: VP Chloride 6/20/2021 12:54:20 PM 60753 280 60 mg/Kg **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: SB Diesel Range Organics (DRO) 6/20/2021 8:01:58 AM 320 9.7 mg/Kg 60742 Motor Oil Range Organics (MRO) 230 6/20/2021 8:01:58 AM 60742 48 mg/Kg 1 Surr: DNOP 93.4 70-130 %Rec 6/20/2021 8:01:58 AM 60742 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: CCM Gasoline Range Organics (GRO) ND 4.9 mg/Kg 1 6/20/2021 1:49:00 AM 60719 Surr: BFB 107 70-130 %Rec 1 6/20/2021 1:49:00 AM 60719 **EPA METHOD 8021B: VOLATILES** Analyst: CCM Benzene ND 0.024 mg/Kg 1 6/20/2021 1:49:00 AM 60719 Toluene ND 0.049 mg/Kg 1 6/20/2021 1:49:00 AM 60719 Ethylbenzene ND 0.049 mg/Kg 1 6/20/2021 1:49:00 AM 60719 Xylenes, Total ND 0.098 mg/Kg 6/20/2021 1:49:00 AM 60719 Surr: 4-Bromofluorobenzene 86.6 70-130 %Rec 6/20/2021 1:49:00 AM 60719

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

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Lab Order: **2106909**Date Reported: **6/25/2021** 

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 2106909

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106909-011 **Collection Date:** 6/15/2021 7:00:00 AM

Client Sample ID: BH-13 Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Ba	tch ID
EPA METHOD 300.0: ANIONS						Ar	nalyst:	VP
Chloride	140	60		mg/Kg	20	6/20/2021 1:06:45	5 PM	60753
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Ar	nalyst:	SB
Diesel Range Organics (DRO)	1100	85		mg/Kg	10	6/23/2021 5:39:17	7 PM	60742
Motor Oil Range Organics (MRO)	730	430		mg/Kg	10	6/23/2021 5:39:17	7 PM	60742
Surr: DNOP	0	70-130	S	%Rec	10	6/23/2021 5:39:17	7 PM	60742
EPA METHOD 8015D: GASOLINE RANGE						Ar	nalyst:	CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/20/2021 2:09:00	MA C	60719
Surr: BFB	120	70-130		%Rec	1	6/20/2021 2:09:00	MA C	60719
EPA METHOD 8021B: VOLATILES						Ar	nalyst:	CCM
Benzene	ND	0.024		mg/Kg	1	6/20/2021 2:09:00	MA C	60719
Toluene	ND	0.048		mg/Kg	1	6/20/2021 2:09:00	MA C	60719
Ethylbenzene	ND	0.048		mg/Kg	1	6/20/2021 2:09:00	MA C	60719
Xylenes, Total	ND	0.097		mg/Kg	1	6/20/2021 2:09:00	MA C	60719
Surr: 4-Bromofluorobenzene	87.9	70-130		%Rec	1	6/20/2021 2:09:00	MA C	60719

**Lab ID:** 2106909-012 **Collection Date:** 6/15/2021 7:05:00 AM

Client Sample ID: BH-14 Matrix: SOIL

Analyses	Result	RL Q	ual Units	DF	Date Analyzed B	atch ID
EPA METHOD 300.0: ANIONS					Analys	t: <b>VP</b>
Chloride	ND	60	mg/Kg	20	6/20/2021 1:19:10 PM	60753
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analys	t: SB
Diesel Range Organics (DRO)	12	9.8	mg/Kg	1	6/20/2021 9:13:41 AM	60742
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	6/20/2021 9:13:41 AM	60742
Surr: DNOP	90.5	70-130	%Rec	1	6/20/2021 9:13:41 AM	60742
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/20/2021 2:29:00 AM	60719
Surr: BFB	97.2	70-130	%Rec	1	6/20/2021 2:29:00 AM	60719
EPA METHOD 8021B: VOLATILES					Analys	t: CCM
Benzene	ND	0.025	mg/Kg	1	6/20/2021 2:29:00 AM	60719
Toluene	ND	0.049	mg/Kg	1	6/20/2021 2:29:00 AM	60719
Ethylbenzene	ND	0.049	mg/Kg	1	6/20/2021 2:29:00 AM	60719
Xylenes, Total	ND	0.098	mg/Kg	1	6/20/2021 2:29:00 AM	60719
Surr: 4-Bromofluorobenzene	84.1	70-130	%Rec	1	6/20/2021 2:29:00 AM	60719

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

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Lab Order: 2106909

Date Reported: 6/25/2021

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 2106909

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106909-013 **Collection Date:** 6/15/2021 7:10:00 AM

Client Sample ID: BH-15 Matrix: SOIL

Result **RL Oual Units DF** Date Analyzed **Analyses Batch ID EPA METHOD 300.0: ANIONS** Analyst: VP Chloride 69 60 6/20/2021 1:31:34 PM 60753 mg/Kg **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: SB Diesel Range Organics (DRO) 6/20/2021 9:37:37 AM 860 9.0 mg/Kg 60742 Motor Oil Range Organics (MRO) 530 6/20/2021 9:37:37 AM 60742 45 mg/Kg 1 Surr: DNOP 111 70-130 %Rec 6/20/2021 9:37:37 AM 60742 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: CCM Gasoline Range Organics (GRO) ND 4.9 mg/Kg 1 6/20/2021 2:49:00 AM 60719 Surr: BFB 107 70-130 %Rec 1 6/20/2021 2:49:00 AM 60719 **EPA METHOD 8021B: VOLATILES** Analyst: CCM Benzene ND 0.025 mg/Kg 1 6/20/2021 2:49:00 AM 60719 Toluene ND 0.049 mg/Kg 1 6/20/2021 2:49:00 AM 60719 Ethylbenzene ND 0.049 mg/Kg 1 6/20/2021 2:49:00 AM 60719 Xylenes, Total ND 0.099 mg/Kg 6/20/2021 2:49:00 AM 60719 Surr: 4-Bromofluorobenzene 82.7 70-130 %Rec 6/20/2021 2:49:00 AM 60719

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

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Lab Order: **2106909** 

# Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/25/2021

CLIENT: GHD Lab Order: 2106909

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106909-014 **Collection Date:** 6/15/2021 7:15:00 AM

Client Sample ID: SW-8 Matrix: SOIL

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Ba	tch ID
EPA METHOD 300.0: ANIONS					Ana	lyst:	VP
Chloride	130	59	mg/Kg	20	6/20/2021 2:08:48 F	PM	60753
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Ana	lyst:	SB
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	6/20/2021 10:25:35	AM	60742
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	6/20/2021 10:25:35	AM	60742
Surr: DNOP	99.6	70-130	%Rec	1	6/20/2021 10:25:35	AM	60742
EPA METHOD 8015D: GASOLINE RANGE					Ana	lyst:	ССМ
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/20/2021 3:08:00 A	MA	60719
Surr: BFB	100	70-130	%Rec	1	6/20/2021 3:08:00 /	MΑ	60719
EPA METHOD 8021B: VOLATILES					Ana	lyst:	ССМ
Benzene	ND	0.025	mg/Kg	1	6/20/2021 3:08:00 A	MΑ	60719
Toluene	ND	0.049	mg/Kg	1	6/20/2021 3:08:00 A	MA	60719
Ethylbenzene	ND	0.049	mg/Kg	1	6/20/2021 3:08:00 /	MA	60719
Xylenes, Total	ND	0.098	mg/Kg	1	6/20/2021 3:08:00 /	MA	60719
Surr: 4-Bromofluorobenzene	84.3	70-130	%Rec	1	6/20/2021 3:08:00 A	MA	60719

**Lab ID:** 2106909-015 **Collection Date:** 6/15/2021 7:20:00 AM

Client Sample ID: SW-9 Matrix: SOIL

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Ba	tch ID
EPA METHOD 300.0: ANIONS					Ana	lyst:	VP
Chloride	140	60	mg/Kg	20	6/20/2021 2:21:13 F	PM	60753
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Ana	lyst:	SB
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	6/20/2021 10:49:39	AM	60742
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	6/20/2021 10:49:39	AM	60742
Surr: DNOP	92.2	70-130	%Rec	1	6/20/2021 10:49:39	AM	60742
EPA METHOD 8015D: GASOLINE RANGE					Ana	lyst:	CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/20/2021 4:28:00 A	λM	60719
Surr: BFB	98.6	70-130	%Rec	1	6/20/2021 4:28:00 A	λM	60719
<b>EPA METHOD 8021B: VOLATILES</b>					Ana	lyst:	CCM
Benzene	ND	0.025	mg/Kg	1	6/20/2021 4:28:00 A	λM	60719
Toluene	ND	0.049	mg/Kg	1	6/20/2021 4:28:00 A	MA	60719
Ethylbenzene	ND	0.049	mg/Kg	1	6/20/2021 4:28:00 A	MA	60719
Xylenes, Total	ND	0.098	mg/Kg	1	6/20/2021 4:28:00 A	MΑ	60719
Surr: 4-Bromofluorobenzene	84.5	70-130	%Rec	1	6/20/2021 4:28:00 A	MA	60719

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

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Lab Order: 2106909

# Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/25/2021

CLIENT: GHD Lab Order: 2106909

**Project:** Brannigan ANF Federal 5 Battery

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

### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **2106909** 

25-Jun-21

Client: GHD

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: MB-60753 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 60753 RunNo: 79212

Prep Date: 6/19/2021 Analysis Date: 6/20/2021 SeqNo: 2780840 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-60753 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 60753 RunNo: 79212

Prep Date: 6/19/2021 Analysis Date: 6/20/2021 SeqNo: 2780841 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 93.7 90 110

#### Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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### Hall Environmental Analysis Laboratory, Inc.

WO#: 2106909 25-Jun-21

**Client: GHD** 

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: MB-60738 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 60738 RunNo: 79195

Prep Date: 6/18/2021 Analysis Date: 6/19/2021 SeqNo: 2782640 Units: mg/Kg

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

Diesel Range Organics (DRO) ND 10 Motor Oil Range Organics (MRO) ND 50

Surr: DNOP 70 8.7 10.00 87.0 130

Sample ID: MB-60739 TestCode: EPA Method 8015M/D: Diesel Range Organics SampType: MBLK

Client ID: PBS Batch ID: 60739 RunNo: 79195

Prep Date: Analysis Date: 6/19/2021 SeqNo: 2782641 6/18/2021 Units: %Rec

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Surr: DNOP 8.6 10.00 85.8 130

Sample ID: LCS-60739 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 60739 RunNo: 79195

Prep Date: 6/18/2021 Analysis Date: 6/19/2021 SeqNo: 2782668 Units: %Rec

SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result POI LowLimit HighLimit Qual 130

Surr: DNOP 4.5 5.000 89.4 70

Sample ID: LCS-60738 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 60738 RunNo: 79195

Units: mg/Kg Prep Date: 6/18/2021 Analysis Date: 6/19/2021 SeqNo: 2782790

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 46 10 50.00 0 92.5 68.9 141 Surr: DNOP 4.6 5.000 92.9 70 130

Sample ID: MB-60742 TestCode: EPA Method 8015M/D: Diesel Range Organics SampType: MBLK Client ID: PBS Batch ID: 60742 RunNo: 79227 Analysis Date: 6/20/2021 SeqNo: 2783470 Prep Date: 6/18/2021 Units: mg/Kg SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result PQL LowLimit HighLimit Qual Diesel Range Organics (DRO) ND 10

Motor Oil Range Organics (MRO) ND 50 Surr: DNOP 9.9 10.00 98.7 70 130

Sample ID: LCS-60742 TestCode: EPA Method 8015M/D: Diesel Range Organics SampType: LCS

Client ID: LCSS Batch ID: 60742 RunNo: 79227

Prep Date: 6/18/2021 Analysis Date: 6/20/2021 SeqNo: 2783473 Units: mg/Kg

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

#### Qualifiers:

- Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix

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

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### Hall Environmental Analysis Laboratory, Inc.

WO#: **2106909 25-Jun-21** 

Client: GHD

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: LCS-60742 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 60742 RunNo: 79227

Prep Date: 6/18/2021 Analysis Date: 6/20/2021 SeqNo: 2783473 Units: mq/Kq

PQL SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Analyte Result LowLimit Qual Diesel Range Organics (DRO) 10 0 50 50.00 100 68.9 141

Surr: DNOP 5.1 5.000 102 70 130

Sample ID: MB-60851 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 60851 RunNo: 79290

Prep Date: 6/23/2021 Analysis Date: 6/23/2021 SeqNo: 2786477 Units: %Rec

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

Surr: DNOP 11 10.00 114 70 130

Sample ID: LCS-60851 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 60851 RunNo: 79290

Prep Date: 6/23/2021 Analysis Date: 6/23/2021 SeqNo: 2786478 Units: %Rec

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Surr: DNOP 5.2 5.000 104 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

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### Hall Environmental Analysis Laboratory, Inc.

WO#: 2106909

25-Jun-21

**Client: GHD** 

Sample ID: MB-60719

Sample ID: 2106909-005amsd

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: LCS-60719 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 60719 RunNo: 79207

Prep Date: 6/17/2021 Analysis Date: 6/19/2021 SeqNo: 2780934 Units: mq/Kq

SPK value SPK Ref Val **RPDLimit** Analyte Result PQL %REC LowLimit HighLimit %RPD Qual 25.00 Gasoline Range Organics (GRO) 25 5.0 Λ 101 78.6 131 Surr: BFB 1100 1000 110 130

TestCode: EPA Method 8015D: Gasoline Range

70

TestCode: EPA Method 8015D: Gasoline Range

130

%RPD

0

**RPDLimit** 

Qual

Client ID: PBS Batch ID: 60719 RunNo: 79207 Prep Date: 6/17/2021 Analysis Date: 6/19/2021 SeqNo: 2780936 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual

Gasoline Range Organics (GRO) ND 5.0 Surr: BFB 990 1000 99.1

SampType: MSD

SampType: MBLK

Sample ID: 2106909-005ams SampType: MS TestCode: EPA Method 8015D: Gasoline Range Client ID: BH-11 Batch ID: 60719 RunNo: 79236 Prep Date: 6/17/2021 Analysis Date: 6/22/2021 SeqNo: 2782310 Units: mg/Kg

SPK value SPK Ref Val %REC Analyte Result PQL LowLimit HighLimit Gasoline Range Organics (GRO) 25 5.0 24.95 0 102 61.3 114 Surr: BFB 1200 998.0 121 70 130

Client ID: BH-11 Batch ID: 60719 RunNo: 79236 Prep Date: 6/17/2021 Analysis Date: 6/22/2021 SeqNo: 2782311 Units: mg/Kg SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Result PQL LowLimit Qual Gasoline Range Organics (GRO) 25 5.0 0 101 61.3 20 24.75 114 1.63 Surr: BFB 1100 990.1 116 70 130 0

Sample ID: mb-60734 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PRS Batch ID: 60734 RunNo: 79236 Prep Date: 6/18/2021 Analysis Date: 6/21/2021 SeqNo: 2782312 Units: %Rec Analyte Result SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Surr: BFB 1000 70 990 98.6 130

Sample ID: Ics-60734 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: 60734 RunNo: 79236 Prep Date: 6/18/2021 Analysis Date: 6/21/2021 SeqNo: 2782313 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual

Surr: BFB 1100 1000 109 70 130

### Qualifiers:

- Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix

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

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### Hall Environmental Analysis Laboratory, Inc.

WO#: **2106909 25-Jun-21** 

Client: GHD

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: mb-60726 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 60726 RunNo: 79236

Prep Date: 6/17/2021 Analysis Date: 6/21/2021 SeqNo: 2782336 Units: %Rec

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

Surr: BFB 990 1000 99.0 70 130

Sample ID: Ics-60726 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 60726 RunNo: 79236

Prep Date: 6/17/2021 Analysis Date: 6/21/2021 SeqNo: 2782337 Units: %Rec

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

Surr: BFB 1100 1000 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 Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

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

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# Hall Environmental Analysis Laboratory, Inc.

WO#: **2106909** 

25-Jun-21

Client: GHD

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: LCS-60719	SampT	ype: <b>LC</b>	S	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batcl	h ID: <b>60</b> 7	719	F	RunNo: 7	9207				
Prep Date: 6/17/2021	Analysis D	Date: <b>6/</b>	19/2021	SeqNo: <b>2780964</b>			Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	89.3	80	120			
Toluene	0.88	0.050	1.000	0	87.8	80	120			
Ethylbenzene	0.90	0.050	1.000	0	90.0	80	120			
Xylenes, Total	2.7	0.10	3.000	0	89.0	80	120			
Surr: 4-Bromofluorobenzene	0.83		1.000		82.5	70	130			

Sample ID: <b>MB-60719</b>	SampT	ype: ME	BLK	TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batcl	h ID: 60	719	RunNo: <b>79207</b>						
Prep Date: 6/17/2021	Analysis D	Date: <b>6/</b>	19/2021	8	SeqNo: 2	780965	Units: mg/K	(g		
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	0.84		1.000		84.2	70	130			

Sample ID: 2106909-006amsd	I SampT	уре: МS	SD	TestCode: EPA Method 8021B: Volatiles						
Client ID: SW-4	Batcl	n ID: <b>60</b> 7	719	RunNo: <b>79207</b>						
Prep Date: 6/17/2021	Analysis D	Date: <b>6/</b> 2	20/2021	SeqNo: <b>2780969</b> Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.024	0.9728	0	89.3	80	120	0	20	
Toluene	0.87	0.049	0.9728	0	89.6	80	120	0	20	
Ethylbenzene	0.89	0.049	0.9728	0	91.8	80	120	0	20	
Xylenes, Total	2.6	0.097	2.918	0	90.6	80	120	0	20	
Surr: 4-Bromofluorobenzene	0.82		0.9728		84.7	70	130	0	0	

Sample ID: 2106909-006ams	SampT	ype: MS	3	Tes	tCode: El	PA Method	8021B: Volat	iles				
Client ID: SW-4	Batch	n ID: <b>60</b> 7	719	F	RunNo: <b>7</b> 9	9207						
Prep Date: 6/17/2021	Analysis D	oate: <b>6/</b> 2	20/2021	9	SeqNo: 2	781005	Units: mg/K	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene	0.87	0.024	0.9747	0	89.4	80	120					
Toluene	0.88	0.049	0.9747	0	89.8	80	120					
Ethylbenzene	0.90	0.049	0.9747	0	92.2	80	120					
Xylenes, Total	2.7	0.097	2.924	0	91.1	80	120					
Surr: 4-Bromofluorobenzene	0.83		0.9747		85.0	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

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

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **2106909 25-Jun-21** 

Client: GHD

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: mb-60734 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: **PBS** Batch ID: **60734** RunNo: **79236** 

Prep Date: 6/18/2021 Analysis Date: 6/21/2021 SeqNo: 2782356 Units: %Rec

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

Surr: 4-Bromofluorobenzene 0.97 1.000 97.5 70 130

Sample ID: LCS-60734 SampType: LCS TestCode: EPA Method 8021B: Volatiles

Client ID: LCSS Batch ID: 60734 RunNo: 79236

Prep Date: 6/18/2021 Analysis Date: 6/21/2021 SeqNo: 2782357 Units: %Rec

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

Surr: 4-Bromofluorobenzene 1.0 1.000 99.5 70 130

Sample ID: mb-60726 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: PBS Batch ID: 60726 RunNo: 79236

Prep Date: 6/17/2021 Analysis Date: 6/21/2021 SeqNo: 2782380 Units: %Rec

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

Surr: 4-Bromofluorobenzene 0.97 1.000 97.1 70 130

Sample ID: LCS-60726 SampType: LCS TestCode: EPA Method 8021B: Volatiles

Client ID: LCSS Batch ID: 60726 RunNo: 79236

Prep Date: 6/17/2021 Analysis Date: 6/21/2021 SeqNo: 2782381 Units: %Rec

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

Surr: 4-Bromofluorobenzene 1.0 1.000 101 70 130

### Qualifiers:

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

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# Hall Environmental Analysis Laboratory, Inc.

WO#: **2106909 25-Jun-21** 

Client: GHD

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: Ics-60717	SampT	ype: <b>LC</b>	S4	TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: BatchQC	Batcl	n ID: <b>60</b> 7	717	RunNo: <b>79220</b>							
Prep Date: 6/17/2021	Analysis D	Date: <b>6/</b> 2	20/2021	SeqNo: <b>2781797</b>			Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.94	0.025	1.000	0	93.6	80	120				
Toluene	1.1	0.050	1.000	0	105	80	120				
Ethylbenzene	1.0	0.050	1.000	0	105	80	120				
Xylenes, Total	3.1	0.10	3.000	0	104	80	120				
Surr: 1,2-Dichloroethane-d4	0.54		0.5000		108	70	130				
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.7	70	130				
Surr: Dibromofluoromethane	0.44		0.5000		88.2	70	130				
Surr: Toluene-d8	0.52		0.5000		104	70	130				

Sample ID: <b>mb-60717</b>	Samp <sup>-</sup>	Гуре: <b>МЕ</b>	BLK	TestCode: EPA Method 8260B: Volatiles Short List					List	
Client ID: PBS	Batc	h ID: <b>60</b>	717	F	RunNo: <b>79220</b>					
Prep Date: 6/17/2021	Analysis [	Date: <b>6/</b>	20/2021	SeqNo: <b>2781799</b> U		Units: mg/k	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.51		0.5000		103	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		100	70	130			
Surr: Dibromofluoromethane	0.45		0.5000		90.6	70	130			
Surr: Toluene-d8	0.51		0.5000		102	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

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

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **2106909 25-Jun-21** 

Client: GHD

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: Ics-60717 SampType: LCS TestCode: EPA Method 8015D Mod: Gasoline Range

Client ID: LCSS Batch ID: 60717 RunNo: 79220

Prep Date: 6/17/2021 Analysis Date: 6/20/2021 SeqNo: 2781848 Units: mg/Kg

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

 Gasoline Range Organics (GRO)
 27
 5.0
 25.00
 0
 110
 70
 130

 Surr: BFB
 480
 500.0
 95.6
 70
 130

Sample ID: mb-60717 SampType: MBLK TestCode: EPA Method 8015D Mod: Gasoline Range

Client ID: PBS Batch ID: 60717 RunNo: 79220

Prep Date: 6/17/2021 Analysis Date: 6/20/2021 SeqNo: 2781850 Units: mg/Kg

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

Gasoline Range Organics (GRO) ND 5.0

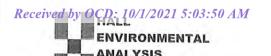
Surr: BFB 470 500.0 93.8 70 130

### Qualifiers:

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

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

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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 Nam	ne: GHD		Worl	Order Nur	nber: 210	6909		Rop	otNo: 1	
Received E	By: Juan Roj	jas	6/17/20	021 7:35:00	AM		Junian	9		
Completed	By: Cheyenn	e Cason	6/17/20	021 9:03:47	AM		chel			
Reviewed E	By: JR6	117/21					Charles			
Chain of	Custody									
1. Is Chain	of Custody comp	plete?			Yes	<b>V</b>	No [	Not Present		
2. How was	the sample deli	vered?			Cou	rier				
Log In										
3. Was an a	attempt made to	cool the samp	les?		Yes	<b>V</b>	No [	NA [		
4. Were all s	samples received	d at a tempera	ture of >0° C	to 6.0°C	Yes	V	No [	] NA [		
5. Sample(s	s) in proper conta	ainer(s)?			Yes	V	No 🗆			
6. Sufficient	sample volume	for indicated to	est(s)?		Yes	<b>V</b>	No 🗆	]		
7. Are samp	les (except VOA	and ONG) pro	operly preserv	ed?	Yes	V	No 🗆			
8. Was pres	ervative added to	o bottles?			Yes		No 🗸	NA [	]	
9. Received	at least 1 vial wi	th headspace	<1/4" for AQ \	/OA?	Yes		No 🗆	NA 🔽	7	
	sample contain			37.01	Yes		No 🗸			
					100		119	# of preserved bottles checked		
	erwork match bo crepancies on ch		)		Yes	<b>V</b>	No 🗆	for pH:	2 or >12 unless noted)	
12. Are matric	ces correctly ider	ntified on Chair	n of Custody?		Yes	<b>V</b>	No 🗌	A .II	/	
13. Is it clear	what analyses w	ere requested	?		Yes	<b>V</b>	No 🗌			
	olding times able fy customer for a				Yes	<b>V</b>	No 🗌	Checked by	v: T.C 6.17.2	-1
Special Ha	ndling (if app	olicable)								
	nt notified of all d		vith this order	>	Yes		No [	NA S		
Per	son Notified:			Date				-		
Ву	Whom:			Via:	eMa	ail 🖂	Phone Fa	ax In Person		
Reg	garding:						Caral Hay		-1	
Clie	ent Instructions:									
16. Additiona	al remarks;									
17. Cooler Ir	nformation									
Cooler	The state of the s	Condition	Seal Intact	Seal No	Seal Da	ate	Signed By			
1	2.4	Good								
2	0.3	Good								

Page 1 of 1

Mailing Address:  324 W. Main St. Suite 108, Artesia NM 88210 Phone #: (505)377-4218 email or Fax#: Beckv. Haskell@ahd.com  QA/QC Package:  Standard  Acoreditation: Standard  Date Time Matrix Sample Name  CASC CAPPE  CASC	Project Name:    Scurvicus   ANF RAN #SRAN   Project #: (An Anager: Becky Haskell   Tom Larson   Sampler: Zach Comino   On Ice: X Yes   No   HEAL No.     Type and # Type   Cooler   Co	### ANALY SISTEM
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Relinquished by:  Relinquished by:  Relinquished by:  Samples submitted to Hall Environmental may be surface		Date Time Remarks: Please email: Chase_Settle@eogresources.com;  Tom.Larson@ghd.com; Zach.Comino@ghd.com: Along with Becky Haskell listed above.  Date Time Direct Bill to EOG Chase Settle

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: 10/		0.500		Tel. 505	505-345-3975	Fax 505	Fax 505-345-4107	0/1/2
/15/2	email or Fax#: Becky. Haskell@ghd.com	Project Manager		100	Ana	Analysis Request	uest	2021
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3		Received by: Via:	Date Time		Direct Bill to FOG Chase Settle	Kell listed	above.	
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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com

OrderNo.: 2106984

June 30, 2021

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

**FAX** 

RE: Brannigan ANF Federal 5 Battery

Dear Tom Larson:

Hall Environmental Analysis Laboratory received 7 sample(s) on 6/18/2021 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

andy

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order: 2106984

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/30/2021

CLIENT: GHD Lab Order: 2106984

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106984-001 **Collection Date:** 6/16/2021 6:40:00 AM

Client Sample ID: SW-10 Matrix: SOIL

**Analyses** Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 300.0: ANIONS** Analyst: CJS Chloride 150 60 6/25/2021 3:31:58 AM 60890 mg/Kg 20 **EPA METHOD 8015D MOD: GASOLINE RANGE** Analyst: JMR Gasoline Range Organics (GRO) ND 4.7 6/26/2021 8:57:58 PM 60799 mg/Kg 1 Surr: BFB 95.9 70-130 %Rec 1 6/26/2021 8:57:58 PM 60799 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: BRM Diesel Range Organics (DRO) ND 9.3 mg/Kg 6/25/2021 11:03:39 PM 60876 1 Motor Oil Range Organics (MRO) ND 47 mg/Kg 1 6/25/2021 11:03:39 PM 60876 Surr: DNOP 71.3 70-130 %Rec 1 6/25/2021 11:03:39 PM 60876 **EPA METHOD 8260B: VOLATILES SHORT LIST** Analyst: JMR Benzene ND 0.023 6/26/2021 8:57:58 PM 60799 mg/Kg 1 Toluene ND 0.047 mg/Kg 1 6/26/2021 8:57:58 PM 60799 Ethylbenzene ND 0.047 mg/Kg 1 6/26/2021 8:57:58 PM 60799 Xylenes, Total ND 0.093 mg/Kg 1 6/26/2021 8:57:58 PM 60799 Surr: 1,2-Dichloroethane-d4 108 70-130 %Rec 1 6/26/2021 8:57:58 PM 60799 Surr: 4-Bromofluorobenzene 107 70-130 %Rec 6/26/2021 8:57:58 PM 60799 Surr: Dibromofluoromethane 80.0 70-130 %Rec 6/26/2021 8:57:58 PM 1 60799 Surr: Toluene-d8 105 70-130 %Rec 6/26/2021 8:57:58 PM 60799

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

Page 1 of 12

Lab Order: 2106984

# Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/30/2021

CLIENT: GHD Lab Order: 2106984

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106984-002 **Collection Date:** 6/16/2021 6:45:00 AM

Client Sample ID: SW-11 Matrix: SOIL

**Analyses** Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 300.0: ANIONS** Analyst: CJS Chloride 200 60 mg/Kg 6/25/2021 3:44:23 AM 60890 20 **EPA METHOD 8015D MOD: GASOLINE RANGE** Analyst: JMR Gasoline Range Organics (GRO) ND 24 5 6/26/2021 9:26:29 PM 60799 mg/Kg Surr: BFB 95.7 70-130 %Rec 5 6/26/2021 9:26:29 PM 60799 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: BRM Diesel Range Organics (DRO) 240 9.5 mg/Kg 6/25/2021 11:28:15 PM 60876 1 Motor Oil Range Organics (MRO) 120 47 mg/Kg 1 6/25/2021 11:28:15 PM 60876 Surr: DNOP 79.4 70-130 %Rec 1 6/25/2021 11:28:15 PM 60876 **EPA METHOD 8260B: VOLATILES SHORT LIST** Analyst: JMR Benzene ND 0.12 6/26/2021 9:26:29 PM 60799 mg/Kg 5 Toluene ND 5 0.24 mg/Kg 6/26/2021 9:26:29 PM 60799 Ethylbenzene ND 0.24 mg/Kg 5 6/26/2021 9:26:29 PM 60799 Xylenes, Total ND 0.48 mg/Kg 5 6/26/2021 9:26:29 PM 60799 Surr: 1,2-Dichloroethane-d4 103 70-130 %Rec 5 6/26/2021 9:26:29 PM 60799 Surr: 4-Bromofluorobenzene 97.2 70-130 %Rec 5 6/26/2021 9:26:29 PM 60799 Surr: Dibromofluoromethane 86.9 70-130 %Rec 5 6/26/2021 9:26:29 PM 60799 Surr: Toluene-d8 113 70-130 %Rec 5 6/26/2021 9:26:29 PM 60799

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

Page 2 of 12

Lab Order: **2106984** 

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/30/2021

CLIENT: GHD Lab Order: 2106984

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106984-003 **Collection Date:** 6/16/2021 6:50:00 AM

Client Sample ID: SW-12 Matrix: SOIL

**Analyses** Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 300.0: ANIONS** Analyst: CJS Chloride 200 61 6/25/2021 3:56:47 AM 60890 mg/Kg 20 **EPA METHOD 8015D MOD: GASOLINE RANGE** Analyst: JMR Gasoline Range Organics (GRO) ND 25 5 6/26/2021 9:55:01 PM 60799 mg/Kg Surr: BFB 96.8 70-130 %Rec 5 6/26/2021 9:55:01 PM 60799 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: BRM Diesel Range Organics (DRO) 39 9.4 mg/Kg 6/25/2021 11:52:43 PM 60876 1 Motor Oil Range Organics (MRO) ND 47 mg/Kg 1 6/25/2021 11:52:43 PM 60876 Surr: DNOP 56.0 70-130 S %Rec 1 6/25/2021 11:52:43 PM 60876 **EPA METHOD 8260B: VOLATILES SHORT LIST** Analyst: JMR Benzene ND 6/26/2021 9:55:01 PM 60799 0.12 mg/Kg 5 Toluene ND 5 0.25 mg/Kg 6/26/2021 9:55:01 PM 60799 Ethylbenzene ND 0.25 mg/Kg 5 6/26/2021 9:55:01 PM 60799 Xylenes, Total ND 0.50 mg/Kg 5 6/26/2021 9:55:01 PM 60799 Surr: 1,2-Dichloroethane-d4 104 70-130 %Rec 5 6/26/2021 9:55:01 PM 60799 Surr: 4-Bromofluorobenzene 101 70-130 %Rec 5 6/26/2021 9:55:01 PM 60799 Surr: Dibromofluoromethane 82 4 70-130 5 %Rec 6/26/2021 9:55:01 PM 60799 Surr: Toluene-d8 109 70-130 %Rec 5 6/26/2021 9:55:01 PM 60799

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

Page 3 of 12

Lab Order: 2106984

# Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/30/2021

CLIENT: GHD Lab Order: 2106984

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106984-004 **Collection Date:** 6/16/2021 7:50:00 AM

Client Sample ID: BH-16 Matrix: SOIL

Chefit Sample 1D. Dir 10			Matila	. 50	/IL
Analyses	Result	RL	Qual Units	DF	Date Analyzed Batch ID
EPA METHOD 300.0: ANIONS					Analyst: <b>CJS</b>
Chloride	ND	60	mg/Kg	20	6/25/2021 4:09:11 AM 60890
EPA METHOD 8015D MOD: GASOLINE RANGE					Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	6/26/2021 10:23:32 PM 60799
Surr: BFB	93.8	70-130	%Rec	1	6/26/2021 10:23:32 PM 60799
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS				Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	6/26/2021 12:17:16 AM 60876
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	6/26/2021 12:17:16 AM 60876
Surr: DNOP	72.1	70-130	%Rec	1	6/26/2021 12:17:16 AM 60876
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>					Analyst: <b>JMR</b>
Benzene	ND	0.024	mg/Kg	1	6/26/2021 10:23:32 PM 60799
Toluene	ND	0.047	mg/Kg	1	6/26/2021 10:23:32 PM 60799
Ethylbenzene	ND	0.047	mg/Kg	1	6/26/2021 10:23:32 PM 60799
Xylenes, Total	ND	0.095	mg/Kg	1	6/26/2021 10:23:32 PM 60799
Surr: 1,2-Dichloroethane-d4	111	70-130	%Rec	1	6/26/2021 10:23:32 PM 60799
Surr: 4-Bromofluorobenzene	103	70-130	%Rec	1	6/26/2021 10:23:32 PM 60799
Surr: Dibromofluoromethane	77.8	70-130	%Rec	1	6/26/2021 10:23:32 PM 60799
Surr: Toluene-d8	105	70-130	%Rec	1	6/26/2021 10:23:32 PM 60799

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

### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

Page 4 of 12

Lab Order: 2106984

# Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/30/2021

CLIENT: GHD Lab Order: 2106984

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106984-005 **Collection Date:** 6/16/2021 7:55:00 AM

Client Sample ID: BH-17 Matrix: SOIL

Cheft Sample 12.				111441123		, 1L	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Anal	yst: CJS
Chloride	ND	60		mg/Kg	20	6/25/2021 4:46:24 A	M 60890
EPA METHOD 8015D MOD: GASOLINE RANGE						Anal	yst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/26/2021 10:52:04	PM 60799
Surr: BFB	95.9	70-130		%Rec	1	6/26/2021 10:52:04	PM 60799
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS					Anal	yst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	6/26/2021 12:41:42	AM 60876
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/26/2021 12:41:42	AM 60876
Surr: DNOP	66.5	70-130	S	%Rec	1	6/26/2021 12:41:42	AM 60876
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Anal	yst: <b>JMR</b>
Benzene	ND	0.025		mg/Kg	1	6/26/2021 10:52:04	PM 60799
Toluene	ND	0.050		mg/Kg	1	6/26/2021 10:52:04	PM 60799
Ethylbenzene	ND	0.050		mg/Kg	1	6/26/2021 10:52:04	PM 60799
Xylenes, Total	ND	0.10		mg/Kg	1	6/26/2021 10:52:04	PM 60799
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	1	6/26/2021 10:52:04	PM 60799
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	6/26/2021 10:52:04	PM 60799
Surr: Dibromofluoromethane	82.1	70-130		%Rec	1	6/26/2021 10:52:04	PM 60799
Surr: Toluene-d8	111	70-130		%Rec	1	6/26/2021 10:52:04	PM 60799

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- 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

Page 5 of 12

Lab Order: 2106984

# Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/30/2021

CLIENT: GHD Lab Order: 2106984

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106984-006 **Collection Date:** 6/16/2021 8:00:00 AM

Client Sample ID: BH-18 Matrix: SOIL

			1,10001	• ~ ~	· <del></del>
Analyses	Result	RL (	Qual Units	DF	Date Analyzed Batch ID
EPA METHOD 300.0: ANIONS					Analyst: CJS
Chloride	ND	61	mg/Kg	20	6/25/2021 4:58:49 AM 60890
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>					Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	6/26/2021 11:20:42 PM 60799
Surr: BFB	94.2	70-130	%Rec	1	6/26/2021 11:20:42 PM 60799
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS				Analyst: BRM
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	6/26/2021 1:06:11 AM 60876
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	6/26/2021 1:06:11 AM 60876
Surr: DNOP	70.8	70-130	%Rec	1	6/26/2021 1:06:11 AM 60876
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>					Analyst: <b>JMR</b>
Benzene	ND	0.024	mg/Kg	1	6/26/2021 11:20:42 PM 60799
Toluene	ND	0.048	mg/Kg	1	6/26/2021 11:20:42 PM 60799
Ethylbenzene	ND	0.048	mg/Kg	1	6/26/2021 11:20:42 PM 60799
Xylenes, Total	ND	0.096	mg/Kg	1	6/26/2021 11:20:42 PM 60799
Surr: 1,2-Dichloroethane-d4	118	70-130	%Rec	1	6/26/2021 11:20:42 PM 60799
Surr: 4-Bromofluorobenzene	103	70-130	%Rec	1	6/26/2021 11:20:42 PM 60799
Surr: Dibromofluoromethane	86.4	70-130	%Rec	1	6/26/2021 11:20:42 PM 60799
Surr: Toluene-d8	111	70-130	%Rec	1	6/26/2021 11:20:42 PM 60799

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

### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

Page 6 of 12

Lab Order: 2106984

# Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/30/2021

CLIENT: GHD Lab Order: 2106984

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106984-007 **Collection Date:** 6/16/2021 8:05:00 AM

Client Sample ID: BH-19 Matrix: SOIL

Cheme Sumple 12.			11141112	• 50	/1E	
Analyses	Result	RL	Qual Units	DF	Date Analyzed Batc	h ID
EPA METHOD 300.0: ANIONS					Analyst: <b>C</b>	JS
Chloride	ND	60	mg/Kg	20	6/25/2021 5:11:13 AM 6	0890
EPA METHOD 8015D MOD: GASOLINE RANGE					Analyst: J	MR
Gasoline Range Organics (GRO)	ND	23	mg/Kg	5	6/26/2021 11:49:22 PM 6	0799
Surr: BFB	93.5	70-130	%Rec	5	6/26/2021 11:49:22 PM 6	0799
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS				Analyst: B	3RM
Diesel Range Organics (DRO)	10	8.3	mg/Kg	1	6/26/2021 1:30:32 AM 6	0876
Motor Oil Range Organics (MRO)	ND	41	mg/Kg	1	6/26/2021 1:30:32 AM 6	0876
Surr: DNOP	70.6	70-130	%Rec	1	6/26/2021 1:30:32 AM 6	0876
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>					Analyst: J	MR
Benzene	ND	0.12	mg/Kg	5	6/26/2021 11:49:22 PM 6	0799
Toluene	ND	0.23	mg/Kg	5	6/26/2021 11:49:22 PM 6	0799
Ethylbenzene	ND	0.23	mg/Kg	5	6/26/2021 11:49:22 PM 6	0799
Xylenes, Total	ND	0.46	mg/Kg	5	6/26/2021 11:49:22 PM 6	0799
Surr: 1,2-Dichloroethane-d4	114	70-130	%Rec	5	6/26/2021 11:49:22 PM 6	0799
Surr: 4-Bromofluorobenzene	99.6	70-130	%Rec	5	6/26/2021 11:49:22 PM 6	0799
Surr: Dibromofluoromethane	84.5	70-130	%Rec	5	6/26/2021 11:49:22 PM 6	0799
Surr: Toluene-d8	110	70-130	%Rec	5	6/26/2021 11:49:22 PM 6	60799

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

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- 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

Page 7 of 12

## Hall Environmental Analysis Laboratory, Inc.

WO#: **2106984** 

30-Jun-21

Client: GHD

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: MB-60890 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 60890 RunNo: 79336

Prep Date: 6/24/2021 Analysis Date: 6/25/2021 SeqNo: 2788102 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-60890 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 60890 RunNo: 79336

Prep Date: 6/24/2021 Analysis Date: 6/25/2021 SeqNo: 2788103 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 95.6 90 110

### Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 8 of 12

### Hall Environmental Analysis Laboratory, Inc.

WO#: **2106984** 30-Jun-21

Client: GHD

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: LCS-60867 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 60867 RunNo: 79325

Prep Date: 6/23/2021 Analysis Date: 6/24/2021 SeqNo: 2787407 Units: %Rec

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

Surr: DNOP 4.3 5.000 85.6 70 130

Sample ID: MB-60867 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 60867 RunNo: 79325

Prep Date: 6/23/2021 Analysis Date: 6/24/2021 SeqNo: 2787409 Units: %Rec

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

Surr: DNOP 8.7 10.00 86.7 70 130

Sample ID: LCS-60876 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 60876 Prep Date: 6/23/2021 Analysis Date: 6/25/2021 SeqNo: 2789216 Units: mq/Kq Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Analyte Qual

Diesel Range Organics (DRO) 47 10 50.00 0 94.7 68.9 141 Surr: DNOP 4.2 5.000 83.2 70 130

Sample ID: MB-60876 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 60876 RunNo: 79325

Prep Date: 6/23/2021 Analysis Date: 6/25/2021 SeqNo: 2789218 Units: mq/Kq

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

Diesel Range Organics (DRO) ND 10
Motor Oil Range Organics (MRO) ND 50

Surr: DNOP 9.3 10.00 92.6 70 130

Sample ID: MB-60900 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 60900 RunNo: 79325

Prep Date: 6/24/2021 Analysis Date: 6/26/2021 SeqNo: 2789502 Units: %Rec

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

Surr: DNOP 9.4 10.00 93.6 70 130

Sample ID: LCS-60900 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 60900 RunNo: 79325

Prep Date: 6/24/2021 Analysis Date: 6/26/2021 SeqNo: 2789504 Units: %Rec

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

Surr: DNOP 4.3 5.000 85.2 70 130

### Qualifiers:

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

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **2106984** 

30-Jun-21

Client: GHD

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: MB-60925 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 60925 RunNo: 79364

Prep Date: 6/25/2021 Analysis Date: 6/26/2021 SeqNo: 2789749 Units: %Rec

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

Surr: DNOP 11 10.00 109 70 130

Sample ID: LCS-60925 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 60925 RunNo: 79364

Prep Date: 6/25/2021 Analysis Date: 6/26/2021 SeqNo: 2789750 Units: %Rec

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

Surr: DNOP 5.6 5.000 112 70 130

Sample ID: LCS-60942 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 60942 RunNo: 79325

Prep Date: 6/26/2021 Analysis Date: 6/27/2021 SeqNo: 2789806 Units: %Rec

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

Surr: DNOP 3.7 5.000 74.6 70 130

Sample ID: MB-60942 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 60942 RunNo: 79325

Prep Date: 6/26/2021 Analysis Date: 6/27/2021 SeqNo: 2789807 Units: %Rec

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

Surr: DNOP 7.4 10.00 74.2 70 130

#### Qualifiers:

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

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# Hall Environmental Analysis Laboratory, Inc.

WO#: **2106984** *30-Jun-21* 

Client: GHD

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: Ics-60799	SampT	ype: <b>LC</b>	S4	Tes	tCode: El	PA Method	8260B: Vola	iles Short	List	
Client ID: BatchQC	Batch	n ID: <b>60</b> 7	799	F	RunNo: <b>7</b> 9	9394				
Prep Date: 6/21/2021	Analysis D	Date: <b>6/</b> 2	26/2021	S	SeqNo: 2	790446	Units: mg/k	ίg		
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	1.1	0.050	1.000	0	106	80	120			
Ethylbenzene	1.0	0.050	1.000	0	103	80	120			
Xylenes, Total	3.2	0.10	3.000	0	107	80	120			
Surr: 1,2-Dichloroethane-d4	0.56		0.5000		112	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		101	70	130			
Surr: Dibromofluoromethane	0.44		0.5000		89.0	70	130			
Surr: Toluene-d8	0.53		0.5000		107	70	130			

Sample ID: <b>mb-60799</b>	Sampl	уре: МЕ	BLK	Tes	tCode: El	PA Method	8260B: Volat	iles Short	List	
Client ID: PBS	Batcl	h ID: <b>60</b>	799	F	RunNo: <b>7</b>	9394				
Prep Date: 6/21/2021	Analysis D	Date: <b>6/</b>	26/2021	8	SeqNo: 2	790447	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.55		0.5000		110	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.1	70	130			
Surr: Dibromofluoromethane	0.40		0.5000		80.6	70	130			
Surr: Toluene-d8	0.55		0.5000		110	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

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **2106984** 

30-Jun-21

Client: GHD

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: Ics-60799 SampType: LCS TestCode: EPA Method 8015D Mod: Gasoline Range

Client ID: LCSS Batch ID: 60799 RunNo: 79394

Prep Date: 6/21/2021 Analysis Date: 6/26/2021 SeqNo: 2790467 Units: mg/Kg

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

Gasoline Range Organics (GRO) 27 5.0 25.00 0 110 70 130

 Gasoline Range Organics (GRO)
 27
 5.0
 25.00
 0
 110
 70
 130

 Surr: BFB
 460
 500.0
 91.3
 70
 130

Sample ID: mb-60799 SampType: MBLK TestCode: EPA Method 8015D Mod: Gasoline Range

Client ID: PBS Batch ID: 60799 RunNo: 79394

Prep Date: 6/21/2021 Analysis Date: 6/26/2021 SeqNo: 2790468 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 460 500.0 91.2 70 130

### Qualifiers:

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

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

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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

# Sample Log-In Check List

TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com

Client Name:	GHD	Work Order I	Number: 210	6984		RcptNo: 1	
Received By:	Cheyenne Cason	6/18/2021 7:40	:00 AM		Chul		
Completed By:	Cheyenne Cason	6/18/2021 8:19	:51 AM		Chul		
Reviewed By:							
Chain of Cus	<u>tody</u>						
1. Is Chain of Cu	ustody complete?		Yes	~	No 🗌	Not Present	
2. How was the	sample delivered?		Cou	rier			
Log In							
	pt made to cool the sampl	es?	Yes	~	No 🗌	NA 🗆	
4. Were all samp	oles received at a temperat	ture of >0° C to 6.0°C	Yes	<b>V</b>	No 🗆	NA 🗆	
5. Sample(s) in p	proper container(s)?		Yes	<b>V</b>	No 🗆		
6. Sufficient sam	ple volume for indicated te	est(s)?	Yes	~	No 🗆		
	except VOA and ONG) pro		Yes	V	No 🗌		
	tive added to bottles?		Yes		No 🗹	NA 🗆	
9. Received at le	ast 1 vial with headspace	<1/4" for AQ VOA?	Yes		No 🗆	NA 🗹	
10. Were any sam	nple containers received b	roken?	Yes		No 🗸	# of preserved	
11 p						bottles checked	
	rk match bottle labels? incies on chain of custody)	i,	Yes	V	No 🗀	for pH: (<2 or >12 unless n	oted)
	orrectly identified on Chair		Yes	V	No 🗌	Adjusted?	104-1-7
13. Is it clear what	analyses were requested	?	Yes	<b>V</b>	No 🗌	/ 6	19 7
	ng times able to be met? istomer for authorization.)		Yes	<b>V</b>	No 🗆	Checked by: T.C. 6	10.2
	ing (if applicable)						
	tified of all discrepancies w	vith this order?	Yes		No 🗌	NA 🗹	
Person	Notified:		Date:	_			
By Who	m:		/ia: ☐ eM	ail 🗍	Phone Fax	In Person	
Regardi	ng:						
Client In	structions:						
16. Additional ren	narks:						
17. Cooler Inform	nation						
Cooler No	Temp °C Condition 3.2 Good	Seal Intact Seal I	No Seal D	ate	Signed By		

Container Preservative HEAL No. Type and # Type COS  Container Preservative HEAL No. Type and # Type COS  COS  COS  COS  COS  COS  COS  COS	Decky Haskell  Vel 4 (Full Validation)  Tom Larson  Tom Larson  Sampler: Zach Comin  On Ice: X Yes  # of Coolers: { Cooler Temp(Induding CF): 3.  Container  Type and # Type  1-16  H-18  Received by: Via:
# of Coolers:   Cooler Temp(including Cr);   Type and # Type   Type   Container   Type   Container   Type   Type   Container   Type   Type   Container   Type   Conta	ple Name Container Type and # 1/2 Cooler Tempor Type and # 1/2 Container Type and # 1/2 Cooler Tempor Type and # 1/2 Cooler Type and Type and Type and Type and Type and
	ample Name 34-10 34-17 34-19 34-19



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

OrderNo.: 2106A59

July 01, 2021

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

FAX:

RE: Brannigan ANF Federal 5 Battery

Dear Becky Haskell:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/19/2021 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

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order: **2106A59**Date Reported: **7/1/2021** 

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 2106A59

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106A59-001 **Collection Date:** 6/17/2021 6:25:00 AM

Client Sample ID: SW-13 Matrix: SOIL

Analyses	Result	RL (	Qual Units	DF	Date Analyzed B	atch ID
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	100	61	mg/Kg	20	6/24/2021 7:52:56 PM	60891
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: BRM
Diesel Range Organics (DRO)	15	10	mg/Kg	1	6/26/2021 3:56:47 AM	60871
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	6/26/2021 3:56:47 AM	60871
Surr: DNOP	104	70-130	%Rec	1	6/26/2021 3:56:47 AM	60871
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: mb
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	6/28/2021 4:08:00 AM	60830
Surr: BFB	92.0	70-130	%Rec	1	6/28/2021 4:08:00 AM	60830
EPA METHOD 8021B: VOLATILES					Analyst	:: mb
Benzene	ND	0.024	mg/Kg	1	6/28/2021 4:08:00 AM	60830
Toluene	ND	0.048	mg/Kg	1	6/28/2021 4:08:00 AM	60830
Ethylbenzene	ND	0.048	mg/Kg	1	6/28/2021 4:08:00 AM	60830
Xylenes, Total	ND	0.095	mg/Kg	1	6/28/2021 4:08:00 AM	60830
Surr: 4-Bromofluorobenzene	87.8	70-130	%Rec	1	6/28/2021 4:08:00 AM	60830

**Lab ID:** 2106A59-002 **Collection Date:** 6/17/2021 6:30:00 AM

Client Sample ID: BH-20 Matrix: SOIL

Analyses	Result	RL	Qual Units	DF	Date Analyzed I	Batch ID
EPA METHOD 300.0: ANIONS					Analys	st: CJS
Chloride	ND	60	mg/Kg	20	6/24/2021 8:30:09 PM	60891
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analys	st: BRM
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	6/26/2021 4:21:16 AM	60871
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	6/26/2021 4:21:16 AM	60871
Surr: DNOP	89.7	70-130	%Rec	1	6/26/2021 4:21:16 AM	60871
EPA METHOD 8015D: GASOLINE RANGE					Analys	st: <b>mb</b>
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/28/2021 5:07:00 AM	60830
Surr: BFB	92.1	70-130	%Rec	1	6/28/2021 5:07:00 AM	60830
EPA METHOD 8021B: VOLATILES					Analys	st: <b>mb</b>
Benzene	ND	0.025	mg/Kg	1	6/28/2021 5:07:00 AM	60830
Toluene	ND	0.049	mg/Kg	1	6/28/2021 5:07:00 AM	60830
Ethylbenzene	ND	0.049	mg/Kg	1	6/28/2021 5:07:00 AM	60830
Xylenes, Total	ND	0.098	mg/Kg	1	6/28/2021 5:07:00 AM	60830
Surr: 4-Bromofluorobenzene	88.6	70-130	%Rec	1	6/28/2021 5:07:00 AM	60830

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

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Lab Order: **2106A59** 

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 7/1/2021

CLIENT: GHD Lab Order: 2106A59

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106A59-003 **Collection Date:** 6/17/2021 6:35:00 AM

Client Sample ID: BH-21 Matrix: SOIL

Result **RL Oual Units DF** Date Analyzed **Analyses Batch ID EPA METHOD 300.0: ANIONS** Analyst: CJS Chloride 66 60 6/24/2021 8:42:33 PM 60891 mg/Kg 20 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: BRM Diesel Range Organics (DRO) 13 10 mg/Kg 6/26/2021 4:45:35 AM 60871 Motor Oil Range Organics (MRO) ND 50 mg/Kg 1 6/26/2021 4:45:35 AM 60871 Surr: DNOP 87.4 70-130 %Rec 6/26/2021 4:45:35 AM 60871 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: mb Gasoline Range Organics (GRO) ND 4.8 mg/Kg 1 6/28/2021 5:27:00 AM 60830 Surr: BFB 87.7 70-130 %Rec 1 6/28/2021 5:27:00 AM 60830 **EPA METHOD 8021B: VOLATILES** Analyst: mb Benzene ND 0.024 mg/Kg 1 6/28/2021 5:27:00 AM 60830 Toluene ND 0.048 mg/Kg 1 6/28/2021 5:27:00 AM 60830 Ethylbenzene ND 0.048 mg/Kg 1 6/28/2021 5:27:00 AM 60830 Xylenes, Total ND 0.097 mg/Kg 6/28/2021 5:27:00 AM 60830 Surr: 4-Bromofluorobenzene 88.0 70-130 %Rec 6/28/2021 5:27:00 AM 60830

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

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**CLIENT:** 

**Analytical Report** 

Lab Order: **2106A59**Date Reported: **7/1/2021** 

2106A59

# Hall Environmental Analysis Laboratory, Inc.

Lab Order:

**Project:** Brannigan ANF Federal 5 Battery

**GHD** 

**Lab ID:** 2106A59-004 **Collection Date:** 6/17/2021 6:40:00 AM

Client Sample ID: BH-22 Matrix: SOIL

Chem Sample ID. Diff-22			Manix	. 50	/IL	
Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS					Anal	/st: CJS
Chloride	ND	60	mg/Kg	20	6/24/2021 8:54:57 P	M 60891
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Anal	/st: BRM
Diesel Range Organics (DRO)	12	9.7	mg/Kg	1	6/26/2021 5:09:58 A	M 60871
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	6/26/2021 5:09:58 A	M 60871
Surr: DNOP	89.7	70-130	%Rec	1	6/26/2021 5:09:58 A	M 60871
EPA METHOD 8015D: GASOLINE RANGE					Analy	/st: <b>mb</b>
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	6/28/2021 5:47:00 A	M 60830
Surr: BFB	96.6	70-130	%Rec	1	6/28/2021 5:47:00 A	M 60830
EPA METHOD 8021B: VOLATILES					Anal	/st: <b>mb</b>
Benzene	ND	0.023	mg/Kg	1	6/28/2021 5:47:00 A	M 60830
Toluene	ND	0.046	mg/Kg	1	6/28/2021 5:47:00 A	M 60830
Ethylbenzene	ND	0.046	mg/Kg	1	6/28/2021 5:47:00 A	M 60830
Xylenes, Total	ND	0.092	mg/Kg	1	6/28/2021 5:47:00 A	M 60830
Surr: 4-Bromofluorobenzene	88.5	70-130	%Rec	1	6/28/2021 5:47:00 A	M 60830

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

### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

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## Hall Environmental Analysis Laboratory, Inc.

2106A59 01-Jul-21

WO#:

Client: GHD

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: MB-60891 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 60891 RunNo: 79336

Prep Date: 6/24/2021 Analysis Date: 6/24/2021 SeqNo: 2788070 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-60891 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 60891 RunNo: 79336

Prep Date: 6/24/2021 Analysis Date: 6/24/2021 SeqNo: 2788071 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 95.4 90 110

### Qualifiers:

\* Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **2106A59** 

01-Jul-21

Client: GHD

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: LCS-60867 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 60867 RunNo: 79325

Prep Date: 6/23/2021 Analysis Date: 6/24/2021 SeqNo: 2787407 Units: %Rec

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

Surr: DNOP 4.3 5.000 85.6 70 130

Sample ID: MB-60867 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 60867 RunNo: 79325

Prep Date: 6/23/2021 Analysis Date: 6/24/2021 SeqNo: 2787409 Units: %Rec

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

Surr: DNOP 8.7 10.00 86.7 70 130

Sample ID: LCS-60871 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 60871 Prep Date: 6/23/2021 Analysis Date: 6/26/2021 SeqNo: 2789215 Units: mq/Kq Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Analyte Qual

 Diesel Range Organics (DRO)
 46
 10
 50.00
 0
 92.2
 68.9
 141

 Surr: DNOP
 3.7
 5.000
 73.3
 70
 130

Sample ID: LCS-60876 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 60876 RunNo: 79325

Prep Date: 6/23/2021 Analysis Date: 6/25/2021 SegNo: 2789216 Units: %Rec

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

Surr: DNOP 4.2 5.000 83.2 70 130

Sample ID: MB-60871 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 60871 RunNo: 79325

Prep Date: 6/23/2021 Analysis Date: 6/26/2021 SeqNo: 2789217 Units: mg/Kg

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

Diesel Range Organics (DRO) ND 10
Motor Oil Range Organics (MRO) ND 50

Surr: DNOP 8.0 10.00 79.6 70 130

Sample ID: MB-60876 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 60876 RunNo: 79325

Prep Date: 6/23/2021 Analysis Date: 6/25/2021 SeqNo: 2789218 Units: %Rec

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

Surr: DNOP 9.3 10.00 92.6 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

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **2106A59** 

01-Jul-21

Client: GHD

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: MB-60915 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 60915 RunNo: 79325

Prep Date: 6/24/2021 Analysis Date: 6/26/2021 SegNo: 2789501 Units: %Rec

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

Surr: DNOP 9.8 10.00 98.4 70 130

Sample ID: LCS-60915 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 60915 RunNo: 79325

Prep Date: 6/24/2021 Analysis Date: 6/26/2021 SeqNo: 2789503 Units: %Rec

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

Surr: DNOP 4.7 5.000 93.7 70 130

Sample ID: MB-60925 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 60925 RunNo: 79364

Prep Date: 6/25/2021 Analysis Date: 6/26/2021 SeqNo: 2789749 Units: %Rec

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

Surr: DNOP 11 10.00 109 70 130

Sample ID: LCS-60925 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 60925 RunNo: 79364

Prep Date: 6/25/2021 Analysis Date: 6/26/2021 SeqNo: 2789750 Units: %Rec

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

Surr: DNOP 5.6 5.000 112 70 130

Sample ID: LCS-60942 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 60942 RunNo: 79325

Prep Date: 6/26/2021 Analysis Date: 6/27/2021 SeqNo: 2789806 Units: %Rec

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

Surr: DNOP 3.7 5.000 74.6 70 130

Sample ID: MB-60942 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 60942 RunNo: 79325

Prep Date: 6/26/2021 Analysis Date: 6/27/2021 SeqNo: 2789807 Units: %Rec

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

Surr: DNOP 7.4 10.00 74.2 70 130

#### Qualifiers:

Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical 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

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **2106A59** *01-Jul-21* 

Client: GHD

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: mb-60830 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 60830 RunNo: 79409

Prep Date: 6/22/2021 Analysis Date: 6/28/2021 SeqNo: 2791288 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 940 1000 93.7 70 130

Sample ID: Ics-60830 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 60830 RunNo: 79409

Prep Date: 6/22/2021 Analysis Date: 6/28/2021 SeqNo: 2791290 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 23 5.0 25.00 0 93.7 78.6 131 Surr: BFB 1000 102 70 1000 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

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **2106A59** *01-Jul-21* 

Client: GHD

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: mb-60830 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: **PBS** Batch ID: **60830** RunNo: **79409** 

Prep Date: 6/22/2021 Analysis Date: 6/28/2021 SeqNo: 2791399 Units: mg/Kg

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

 Benzene
 ND
 0.025

 Toluene
 ND
 0.050

 Ethylbenzene
 ND
 0.050

 Xylenes, Total
 ND
 0.10

Surr: 4-Bromofluorobenzene 0.91 1.000 91.1 70 130

Sample ID: Ics-60830 SampType: LCS TestCode: EPA Method 8021B: Volatiles

Client ID: LCSS Batch ID: 60830 RunNo: 79409

Prep Date: 6/22/2021	Analysis D	Date: <b>6/</b> 2	28/2021	S	SeqNo: 27	791401	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	101	80	120			
Toluene	1.0	0.050	1.000	0	101	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.0	0.10	3.000	0	101	80	120			
Surr: 4-Bromofluorobenzene	0.91		1.000		90.6	70	130			

Sample ID: 2106a59-001ams SampType: MS TestCode: EPA Method 8021B: Volatiles

Client ID: **SW-13** Batch ID: **60830** RunNo: **79409** 

Prep Date: 6/22/2021	Analysis [	Date: <b>6/</b>	28/2021	S	SeqNo: 2	791403	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.023	0.9320	0	89.1	80	120			
Toluene	0.88	0.047	0.9320	0	94.5	80	120			
Ethylbenzene	0.91	0.047	0.9320	0	97.4	80	120			
Xylenes, Total	2.7	0.093	2.796	0	97.8	80	120			
Surr: 4-Bromofluorobenzene	0.83		0.9320		88.8	70	130			

Sample ID: 2106a59-001amsd SampType: MSD TestCode: EPA Method 8021B: Volatiles

Client ID: **SW-13** Batch ID: **60830** RunNo: **79409** 

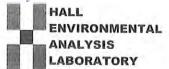
Prep Date: 6/22/2021	Analysis [	Date: <b>6/</b>	28/2021	S	SeqNo: 2	791405	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.024	0.9434	0	90.8	80	120	3.12	20	
Toluene	0.91	0.047	0.9434	0	96.9	80	120	3.76	20	
Ethylbenzene	0.94	0.047	0.9434	0	99.8	80	120	3.65	20	
Xylenes, Total	2.8	0.094	2.830	0	100	80	120	3.83	20	
Surr: 4-Bromofluorobenzene	0.83		0.9434		88.5	70	130	0	0	

### Qualifiers:

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

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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com

# Sample Log-In Check List

Client Name:	GHD	Work Order Nun	nber: 210	6A59		RcptN	o: 1
Received By:	Desiree Dominguez	6/19/2021 8:40:00	AM		TDZ		
Completed By:	Desiree Dominguez	6/19/2021 9:54:26	AM		TOS		
Reviewed By:	TR 6/71/21						
Chain of Cus	stody						
1. Is Chain of C	ustody complete?		Yes	~	No 🗌	Not Present	
2. How was the	sample delivered?		Cou	rier			
Log In							
The second secon	npt made to cool the samples	?	Yes	~	No 🗌	NA 🗌	
4. Were all samp	ples received at a temperatur	e of >0° C to 6.0°C	Yes	~	No 🗆	NA 🗆	
5. Sample(s) in	proper container(s)?		Yes	<b>V</b>	No 🗌		
6. Sufficient sam	ple volume for indicated test	(s)?	Yes	V	No 🗌		
	except VOA and ONG) prope			V	No 🗆		
	tive added to bottles?		Yes		No 🗸	NA 🗆	
9. Received at le	east 1 vial with headspace <1	/4" for AQ VOA?	Yes		No 🗌	NA 🗸	
10. Were any san	mple containers received brok	en?	Yes		No 🗸		
						# of preserved bottles checked	
	ork match bottle labels? ancies on chain of custody)		Yes	<b>V</b>	No 🗔	for pH:	or>12 unless noted)
	correctly identified on Chain of	f Custody?	Yes	<b>V</b>	No 🗆	Adjusted?	or 12 unicss noted)
	t analyses were requested?	•		<b>V</b>	No 🗌		
	ng times able to be met? ustomer for authorization.)		Yes	<b>V</b>	No 🗌	Checked by:	DAD 6-19-21
	ing (if applicable)						
15. Was client no	otified of all discrepancies with	this order?	Yes		No 🗌	NA 🗹	
Person	Notified:	Date		-			
By Who	om:	Via:	☐ eMa	ail 🔲	Phone Fax	☐ In Person	
Regardi	ing:						
Client Ir	nstructions:						
16. Additional ren	marks:						
17. Cooler Infor Cooler No		Seal Intact   Seal No	Seal D	ate	Signed By		

Chain-of-Custody Record	Turn-Around Time:	10/
Ment: GHD	A Standard   Rush	
	l ai	ANALYSIS LABORATORY
Mailing Address:	1 JANE CO	=
324 W. Main St. Suite 108, Artesia NM 88210	ect #:	Hawkins NE - Albuquerque, NM 87109
Phone #: (505)377-4218	81285011	4107
email or Fax#: Becky.Haskell@ghd.com	Project Manager	Analysis Request
	Becky Hawkell	SO'S
Standard 🗆 Level 4 (Full Validation)	Tom Larson	Appended Simon
☐ Az Compliance	r: Zach Comino	V DRC (1) 82709 102, F
	Unice: A Yes II No	OF 504 30 N
	# of Cooler Temp(including cF): 2, 4 +0, 3 = 2 = 9	ficides thod the sand
ome N elame N virte M emiT etel	Preservative HEAL No.	EX / MET 18019 191 191 191 191 191 191 191 191 191
Watth Call of Mark	and # lype	808 808 808
2 2397	1001	9 %
C630 . RH-20.	-003	
0635 BH-21	7,003	
52-HS (3H-25	7007	7
Date: Time: Relinquished by: / Re	Received by: Via: Date Time	
Date: Time: Relinquished by: Received by: Via	18/21 Date 0.19.71	Ternarks. Please email: Chase_Settle@eogresources.com; Tom.Larson@ghd.com; Zach.Comino@ghd.com: Along with Becky Haskell listed above.  Direct Bill to EOG Chase Settle



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

OrderNo.: 2106B23

Hall Environmental Analysis Laboratory

July 01, 2021

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

**FAX** 

RE: Brannigan ANF Federal 5

Dear Becky Haskell:

Hall Environmental Analysis Laboratory received 11 sample(s) on 6/22/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com 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

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order: **2106B23**Date Reported: **7/1/2021** 

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 2106B23

**Project:** Brannigan ANF Federal 5

**Lab ID:** 2106B23-001 **Collection Date:** 6/18/2021 6:00:00 AM

Client Sample ID: SW-14 Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Anal	yst: <b>JMT</b>
Chloride	560	60		mg/Kg	20	6/29/2021 2:54:57 F	PM 60959
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Anal	yst: <b>BRM</b>
Diesel Range Organics (DRO)	25	9.9		mg/Kg	1	6/27/2021 10:52:46	AM 60900
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/27/2021 10:52:46	AM 60900
Surr: DNOP	65.7	70-130	S	%Rec	1	6/27/2021 10:52:46	AM 60900
EPA METHOD 8015D: GASOLINE RANGE						Anal	yst: <b>mb</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/29/2021 6:55:00 F	M 60884
Surr: BFB	91.4	70-130		%Rec	1	6/29/2021 6:55:00 F	PM 60884
EPA METHOD 8021B: VOLATILES						Anal	yst: <b>mb</b>
Benzene	ND	0.025		mg/Kg	1	6/29/2021 6:55:00 P	M 60884
Toluene	ND	0.050		mg/Kg	1	6/29/2021 6:55:00 P	M 60884
Ethylbenzene	ND	0.050		mg/Kg	1	6/29/2021 6:55:00 P	M 60884
Xylenes, Total	ND	0.099		mg/Kg	1	6/29/2021 6:55:00 P	M 60884
Surr: 4-Bromofluorobenzene	89.3	70-130		%Rec	1	6/29/2021 6:55:00 F	PM 60884

**Lab ID:** 2106B23-002 **Collection Date:** 6/18/2021 6:05:00 AM

Client Sample ID: SW-15 Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Anal	/st: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	6/29/2021 3:07:21 P	M 60959
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Anal	/st: BRM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/27/2021 11:41:27	AM 60900
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/27/2021 11:41:27	AM 60900
Surr: DNOP	57.9	70-130	S	%Rec	1	6/27/2021 11:41:27	AM 60900
EPA METHOD 8015D: GASOLINE RANGE						Anal	/st: <b>mb</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/29/2021 7:15:00 P	M 60884
Surr: BFB	86.4	70-130		%Rec	1	6/29/2021 7:15:00 P	M 60884
EPA METHOD 8021B: VOLATILES						Anal	/st: <b>mb</b>
Benzene	ND	0.025		mg/Kg	1	6/29/2021 7:15:00 P	M 60884
Toluene	ND	0.050		mg/Kg	1	6/29/2021 7:15:00 P	M 60884
Ethylbenzene	ND	0.050		mg/Kg	1	6/29/2021 7:15:00 P	M 60884
Xylenes, Total	ND	0.10		mg/Kg	1	6/29/2021 7:15:00 P	M 60884
Surr: 4-Bromofluorobenzene	87.0	70-130		%Rec	1	6/29/2021 7:15:00 P	M 60884

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

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Lab Order: **2106B23** 

### Hall Environmental Analysis Laboratory, Inc.

Date Reported: 7/1/2021

2106B23

Lab Order:

CLIENT: GHD

Project: Brannigan ANF Federal 5

**Lab ID:** 2106B23-003 **Collection Date:** 6/18/2021 6:10:00 AM

Client Sample ID: SW-16 Matrix: SOIL

Result **RL Oual Units DF** Date Analyzed **Analyses Batch ID EPA METHOD 300.0: ANIONS** Analyst: JMT Chloride 460 60 6/28/2021 1:28:26 PM 60963 mg/Kg 20 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: BRM Diesel Range Organics (DRO) 6/27/2021 12:30:14 PM 60900 ND 9.9 mg/Kg Motor Oil Range Organics (MRO) ND 6/27/2021 12:30:14 PM 60900 49 mg/Kg 1 Surr: DNOP 76.3 70-130 %Rec 6/27/2021 12:30:14 PM 60900 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: mb Gasoline Range Organics (GRO) ND 5.0 mg/Kg 1 6/29/2021 7:35:00 PM 60884 Surr: BFB 90.6 70-130 %Rec 1 6/29/2021 7:35:00 PM 60884 **EPA METHOD 8021B: VOLATILES** Analyst: mb Benzene ND 0.025 mg/Kg 1 6/29/2021 7:35:00 PM 60884 Toluene ND 0.050 mg/Kg 1 6/29/2021 7:35:00 PM 60884 Ethylbenzene ND 0.050 mg/Kg 1 6/29/2021 7:35:00 PM 60884 Xylenes, Total ND 0.10 mg/Kg 6/29/2021 7:35:00 PM 60884 Surr: 4-Bromofluorobenzene 90.5 70-130 %Rec 6/29/2021 7:35:00 PM 60884

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

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Lab Order: **2106B23**Date Reported: **7/1/2021** 

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 2106B23

**Project:** Brannigan ANF Federal 5

**Lab ID:** 2106B23-004 **Collection Date:** 6/18/2021 6:15:00 AM

Client Sample ID: SW-17 Matrix: SOIL

Analyses	Result	RL (	Qual Units	DF	Date Analyzed B	atch ID
EPA METHOD 300.0: ANIONS					Analys	t: JMT
Chloride	400	60	mg/Kg	20	6/28/2021 2:05:31 PM	60963
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analys	t: SB
Diesel Range Organics (DRO)	63	9.7	mg/Kg	1	6/27/2021 4:05:08 PM	60900
Motor Oil Range Organics (MRO)	120	49	mg/Kg	1	6/27/2021 4:05:08 PM	60900
Surr: DNOP	97.1	70-130	%Rec	1	6/27/2021 4:05:08 PM	60900
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: mb
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	6/29/2021 7:55:00 PM	60884
Surr: BFB	89.3	70-130	%Rec	1	6/29/2021 7:55:00 PM	60884
EPA METHOD 8021B: VOLATILES					Analys	t: mb
Benzene	ND	0.024	mg/Kg	1	6/29/2021 7:55:00 PM	60884
Toluene	ND	0.048	mg/Kg	1	6/29/2021 7:55:00 PM	60884
Ethylbenzene	ND	0.048	mg/Kg	1	6/29/2021 7:55:00 PM	60884
Xylenes, Total	ND	0.097	mg/Kg	1	6/29/2021 7:55:00 PM	60884
Surr: 4-Bromofluorobenzene	90.0	70-130	%Rec	1	6/29/2021 7:55:00 PM	60884

**Lab ID:** 2106B23-005 **Collection Date:** 6/18/2021 6:20:00 AM

Client Sample ID: SW-18 Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed B	atch ID
EPA METHOD 300.0: ANIONS						Analys	t: <b>JMT</b>
Chloride	990	60		mg/Kg	20	6/28/2021 2:42:36 PM	60963
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS					Analys	t: BRM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/27/2021 1:48:12 PM	60900
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/27/2021 1:48:12 PM	60900
Surr: DNOP	60.7	70-130	S	%Rec	1	6/27/2021 1:48:12 PM	60900
EPA METHOD 8015D: GASOLINE RANGE						Analys	t: <b>mb</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/29/2021 8:14:00 PM	60884
Surr: BFB	86.8	70-130		%Rec	1	6/29/2021 8:14:00 PM	60884
EPA METHOD 8021B: VOLATILES						Analys	t: <b>mb</b>
Benzene	ND	0.025		mg/Kg	1	6/29/2021 8:14:00 PM	60884
Toluene	ND	0.049		mg/Kg	1	6/29/2021 8:14:00 PM	60884
Ethylbenzene	ND	0.049		mg/Kg	1	6/29/2021 8:14:00 PM	60884
Xylenes, Total	ND	0.099		mg/Kg	1	6/29/2021 8:14:00 PM	60884
Surr: 4-Bromofluorobenzene	88.8	70-130		%Rec	1	6/29/2021 8:14:00 PM	60884

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

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Lab Order: 2106B23

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 7/1/2021

CLIENT: GHD Lab Order: 2106B23

**Project:** Brannigan ANF Federal 5

**Lab ID:** 2106B23-006 **Collection Date:** 6/18/2021 6:30:00 AM

Client Sample ID: SW-19 Matrix: SOIL

Chefit bampic ID. 5 W 17		11444141 ~ 012									
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch ID					
EPA METHOD 300.0: ANIONS					Anal	yst: <b>JMT</b>					
Chloride	96	60	mg/Kg	20	6/28/2021 2:54:57 P	M 60963					
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Anal	yst: <b>BRM</b>					
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	6/26/2021 4:39:15 P	M 60915					
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	6/26/2021 4:39:15 P	M 60915					
Surr: DNOP	82.4	70-130	%Rec	1	6/26/2021 4:39:15 P	M 60915					
EPA METHOD 8015D: GASOLINE RANGE					Anal	yst: <b>NSB</b>					
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	6/29/2021 5:08:21 P	M 60893					
Surr: BFB	102	70-130	%Rec	1	6/29/2021 5:08:21 P	M 60893					
EPA METHOD 8021B: VOLATILES					Anal	yst: <b>NSB</b>					
Benzene	ND	0.024	mg/Kg	1	6/29/2021 5:08:21 P	M 60893					
Toluene	ND	0.047	mg/Kg	1	6/29/2021 5:08:21 P	M 60893					
Ethylbenzene	ND	0.047	mg/Kg	1	6/29/2021 5:08:21 P	M 60893					
Xylenes, Total	ND	0.094	mg/Kg	1	6/29/2021 5:08:21 P	M 60893					
Surr: 4-Bromofluorobenzene	104	70-130	%Rec	1	6/29/2021 5:08:21 P	M 60893					

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

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Lab Order: **2106B23**Date Reported: **7/1/2021** 

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 2106B23

**Project:** Brannigan ANF Federal 5

**Lab ID:** 2106B23-007 **Collection Date:** 6/18/2021 6:50:00 AM

Client Sample ID: BH-23 Matrix: SOIL

Analyses	Result	RL Qu	al Units	DF	Date Analyzed B	atch ID
EPA METHOD 300.0: ANIONS					Analyst	: JMT
Chloride	ND	59	mg/Kg	20	6/28/2021 3:32:00 PM	60963
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	6/26/2021 5:03:32 PM	60915
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	6/26/2021 5:03:32 PM	60915
Surr: DNOP	82.2	70-130	%Rec	1	6/26/2021 5:03:32 PM	60915
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	6/29/2021 5:31:54 PM	60893
Surr: BFB	101	70-130	%Rec	1	6/29/2021 5:31:54 PM	60893
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	6/29/2021 5:31:54 PM	60893
Toluene	ND	0.048	mg/Kg	1	6/29/2021 5:31:54 PM	60893
Ethylbenzene	ND	0.048	mg/Kg	1	6/29/2021 5:31:54 PM	60893
Xylenes, Total	ND	0.096	mg/Kg	1	6/29/2021 5:31:54 PM	60893
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	6/29/2021 5:31:54 PM	60893

**Lab ID:** 2106B23-008 **Collection Date:** 6/18/2021 6:55:00 AM

Client Sample ID: BH-24 Matrix: SOIL

Analyses	Result	RL Qu	ual Units	DF	Date Analyzed B	atch ID
EPA METHOD 300.0: ANIONS					Analys	t: <b>JMT</b>
Chloride	ND	60	mg/Kg	20	6/28/2021 3:44:22 PM	60963
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analys	t: BRM
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	6/26/2021 5:27:50 PM	60915
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	6/26/2021 5:27:50 PM	60915
Surr: DNOP	74.6	70-130	%Rec	1	6/26/2021 5:27:50 PM	60915
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	6/29/2021 5:55:21 PM	60893
Surr: BFB	102	70-130	%Rec	1	6/29/2021 5:55:21 PM	60893
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.024	mg/Kg	1	6/29/2021 5:55:21 PM	60893
Toluene	ND	0.048	mg/Kg	1	6/29/2021 5:55:21 PM	60893
Ethylbenzene	ND	0.048	mg/Kg	1	6/29/2021 5:55:21 PM	60893
Xylenes, Total	ND	0.095	mg/Kg	1	6/29/2021 5:55:21 PM	60893
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	1	6/29/2021 5:55:21 PM	60893

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

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Lab Order: **2106B23**Date Reported: **7/1/2021** 

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 2106B23

**Project:** Brannigan ANF Federal 5

**Lab ID:** 2106B23-009 **Collection Date:** 6/18/2021 7:40:00 AM

Client Sample ID: BH-25 Matrix: SOIL

Cheff Sample ID: D11-23		Matrix: SOIL								
Analyses	Result	RL (	Qual Units	DF	Date Analyzed	Batch ID				
EPA METHOD 300.0: ANIONS					Anal	lyst: <b>JMT</b>				
Chloride	81	60	mg/Kg	20	6/28/2021 3:56:42 F	PM 60963				
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Anal	lyst: <b>BRM</b>				
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	6/26/2021 5:52:12 F	PM 60915				
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	6/26/2021 5:52:12 F	PM 60915				
Surr: DNOP	81.2	70-130	%Rec	1	6/26/2021 5:52:12 F	PM 60915				
EPA METHOD 8015D: GASOLINE RANGE					Anal	lyst: <b>NSB</b>				
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	6/29/2021 6:18:56 F	PM 60893				
Surr: BFB	99.0	70-130	%Rec	1	6/29/2021 6:18:56 F	PM 60893				
<b>EPA METHOD 8021B: VOLATILES</b>					Anal	lyst: <b>NSB</b>				
Benzene	ND	0.024	mg/Kg	1	6/29/2021 6:18:56 F	PM 60893				
Toluene	ND	0.047	mg/Kg	1	6/29/2021 6:18:56 F	PM 60893				
Ethylbenzene	ND	0.047	mg/Kg	1	6/29/2021 6:18:56 F	PM 60893				
Xylenes, Total	ND	0.095	mg/Kg	1	6/29/2021 6:18:56 F	PM 60893				
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	6/29/2021 6:18:56 F	PM 60893				

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

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

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Lab Order: **2106B23**Date Reported: **7/1/2021** 

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 2106B23

**Project:** Brannigan ANF Federal 5

**Lab ID:** 2106B23-010 **Collection Date:** 6/18/2021 7:45:00 AM

Client Sample ID: BH-26 Matrix: SOIL

Analyses	Result	RL Qu	al Units	DF	Date Analyzed B	atch ID
EPA METHOD 300.0: ANIONS					Analyst	:: ЈМТ
Chloride	ND	60	mg/Kg	20	6/28/2021 4:09:04 PM	60963
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	6/26/2021 6:16:35 PM	60915
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	6/26/2021 6:16:35 PM	60915
Surr: DNOP	81.0	70-130	%Rec	1	6/26/2021 6:16:35 PM	60915
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	6/29/2021 6:42:19 PM	60893
Surr: BFB	99.3	70-130	%Rec	1	6/29/2021 6:42:19 PM	60893
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.023	mg/Kg	1	6/29/2021 6:42:19 PM	60893
Toluene	ND	0.047	mg/Kg	1	6/29/2021 6:42:19 PM	60893
Ethylbenzene	ND	0.047	mg/Kg	1	6/29/2021 6:42:19 PM	60893
Xylenes, Total	ND	0.094	mg/Kg	1	6/29/2021 6:42:19 PM	60893
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	6/29/2021 6:42:19 PM	60893

**Lab ID:** 2106B23-011 **Collection Date:** 6/18/2021 7:50:00 AM

Client Sample ID: BH-27 Matrix: SOIL

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS					Anal	yst: <b>JMT</b>
Chloride	ND	60	mg/Kg	20	6/28/2021 4:21:25 F	PM 60963
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Anal	yst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	6/26/2021 6:40:56 P	PM 60915
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	6/26/2021 6:40:56 P	PM 60915
Surr: DNOP	81.4	70-130	%Rec	1	6/26/2021 6:40:56 P	PM 60915
EPA METHOD 8015D: GASOLINE RANGE					Anal	yst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/29/2021 7:05:44 P	PM 60893
Surr: BFB	101	70-130	%Rec	1	6/29/2021 7:05:44 P	PM 60893
EPA METHOD 8021B: VOLATILES					Anal	yst: <b>NSB</b>
Benzene	ND	0.024	mg/Kg	1	6/29/2021 7:05:44 P	PM 60893
Toluene	ND	0.049	mg/Kg	1	6/29/2021 7:05:44 F	PM 60893
Ethylbenzene	ND	0.049	mg/Kg	1	6/29/2021 7:05:44 F	PM 60893
Xylenes, Total	ND	0.097	mg/Kg	1	6/29/2021 7:05:44 P	PM 60893
Surr: 4-Bromofluorobenzene	103	70-130	%Rec	1	6/29/2021 7:05:44 P	PM 60893

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

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**CLIENT:** 

**Analytical Report** 

Lab Order: 2106B23

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 7/1/2021

2106B23

Lab Order:

**GHD Project:** Brannigan ANF Federal 5

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix

- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL

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### Hall Environmental Analysis Laboratory, Inc.

2106B23

WO#:

01-Jul-21

Client: GHD

**Project:** Brannigan ANF Federal 5

Sample ID: MB-60963 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 60963 RunNo: 79430

Prep Date: 6/28/2021 Analysis Date: 6/28/2021 SegNo: 2792218 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-60963 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 60963 RunNo: 79430

Prep Date: 6/28/2021 Analysis Date: 6/28/2021 SeqNo: 2792219 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 93.0 90 110

Sample ID: MB-60959 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 60959 RunNo: 79432

Prep Date: 6/28/2021 Analysis Date: 6/28/2021 SeqNo: 2792330 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-60959 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 60959 RunNo: 79432

Prep Date: 6/28/2021 Analysis Date: 6/28/2021 SeqNo: 2792332 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 Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

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

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **2106B23** 

01-Jul-21

Client: GHD

**Project:** Brannigan ANF Federal 5

Sample ID: MB-60915	SampType	: MBLK	Tes	tCode: <b>EP</b>	A Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Batch ID:	60915	R	unNo: <b>79</b>	325				
Prep Date: 6/24/2021	Analysis Date:	6/26/2021	S	SeqNo: <b>27</b>	789501	Units: mg/k	<b>(</b> g		
Analyte	Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10							
Motor Oil Range Organics (MRO)	ND	50							
Surr: DNOP	9.8	10.00		98.4	70	130			
Sample ID: MB-60900	SampType	: MBLK	Tes	tCode: <b>EP</b>	A Method	8015M/D: Die	esel Rango	e Organics	
Client ID: PBS	Batch ID:	60900	R	lunNo: <b>7</b> 9	325				
Prep Date: 6/24/2021	Analysis Date:	6/26/2021	S	SeqNo: <b>27</b>	789502	Units: mg/k	<b>(</b> g		
Analyte	Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10							
Motor Oil Range Organics (MRO)	ND	50							
Surr: DNOP	9.4	10.00		93.6	70	130			
Sample ID: LCS-60915	SampType	: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: LCSS	Batch ID:	60915	R	RunNo: <b>79325</b>					
Prep Date: 6/24/2021	Analysis Date:	6/26/2021	S	SeqNo: <b>27</b>	789503	Units: mg/k	<b>(</b> g		
Analyte	Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10 50.00	0	107	68.9	141			
Surr: DNOP	4.7	5.000		93.7	70	130			
Sample ID: LCS-60900	SampType	: LCS	Tes	tCode: EP	A Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch ID:	60900	R	tunNo: <b>79</b>	325				
Prep Date: 6/24/2021	Analysis Date:	6/26/2021	S	SeqNo: <b>27</b>	789504	Units: mg/K	<b>(</b> g		
Analyte	Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10 50.00	0	103	68.9	141			
Surr: DNOP	4.3	5.000		85.2	70	130			
Sample ID: MB-60925	SampType	: MBLK	Tes	tCode: EP	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Batch ID:	60925	R	tunNo: <b>79</b>	9364				

### Qualifiers:

Analyte

Surr: DNOP

- 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

109

HighLimit

130

70

%RPD

- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range

SPK value SPK Ref Val %REC LowLimit

RL Reporting Limit

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**RPDLimit** 

Qual

Result

11

PQL

10.00

### Hall Environmental Analysis Laboratory, Inc.

2106B23 01-Jul-21

WO#:

Client: GHD

**Project:** Brannigan ANF Federal 5

Sample ID: LCS-60925 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 60925 RunNo: 79364

Prep Date: 6/25/2021 Analysis Date: 6/26/2021 SegNo: 2789750 Units: %Rec

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

Surr: DNOP 5.6 5.000 112 70 130

Sample ID: LCS-60942 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 60942 RunNo: 79325

Prep Date: 6/26/2021 Analysis Date: 6/27/2021 SeqNo: 2789806 Units: %Rec

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

Surr: DNOP 3.7 5.000 74.6 70 130

Sample ID: MB-60942 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 60942 RunNo: 79325

Prep Date: 6/26/2021 Analysis Date: 6/27/2021 SeqNo: 2789807 Units: %Rec

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

Surr: DNOP 7.4 10.00 74.2 70 130

Sample ID: MB-60943 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 60943 RunNo: 79391

Prep Date: 6/26/2021 Analysis Date: 6/27/2021 SeqNo: 2790235 Units: %Rec

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

Surr: DNOP 11 10.00 107 70 130

Sample ID: LCS-60943 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 60943 RunNo: 79391

5.4

Prep Date: 6/26/2021 Analysis Date: 6/27/2021 SeqNo: 2790236 Units: %Rec

5.000

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

Qualifiers:

Surr: DNOP

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

107

70

130

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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### Hall Environmental Analysis Laboratory, Inc.

WO#: **2106B23** *01-Jul-21* 

Client: GHD

**Project:** Brannigan ANF Federal 5

Sample ID: mb-60893 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: **PBS** Batch ID: **60893** RunNo: **79456** 

Prep Date: 6/24/2021 Analysis Date: 6/29/2021 SeqNo: 2792789 Units: mq/Kq

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

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 990 1000 99.0 70 130

Sample ID: Ics-60893 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 60893 RunNo: 79456

Prep Date: 6/24/2021 Analysis Date: 6/29/2021 SeqNo: 2792790 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 26 5.0 25.00 O 106 78.6 131 Surr: BFB 1100 1000 112 70 130

Sample ID: mb-60933 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 60933 RunNo: 79456

Prep Date: 6/25/2021 Analysis Date: 6/30/2021 SeqNo: 2792813 Units: %Rec

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

Surr: BFB 990 1000 99.1 70 130

Sample ID: Ics-60933 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 60933 RunNo: 79456

Prep Date: 6/25/2021 Analysis Date: 6/30/2021 SeqNo: 2792814 Units: %Rec

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

Surr: BFB 1100 1000 110 70 130

Sample ID: mb-60884 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 60884 RunNo: 79458

Prep Date: 6/23/2021 Analysis Date: 6/29/2021 SeqNo: 2793253 Units: mg/Kg

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

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 890 1000 89.0 70 130

Sample ID: mb-60919 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 60919 RunNo: 79458

Prep Date: 6/24/2021 Analysis Date: 6/29/2021 SeqNo: 2793254 Units: %Rec

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

Surr: BFB 900 1000 90.1 70 130

#### Qualifiers:

\* Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical 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

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### Hall Environmental Analysis Laboratory, Inc.

WO#: 2106B23 01-Jul-21

**Client:** GHD

**Project:** Brannigan ANF Federal 5

Sample ID: Ics-60884 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 60884 RunNo: 79458

Prep Date: 6/23/2021 Analysis Date: 6/29/2021 SeqNo: 2793255 Units: mg/Kg

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

0 Gasoline Range Organics (GRO) 25 5.0 25.00 101 78.6 131 Surr: BFB 1000 1000 100 130

Sample ID: Ics-60919 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 60919 RunNo: 79458

Prep Date: 6/24/2021 Analysis Date: 6/29/2021 SeqNo: 2793256 Units: %Rec

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

104

70

1000

Surr: BFB

1000

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix

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

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### Hall Environmental Analysis Laboratory, Inc.

WO#: **2106B23** *01-Jul-21* 

Client: GHD

**Project:** Brannigan ANF Federal 5

Sample ID: mb-60893	SampType: <b>MBLK</b>	TestCode: EPA Method 8021B: Volatiles
Client ID: DDC	Potob ID: 60002	DunNo: 704E6

Prep Date: 6/24/2021 Analysis Date: 6/29/2021 SeqNo: 2792832 Units: mg/Kg

Trop Date. 0/24/2021 Analysis Date. 0/25/2021 Seque. 2/32032 Sints. Ingreg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		101	70	130			

Sample ID: LCS-60893 SampType: LCS TestCode: EPA Method 8021B: Volatiles

Client ID: LCSS Batch ID: 60893 RunNo: 79456

Prep Date: 6/24/2021 Analysis Date: 6/29/2021 SeqNo: 2792833 Units: mg/Kg

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

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.81	0.025	1.000	0	81.1	80	120			
Toluene	0.92	0.050	1.000	0	91.5	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.3	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.2	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	70	130			

Sample ID: <b>mb-60933</b>	SampT	BLK	Tes	stCode: EPA Method 8021B: Volatiles								
Client ID: PBS	ient ID: PBS Batch ID: 60933 RunNo: 79456											
Prep Date: 6/25/2021	Analysis D	ate: 6/	30/2021	SeqNo: 2792854			Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Surr: 4-Bromofluorobenzene	1.0		1.000		100	70	130					

Sample ID: LCS-60933	SampType: LCS	TestCode: EPA Method 8021B: Volatiles	
Client ID: LCSS	Batch ID: 60933	RunNo: <b>79456</b>	
Prep Date: 6/25/2021	Analysis Date: 6/30/2021	SeqNo: <b>2792856</b> Units: <b>%Rec</b>	
Analyte	Result PQL SPK value S	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual	

Surr: 4-Bromofluorobenzene 1.0 1.000 102 70 130

Sample ID: mb-60884	PA Method 8021B: Volatiles								
Client ID: PBS Batch ID: 60884 RunNo: 79458									
Prep Date: 6/23/2021 Analysis Date: 6/29/2021 SeqNo: 2					93305	Units: mg/K	g		
Analyte	Result F	PQL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND (	0.025							

Benzene	ND	0.025
Toluene	ND	0.050
Ethylbenzene	ND	0.050
Xylenes, Total	ND	0.10

#### Qualifiers:

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

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### Hall Environmental Analysis Laboratory, Inc.

WO#: **2106B23** *01-Jul-21* 

Client: GHD

**Project:** Brannigan ANF Federal 5

Sample ID: mb-60884 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: PBS Batch ID: 60884 RunNo: 79458

Prep Date: 6/23/2021 Analysis Date: 6/29/2021 SeqNo: 2793305 Units: mg/Kg

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

Surr: 4-Bromofluorobenzene 0.89 1.000 89.2 70 130

Sample ID: mb-60919 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: PBS Batch ID: 60919 RunNo: 79458

Prep Date: 6/24/2021 Analysis Date: 6/29/2021 SeqNo: 2793306 Units: %Rec

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

Surr: 4-Bromofluorobenzene 0.91 1.000 91.1 70 130

Sample ID: Ics-60884 SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSS Batch ID: 60884 RunNo: 79458 Prep Date: 6/23/2021 Analysis Date: 6/29/2021 SeqNo: 2793307 Units: mg/Kg PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte Result 1.0 0.025 1.000 101 80 120 Benzene 0 102 80 120 Toluene 1.0 0.050 1.000 Ethylbenzene 1.0 0.050 1.000 0 103 80 120 0 Xylenes, Total 3.1 0.10 3.000 104 80 120 Surr: 4-Bromofluorobenzene 0.91 1.000 90.7 70 130

Sample ID: Ics-60919 SampType: LCS TestCode: EPA Method 8021B: Volatiles

Client ID: LCSS Batch ID: 60919 RunNo: 79458

Prep Date: 6/24/2021 Analysis Date: 6/29/2021 SeqNo: 2793308 Units: %Rec

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

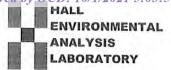
Surr: 4-Bromofluorobenzene 0.97 1.000 97.2 70 130

### Qualifiers:

- Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

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

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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

Website: clients.hallenvironmental.com

# Sample Log-In Check List

Client Name: GHD Work Order Number: 2106B23 RcptNo: 1 Received By: Juan Rojas 6/22/2021 7:30:00 AM Completed By: **Desiree Dominguez** 6/22/2021 8:29:13 AM 5 PA 6.22.21 Chain of Custody 1. Is Chain of Custody complete? Yes 🗸 No 🗌 Not Present 2. How was the sample delivered? Courier Log In 3. Was an attempt made to cool the samples? Yes V No 🗌 NA 🗌 Were all samples received at a temperature of >0° C to 6.0°C No \_ NA L Sample(s) in proper container(s)? Yes V No 🗌 6. Sufficient sample volume for indicated test(s)? Yes V No 7. Are samples (except VOA and ONG) properly preserved? No 8. Was preservative added to bottles? No V Yes \_\_ NA L Received at least 1 vial with headspace <1/4" for AQ VOA?</li> NA V No 🗌 Yes 10. Were any sample containers received broken? Yes 🗌 No V # of preserved bottles checked 11. Does paperwork match bottle labels? Yes 🗸 No 🗌 for pH: (Note discrepancies on chain of custody) (<2 or >12 unless noted) Adjusted? 12. Are matrices correctly identified on Chain of Custody? Yes V No 🗌 13. Is it clear what analyses were requested? Yes V No | Checked by: KPU 6/22/21 14. Were all holding times able to be met? Yes 🗸 No 🗌 (If no, notify customer for authorization.) Special Handling (if applicable) 15. Was client notified of all discrepancies with this order? Yes No NA V Person Notified: Date: By Whom: eMail Phone Fax In Person Via: Regarding: Client Instructions: 16. Additional remarks: 17. Cooler Information Cooler No Temp °C Condition Seal Intact Seal No Seal Date Signed By 1 0.4 Good 2 1.2 Good

HALL ENVIRONMENTAL ANALYSTS I AROBATOBY	)m	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Analysis Remiest	(d)	SOS S	NAbs	1) DR(1) 1) 1) 10 10 10 10 10 10 10 10 10 10 10 10 10	\ O3 3/8/5 .40 .40 .N	O3 <sup>3</sup> qes	DD() Oodsticions SB31 Metstick MO (A()	TEX / PH:801 Pe: OB (Me ob) PE: Br Pt: Br Br Pt: Br Br Pt:	85 BS										7		Remarks: Please email: Chase_Settle@eogresources.com; Tom.Larson@ahd.com: Zach Comino@ahd.com: Along with		Direct Bill to EOG Chase Settle
Turn-Around Time:  ApStandard □ Rush S· Ax,		Project #	7	11228319	Project Manager:	Becky Haskell	Tom Larson	Ľ	On Ice: X Yes 🗆 No	# of Coolers:	Cooler Temp(including CF); O. 6-0.2:0. 9	Container Preservative HEAL No. Type and # Type			7,000	700-	500-	300-	100-	800-	600-	010-	110-		Via: Contra	Claiv	122/21
Client: GHD	Mailing Address:	324 W Main St Sruite 108 Artesia MM 00000	Diese #		email or Fax#: Becky, Haskell@ghd.com	ige:	☐ Standard ☐ Level 4 (Full Validation)	screditation:	□ NELAC □ Other	L EUU (Iype)		Date Time Matrix Sample Name	50000 S SU-14	1005 1 323-15	26.0	CI-US 2190	100 SW-18	1	0650 RH-23	C655 13H-24	CRYO DH-25	2420	134-21	Date: Time: Relinquished by:	1000 20 1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/	Time: Relinquished by:	Walter 1910 Courier



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

July 01, 2021

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

**FAX** 

RE: Brannigan ANF Federal 5 Battery OrderNo.: 2106B88

### Dear Becky Haskell:

Hall Environmental Analysis Laboratory received 11 sample(s) on 6/23/2021 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

andyl

4901 Hawkins NE

Albuquerque, NM 87109

**CLIENT:** 

### **Analytical Report**

Lab Order: **2106B88**Date Reported: **7/1/2021** 

## Hall Environmental Analysis Laboratory, Inc.

GHD Lab Order: 2106B88

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106B88-001 **Collection Date:** 6/21/2021 6:30:00 AM

Client Sample ID: SW-19 Matrix: SOIL

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS					Analy	st: <b>JMT</b>
Chloride	190	60	mg/Kg	20	6/29/2021 6:25:52 Pf	M 61012
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analy	st: SB
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	6/26/2021 4:37:46 PI	M 60925
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	6/26/2021 4:37:46 PI	M 60925
Surr: DNOP	70.2	70-130	%Rec	1	6/26/2021 4:37:46 PI	M 60925
EPA METHOD 8015D: GASOLINE RANGE					Analy	st: <b>mb</b>
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	6/30/2021 1:12:00 Al	√ 60919
Surr: BFB	95.7	70-130	%Rec	1	6/30/2021 1:12:00 Al	M 60919
EPA METHOD 8021B: VOLATILES					Analy	st: <b>mb</b>
Benzene	ND	0.024	mg/Kg	1	6/30/2021 1:12:00 Al	M 60919
Toluene	ND	0.048	mg/Kg	1	6/30/2021 1:12:00 Af	M 60919
Ethylbenzene	ND	0.048	mg/Kg	1	6/30/2021 1:12:00 Af	M 60919
Xylenes, Total	ND	0.096	mg/Kg	1	6/30/2021 1:12:00 Af	M 60919
Surr: 4-Bromofluorobenzene	93.5	70-130	%Rec	1	6/30/2021 1:12:00 Al	M 60919

**Lab ID:** 2106B88-002 **Collection Date:** 6/21/2021 6:35:00 AM

Client Sample ID: BH-28 Matrix: SOIL

Analyses	Result	RL (	Qual Units	DF	Date Analyzed I	Batch ID
EPA METHOD 300.0: ANIONS					Analys	t: <b>JMT</b>
Chloride	360	60	mg/Kg	20	6/29/2021 6:38:16 PM	61012
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analys	st: SB
Diesel Range Organics (DRO)	11	9.8	mg/Kg	1	6/26/2021 4:50:16 PM	60925
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	6/26/2021 4:50:16 PM	60925
Surr: DNOP	80.6	70-130	%Rec	1	6/26/2021 4:50:16 PM	60925
EPA METHOD 8015D: GASOLINE RANGE					Analys	st: <b>mb</b>
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/30/2021 1:32:00 AM	60919
Surr: BFB	93.2	70-130	%Rec	1	6/30/2021 1:32:00 AM	60919
EPA METHOD 8021B: VOLATILES					Analys	t: <b>mb</b>
Benzene	ND	0.025	mg/Kg	1	6/30/2021 1:32:00 AM	60919
Toluene	ND	0.049	mg/Kg	1	6/30/2021 1:32:00 AM	60919
Ethylbenzene	ND	0.049	mg/Kg	1	6/30/2021 1:32:00 AM	60919
Xylenes, Total	ND	0.098	mg/Kg	1	6/30/2021 1:32:00 AM	60919
Surr: 4-Bromofluorobenzene	92.4	70-130	%Rec	1	6/30/2021 1:32:00 AM	60919

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

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Lab Order: **2106B88**Date Reported: **7/1/2021** 

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 2106B88

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106B88-003 **Collection Date:** 6/21/2021 6:40:00 AM

Client Sample ID: BH-29 Matrix: SOIL

Chem Sample ID: D11-29			Matrix	. 50	AL.	
Analyses	Result	RL Q	Qual Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS					Anal	yst: <b>JMT</b>
Chloride	580	60	mg/Kg	20	6/29/2021 6:50:40 P	PM 61012
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Anal	yst: <b>SB</b>
Diesel Range Organics (DRO)	55	9.8	mg/Kg	1	6/26/2021 5:02:48 P	PM 60925
Motor Oil Range Organics (MRO)	87	49	mg/Kg	1	6/26/2021 5:02:48 P	M 60925
Surr: DNOP	90.1	70-130	%Rec	1	6/26/2021 5:02:48 P	PM 60925
EPA METHOD 8015D: GASOLINE RANGE					Anal	yst: <b>mb</b>
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/30/2021 1:52:00 A	M 60919
Surr: BFB	92.6	70-130	%Rec	1	6/30/2021 1:52:00 A	M 60919
EPA METHOD 8021B: VOLATILES					Anal	yst: <b>mb</b>
Benzene	ND	0.024	mg/Kg	1	6/30/2021 1:52:00 A	M 60919
Toluene	ND	0.049	mg/Kg	1	6/30/2021 1:52:00 A	M 60919
Ethylbenzene	ND	0.049	mg/Kg	1	6/30/2021 1:52:00 A	M 60919
Xylenes, Total	ND	0.098	mg/Kg	1	6/30/2021 1:52:00 A	M 60919
Surr: 4-Bromofluorobenzene	90.7	70-130	%Rec	1	6/30/2021 1:52:00 A	M 60919

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

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

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Lab Order: **2106B88**Date Reported: **7/1/2021** 

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 2106B88

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106B88-004 **Collection Date:** 6/21/2021 6:45:00 AM

Client Sample ID: SW-20 Matrix: SOIL

Analyses	Result	RL (	Qual Units	DF	Date Analyzed B	atch ID
EPA METHOD 300.0: ANIONS					Analys	t: JMT
Chloride	80	60	mg/Kg	20	6/29/2021 7:03:05 PM	61012
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analys	t: SB
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	6/26/2021 5:15:11 PM	60925
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	6/26/2021 5:15:11 PM	60925
Surr: DNOP	99.6	70-130	%Rec	1	6/26/2021 5:15:11 PM	60925
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: <b>mb</b>
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/30/2021 2:12:00 AM	60919
Surr: BFB	91.9	70-130	%Rec	1	6/30/2021 2:12:00 AM	60919
EPA METHOD 8021B: VOLATILES					Analys	t: <b>mb</b>
Benzene	ND	0.024	mg/Kg	1	6/30/2021 2:12:00 AM	60919
Toluene	ND	0.049	mg/Kg	1	6/30/2021 2:12:00 AM	60919
Ethylbenzene	ND	0.049	mg/Kg	1	6/30/2021 2:12:00 AM	60919
Xylenes, Total	ND	0.097	mg/Kg	1	6/30/2021 2:12:00 AM	60919
Surr: 4-Bromofluorobenzene	92.8	70-130	%Rec	1	6/30/2021 2:12:00 AM	60919

**Lab ID:** 2106B88-005 **Collection Date:** 6/21/2021 6:50:00 AM

Client Sample ID: SW-21 Matrix: SOIL

Analyses	Result	RL Q	ual Units	DF	Date Analyzed E	Batch ID
EPA METHOD 300.0: ANIONS					Analys	t: <b>JMT</b>
Chloride	170	60	mg/Kg	20	6/29/2021 7:15:29 PM	61012
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analys	t: SB
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	6/26/2021 5:27:50 PM	60925
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	6/26/2021 5:27:50 PM	60925
Surr: DNOP	108	70-130	%Rec	1	6/26/2021 5:27:50 PM	60925
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: <b>mb</b>
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	6/30/2021 2:32:00 AM	60919
Surr: BFB	93.1	70-130	%Rec	1	6/30/2021 2:32:00 AM	60919
EPA METHOD 8021B: VOLATILES					Analys	t: mb
Benzene	ND	0.024	mg/Kg	1	6/30/2021 2:32:00 AM	60919
Toluene	ND	0.048	mg/Kg	1	6/30/2021 2:32:00 AM	60919
Ethylbenzene	ND	0.048	mg/Kg	1	6/30/2021 2:32:00 AM	60919
Xylenes, Total	ND	0.096	mg/Kg	1	6/30/2021 2:32:00 AM	60919
Surr: 4-Bromofluorobenzene	94.6	70-130	%Rec	1	6/30/2021 2:32:00 AM	60919

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

Page 3 of 12

**CLIENT:** 

**Analytical Report** 

Lab Order: **2106B88**Date Reported: **7/1/2021** 

2106B88

### Hall Environmental Analysis Laboratory, Inc.

Lab Order:

**Project:** Brannigan ANF Federal 5 Battery

**GHD** 

**Lab ID:** 2106B88-006 **Collection Date:** 6/21/2021 6:55:00 AM

Client Sample ID: SW-22 Matrix: SOIL

Result **RL Oual Units DF** Date Analyzed **Analyses Batch ID EPA METHOD 300.0: ANIONS** Analyst: JMT Chloride 6/29/2021 7:52:43 PM 140 60 61012 mg/Kg 20 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: SB Diesel Range Organics (DRO) 6/26/2021 5:40:23 PM ND 9.7 mg/Kg 60925 Motor Oil Range Organics (MRO) ND 6/26/2021 5:40:23 PM 60925 49 mg/Kg 1 Surr: DNOP 108 70-130 %Rec 6/26/2021 5:40:23 PM 60925 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: mb Gasoline Range Organics (GRO) ND 4.9 mg/Kg 1 6/30/2021 2:52:00 AM 60919 Surr: BFB 94.6 70-130 %Rec 1 6/30/2021 2:52:00 AM 60919 **EPA METHOD 8021B: VOLATILES** Analyst: mb Benzene ND 0.024 mg/Kg 1 6/30/2021 2:52:00 AM 60919 Toluene ND 0.049 mg/Kg 1 6/30/2021 2:52:00 AM 60919 Ethylbenzene ND 0.049 mg/Kg 1 6/30/2021 2:52:00 AM 60919 Xylenes, Total ND 0.097 mg/Kg 6/30/2021 2:52:00 AM 60919 Surr: 4-Bromofluorobenzene 92.6 70-130 %Rec 6/30/2021 2:52:00 AM 60919

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

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Lab Order: **2106B88**Date Reported: **7/1/2021** 

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 2106B88

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106B88-007 **Collection Date:** 6/21/2021 7:00:00 AM

Client Sample ID: BH-30 Matrix: SOIL

Analyses	Result	RL Q	ual Units	DF	Date Analyzed B	atch ID
EPA METHOD 300.0: ANIONS					Analys	t: <b>JMT</b>
Chloride	ND	60	mg/Kg	20	6/29/2021 8:05:07 PM	61012
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analys	t: <b>SB</b>
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	6/26/2021 5:52:52 PM	60925
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	6/26/2021 5:52:52 PM	60925
Surr: DNOP	101	70-130	%Rec	1	6/26/2021 5:52:52 PM	60925
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: <b>mb</b>
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	6/30/2021 4:11:00 AM	60919
Surr: BFB	91.5	70-130	%Rec	1	6/30/2021 4:11:00 AM	60919
EPA METHOD 8021B: VOLATILES					Analys	t: <b>mb</b>
Benzene	ND	0.025	mg/Kg	1	6/30/2021 4:11:00 AM	60919
Toluene	ND	0.050	mg/Kg	1	6/30/2021 4:11:00 AM	60919
Ethylbenzene	ND	0.050	mg/Kg	1	6/30/2021 4:11:00 AM	60919
Xylenes, Total	ND	0.099	mg/Kg	1	6/30/2021 4:11:00 AM	60919
Surr: 4-Bromofluorobenzene	89.6	70-130	%Rec	1	6/30/2021 4:11:00 AM	60919

**Lab ID:** 2106B88-008 **Collection Date:** 6/21/2021 7:10:00 AM

Client Sample ID: BH-31 Matrix: SOIL

Analyses	Result	RL Q	Qual Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS					Analy	st: <b>JMT</b>
Chloride	ND	60	mg/Kg	20	6/29/2021 8:17:31 PM	61012
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analys	st: SB
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	6/26/2021 6:05:23 PM	60925
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	6/26/2021 6:05:23 PM	60925
Surr: DNOP	99.7	70-130	%Rec	1	6/26/2021 6:05:23 PM	60925
EPA METHOD 8015D: GASOLINE RANGE					Analys	st: <b>mb</b>
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	6/30/2021 4:31:00 AM	60919
Surr: BFB	98.3	70-130	%Rec	1	6/30/2021 4:31:00 AM	60919
EPA METHOD 8021B: VOLATILES					Analys	st: <b>mb</b>
Benzene	ND	0.025	mg/Kg	1	6/30/2021 4:31:00 AM	60919
Toluene	ND	0.050	mg/Kg	1	6/30/2021 4:31:00 AM	60919
Ethylbenzene	ND	0.050	mg/Kg	1	6/30/2021 4:31:00 AM	60919
Xylenes, Total	ND	0.10	mg/Kg	1	6/30/2021 4:31:00 AM	60919
Surr: 4-Bromofluorobenzene	97.0	70-130	%Rec	1	6/30/2021 4:31:00 AM	60919

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

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Lab Order: **2106B88**Date Reported: **7/1/2021** 

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 2106B88

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106B88-009 **Collection Date:** 6/21/2021 7:20:00 AM

Client Sample ID: BH-32 Matrix: SOIL

Result **RL Oual Units DF** Date Analyzed **Analyses Batch ID EPA METHOD 300.0: ANIONS** Analyst: JMT Chloride ND 6/29/2021 8:29:56 PM 60 61012 mg/Kg 20 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: SB Diesel Range Organics (DRO) 6/26/2021 6:17:52 PM ND 9.8 mg/Kg 60925 Motor Oil Range Organics (MRO) ND 6/26/2021 6:17:52 PM 60925 49 mg/Kg 1 Surr: DNOP 106 70-130 %Rec 6/26/2021 6:17:52 PM 60925 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: mb Gasoline Range Organics (GRO) ND 4.8 mg/Kg 1 6/30/2021 4:51:00 AM 60919 Surr: BFB 96.0 70-130 %Rec 1 6/30/2021 4:51:00 AM 60919 **EPA METHOD 8021B: VOLATILES** Analyst: mb Benzene ND 0.024 mg/Kg 1 6/30/2021 4:51:00 AM 60919 Toluene ND 0.048 mg/Kg 1 6/30/2021 4:51:00 AM 60919 Ethylbenzene ND 0.048 mg/Kg 1 6/30/2021 4:51:00 AM 60919 Xylenes, Total ND 0.097 mg/Kg 6/30/2021 4:51:00 AM 60919 Surr: 4-Bromofluorobenzene 97.4 70-130 %Rec 6/30/2021 4:51:00 AM 60919

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

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Lab Order: **2106B88**Date Reported: **7/1/2021** 

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 2106B88

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2106B88-010 **Collection Date:** 6/21/2021 7:25:00 AM

Client Sample ID: BH-33 Matrix: SOIL

Analyses	Result	RL Q	ual Units	DF	Date Analyzed B	atch ID
EPA METHOD 300.0: ANIONS					Analys	t: <b>JMT</b>
Chloride	ND	60	mg/Kg	20	6/29/2021 9:07:08 PM	61012
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analys	t: SB
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	6/26/2021 6:30:16 PM	60925
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	6/26/2021 6:30:16 PM	60925
Surr: DNOP	100	70-130	%Rec	1	6/26/2021 6:30:16 PM	60925
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: <b>mb</b>
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	6/30/2021 5:11:00 AM	60919
Surr: BFB	95.9	70-130	%Rec	1	6/30/2021 5:11:00 AM	60919
EPA METHOD 8021B: VOLATILES					Analys	t: <b>mb</b>
Benzene	ND	0.024	mg/Kg	1	6/30/2021 5:11:00 AM	60919
Toluene	ND	0.047	mg/Kg	1	6/30/2021 5:11:00 AM	60919
Ethylbenzene	ND	0.047	mg/Kg	1	6/30/2021 5:11:00 AM	60919
Xylenes, Total	ND	0.094	mg/Kg	1	6/30/2021 5:11:00 AM	60919
Surr: 4-Bromofluorobenzene	97.5	70-130	%Rec	1	6/30/2021 5:11:00 AM	60919

**Lab ID:** 2106B88-011 **Collection Date:** 6/21/2021 7:40:00 AM

Client Sample ID: BH-34 Matrix: SOIL

Analyses	Result	RL Q	ual Units	DF	Date Analyzed B	atch ID
EPA METHOD 300.0: ANIONS					Analyst	: <b>VP</b>
Chloride	ND	60	mg/Kg	20	6/30/2021 1:57:28 AM	61024
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: SB
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	6/26/2021 6:42:37 PM	60925
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	6/26/2021 6:42:37 PM	60925
Surr: DNOP	99.9	70-130	%Rec	1	6/26/2021 6:42:37 PM	60925
EPA METHOD 8015D: GASOLINE RANGE					Analyst	:: mb
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/30/2021 5:31:00 AM	60919
Surr: BFB	98.7	70-130	%Rec	1	6/30/2021 5:31:00 AM	60919
EPA METHOD 8021B: VOLATILES					Analyst	:: mb
Benzene	ND	0.025	mg/Kg	1	6/30/2021 5:31:00 AM	60919
Toluene	ND	0.049	mg/Kg	1	6/30/2021 5:31:00 AM	60919
Ethylbenzene	ND	0.049	mg/Kg	1	6/30/2021 5:31:00 AM	60919
Xylenes, Total	ND	0.098	mg/Kg	1	6/30/2021 5:31:00 AM	60919
Surr: 4-Bromofluorobenzene	95.4	70-130	%Rec	1	6/30/2021 5:31:00 AM	60919

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

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Lab Order: **2106B88** 

# Hall Environmental Analysis Laboratory, Inc.

Date Reported: 7/1/2021

CLIENT: GHD Lab Order: 2106B88

**Project:** Brannigan ANF Federal 5 Battery

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

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- 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

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### Hall Environmental Analysis Laboratory, Inc.

WO#: **2106B88** 

01-Jul-21

Client: GHD

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: MB-61012 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: **PBS** Batch ID: **61012** RunNo: **79428** 

Prep Date: 6/29/2021 Analysis Date: 6/30/2021 SegNo: 2793004 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-61012 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 61012 RunNo: 79428

Prep Date: 6/29/2021 Analysis Date: 6/30/2021 SeqNo: 2793005 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 91.9 90 110

Sample ID: MB-61024 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 61024 RunNo: 79428

Prep Date: 6/29/2021 Analysis Date: 6/30/2021 SeqNo: 2793007 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-61024 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 61024 RunNo: 79428

Prep Date: 6/29/2021 Analysis Date: 6/30/2021 SeqNo: 2793008 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 94.0 90 110

Sample ID: MB-61012 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 61012 RunNo: 79443

Prep Date: 6/29/2021 Analysis Date: 6/29/2021 SeqNo: 2793801 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-61012 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 61012 RunNo: 79443

Prep Date: 6/29/2021 Analysis Date: 6/29/2021 SeqNo: 2793802 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 91.5 90 110

#### Qualifiers:

Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical 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

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### Hall Environmental Analysis Laboratory, Inc.

WO#: **2106B88** *01-Jul-21* 

Client: GHD

Surr: DNOP

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: MB-60925 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 60925 RunNo: 79364

Prep Date: 6/25/2021 Analysis Date: 6/26/2021 SeqNo: 2789749 Units: mg/Kg

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

Diesel Range Organics (DRO) ND 10

Motor Oil Range Organics (MRO) ND 50

Surr: DNOP 11 10.00 109 70 130

Sample ID: LCS-60925 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 60925 RunNo: 79364

5.6

Prep Date: 6/25/2021 Analysis Date: 6/26/2021 SeqNo: 2789750 Units: mg/Kg

5.000

SPK value SPK Ref Val %REC Analyte PQL LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 49 10 50.00 98.0 68.9 141

112

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

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### Hall Environmental Analysis Laboratory, Inc.

WO#: **2106B88** 

01-Jul-21

Client: GHD

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: mb-60919 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 60919 RunNo: 79458

Prep Date: 6/24/2021 Analysis Date: 6/29/2021 SeqNo: 2793254 Units: mg/Kg

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

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 900 1000 90.1 70 130

Sample ID: Ics-60919 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 60919 RunNo: 79458

Prep Date: 6/24/2021 Analysis Date: 6/29/2021 SeqNo: 2793256 Units: mg/Kg

Qual Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Gasoline Range Organics (GRO) 25 5.0 25.00 0 101 78.6 131 Surr: BFB 1000 104 70 1000 130

#### Qualifiers:

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

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

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### Hall Environmental Analysis Laboratory, Inc.

WO#: 2106B88

01-Jul-21

**Client:** GHD

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: mb-60919 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: PBS Batch ID: 60919 RunNo: 79458

Prep Date: 6/24/2021 Analysis Date: 6/29/2021 SeqNo: 2793306 Units: mg/Kg

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

Benzene ND 0.025 Toluene ND 0.050 ND 0.050 Ethylbenzene Xylenes, Total ND 0.10

Surr: 4-Bromofluorobenzene 0.91 1.000 91.1 70 130

Sample ID: Ics-60919 SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSS Batch ID: 60919 RunNo: 79458

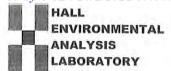
Prep Date: 6/24/2021	Analysis [	Date: <b>6/</b>	29/2021	SeqNo: <b>2793308</b>			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	102	80	120			
Toluene	1.0	0.050	1.000	0	103	80	120			
Ethylbenzene	1.0	0.050	1.000	0	105	80	120			
Xylenes, Total	3.2	0.10	3.000	0	105	80	120			
Surr: 4-Bromofluorobenzene	0.97		1.000		97.2	70	130			

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix

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

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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com

# Sample Log-In Check List

Client Name:	GHD	Work Order Numb	er; 210	6B88		RcptNo: 1
Received By:	Juan Rojas	6/23/2021 7:30:00 A	M		Juan Eng	
Completed By:	Desiree Dominguez	6/23/2021 8:27:51 A	М		TA	
Reviewed By:	Jn 6/23/21				112	
Chain of Cus	stody					
1. Is Chain of C	sustody complete?		Yes	~	No 🗌	Not Present
2. How was the	sample delivered?		Cou	rier		
Log In						
	npt made to cool the sample	s?	Yes	<b>V</b>	No 🗆	NA 🗆
4. Were all sam	ples received at a temperatu	re of >0° C to 6.0°C	Yes	<b>V</b>	No 🗌	NA 🗆
5. Sample(s) in	proper container(s)?		Yes	<b>V</b>	No 🗌	
6. Sufficient san	nple volume for indicated tes	t(s)?	Yes	<b>V</b>	No 🗌	
7. Are samples (	(except VOA and ONG) prop	erly preserved?	Yes	V	No 🗆	
8. Was preserva	ative added to bottles?		Yes		No 🗸	NA 🗌
9. Received at le	east 1 vial with headspace <	1/4" for AQ VOA?	Yes		No 🗌	NA 🗸
10. Were any sar	mple containers received bro	ken?	Yes		No 🗸	4.7
				<u>.</u>		# of preserved bottles checked
	ork match bottle labels? ancies on chain of custody)		Yes	<b>V</b>	No 🗔	for pH: (<2 or >12 unless noted
	correctly identified on Chain	of Custody?	Yes	V	No 🗌	Adjusted?
	it analyses were requested?	or cuctouy.	Yes	V	No 🗆	/
14. Were all holdi	ing times able to be met?		Yes	<b>V</b>	No 🗌	Checked by: KRG/RLC
	ustomer for authorization.)  ling (if applicable)					6/23/2
	otified of all discrepancies wi	th this order?	Yes		No 🗌	NA 🗹
Person	Notified:	Date:				
By Who	om:	Via:	eM	ail 🗍	Phone Fax	In Person
Regard	ling:					
Client I	nstructions:					
16. Additional re	marks:					
17. <u>Cooler Infor</u> Cooler No		Seal Intact Seal No	Seal D	ate	Signed By	

Standard   Rush   S-Ak   Rush   S-Ak   Rush   S-Ak   Rush   Rush   S-Ak   Rush   Rus	GHD Address:		<			FINA	TO CAMPAGE	
Mailing Address:   Control   Contro		]	Sh Sin					
Maining Address:   States   Main St. Suite 106 Artesia NM 82210   Projecties   Main St. Suite 106 Artesia NM 82210   Main St. Suite 106 Artesia State   Main St. Sui			0		ANAL	YSIS	LABORAT	-
Sandard   Continue   Project Manager   Project   Project Manager   Project Manager   Project   P		<	_		www.hal	lenvironm	ental.com	
	Suite 108, Artesia NM 88210			4901 Ha	awkins NE -	Albuquer	que, NM 87109	
Project Mariager:   Analysis Request   Accordination:   Accompliance   Analysis Request   Accordination:   Accompliance   Accordination:   Accompliance   Accordination:   Accompliance   Analysis Register   Accordination:   Accompliance   Accordination:   Accordina	(505)377-4218	1100000	·	Tel. 50	5-345-3975	Fax 5	05-345-4107	
Standard		Project Manager			A -	nalysis R	ednest	
Standard   Caronina		Becky Haskell		RQ)		<sup>⊅</sup> OS	(Jue	
Compliance   DAZ Compliance   Sampler, Zech Comino   Daze   Compliance   Date		Tom Larson		M/		, <sub>t</sub>	Apse S	
Time   Matrix   Sample Name   Preservative   Pres	□ Az Compliance		00	92 P	3027	ار <sub>د</sub> (	/Juə	
Time   Matrix   Sample   Name   Type and # Type	NELAC   Other		1	308/	28 1		_	
Time   Matrix   Sample   Name   Type   and # Type	EDD (Type)	olers:	2	SP(	o 0		_	
Time Matrix Sample Name         Container Preservative And # Type         Pr		(including CF);	2.8-1.0-4.8	D)G8 Sticio	rs8 Meta	(A(		
CGZO   S   SLD - 1	Time Matrix			108:H	VHs by	OV) 09	_	
CC35         CC44         CC45         CC45 <th< td=""><td>5 0500</td><td></td><td>2106-638</td><td>28</td><td>/심</td><td>28</td><td>οT</td><td></td></th<>	5 0500		2106-638	28	/심	28	οT	
CC.41C         T3H - 21         - 004         - 005           COSS         SLU - 21         - 005         - 005           CONO         T3H - 31         - 007         - 007           CONO         T3H - 31         - 006         - 007           CONO         T3H - 31         - 006         - 007           CONO         T3H - 32         - 006         - 007           CONO         T3H - 32         - 011         b           CONO         T3H - 32         - 010         cond           CONO         T3H - 32         - 010         cond           CONO         T3H - 32         - 010         cond           CONO         Table Time         Remarks: Please email: Chase_Settle@eograesources.com; Tom. Larson@ghd.com; Along with Beckel listed above.           CASO         Table Time         Tom. Larson@ghd.com; Along with Beckel listed above.           Tom. Larson@ghd.com; Along with Beckel listed above.         Diate Time	C635 1 (3H-72)		3 8	-		+	Q	+
Color   Stult - 2   -004     -005   -005   -005     -005   -005     -005	LAT.		133	-			*	+
Color   Stu - 21			COOL					
Color   Colo	3		h00-					
CNO	305		200-					
CANO			-006					
12   13   15   15   15   15   15   15   15	JAY (I		£00-					
12   12   12   12   12   12   12   12	-151		- 008					
Control   Cont	-HXI		-000					-
Columbia	OZZS IZH-3		-010					
Time: Relinquished by:  Received by: Via: Date Time Remarks: Please email: Chase_Settle@eogresources.com;  AMMA (22/21 80)  Tom.Larson@ghd.com; Zach.Comino@ghd.com: Along with Becky Haskell listed above.  Becky Haskell listed above.  Direct Bill to EOG Chase Settle	- HZI 20-CO	<b>→</b>	110-	<b>&gt;</b>			7	
Tom.Larson@ghd.com; Zach.Comino@ghd.com: Along with Received by:    1900   Chase Settle   130   Chase Settle   130	Time: Relinquished by:	-			0000 0000	0000		
1900 CLUM (1800 Chase Settle	Time: Relinquished by	3	2	Tom.Larson	@ghd.com;	Zach. Con	etue@eogresource nino@ghd.com: Alo	
	22/4 1900 Cluss	ecented by: Via: 8	Date (28/2)		Direct Bill	EOG	ed above. hase Settle	



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

July 01, 2021

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

**FAX** 

RE: Brannigan ANF Federal #5 Battery OrderNo.: 2106D58

### Dear Becky Haskell:

Hall Environmental Analysis Laboratory received 9 sample(s) on 6/25/2021 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

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order: **2106D58**Date Reported: **7/1/2021** 

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 2106D58

**Project:** Brannigan ANF Federal #5 Battery

**Lab ID:** 2106D58-001 **Collection Date:** 6/23/2021 7:00:00 AM

Client Sample ID: SW-23 Matrix: SOIL

Analyses	Result	RL (	Qual Units	DF	Date Analyzed B	atch ID
EPA METHOD 300.0: ANIONS					Analys	t: <b>VP</b>
Chloride	ND	60	mg/Kg	20	6/30/2021 2:34:42 AM	61024
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analys	t: BRM
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	6/27/2021 11:31:50 PM	1 60942
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	6/27/2021 11:31:50 PM	1 60942
Surr: DNOP	80.0	70-130	%Rec	1	6/27/2021 11:31:50 PM	1 60942
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/30/2021 2:32:34 PM	60933
Surr: BFB	102	70-130	%Rec	1	6/30/2021 2:32:34 PM	60933
EPA METHOD 8021B: VOLATILES					Analys	t: <b>NSB</b>
Benzene	ND	0.025	mg/Kg	1	6/30/2021 2:32:34 PM	60933
Toluene	0.055	0.049	mg/Kg	1	6/30/2021 2:32:34 PM	60933
Ethylbenzene	ND	0.049	mg/Kg	1	6/30/2021 2:32:34 PM	60933
Xylenes, Total	ND	0.099	mg/Kg	1	6/30/2021 2:32:34 PM	60933
Surr: 4-Bromofluorobenzene	105	70-130	%Rec	1	6/30/2021 2:32:34 PM	60933

**Lab ID:** 2106D58-002 **Collection Date:** 6/23/2021 7:05:00 AM

Client Sample ID: SW-24 Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analy	st: <b>VP</b>
Chloride	150	60		mg/Kg	20	6/30/2021 3:11:56 AM	A 61024
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analy	st: BRM
Diesel Range Organics (DRO)	27	9.6		mg/Kg	1	6/27/2021 11:56:09 F	M 60942
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/27/2021 11:56:09 F	M 60942
Surr: DNOP	64.2	70-130	S	%Rec	1	6/27/2021 11:56:09 F	M 60942
EPA METHOD 8015D: GASOLINE RANGE						Analy	st: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/30/2021 2:56:04 PM	M 60933
Surr: BFB	103	70-130		%Rec	1	6/30/2021 2:56:04 PM	M 60933
EPA METHOD 8021B: VOLATILES						Analy	st: NSB
Benzene	ND	0.024		mg/Kg	1	6/30/2021 2:56:04 PM	M 60933
Toluene	ND	0.047		mg/Kg	1	6/30/2021 2:56:04 PM	A 60933
Ethylbenzene	ND	0.047		mg/Kg	1	6/30/2021 2:56:04 PM	A 60933
Xylenes, Total	ND	0.095		mg/Kg	1	6/30/2021 2:56:04 PM	M 60933
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	6/30/2021 2:56:04 PM	M 60933

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

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Lab Order: **2106D58**Date Reported: **7/1/2021** 

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 2106D58

**Project:** Brannigan ANF Federal #5 Battery

**Lab ID:** 2106D58-003 **Collection Date:** 6/23/2021 7:10:00 AM

Client Sample ID: SW-25 Matrix: SOIL

Result **RL Oual Units DF** Date Analyzed **Analyses Batch ID EPA METHOD 300.0: ANIONS** Analyst: VP Chloride 83 60 6/30/2021 3:24:21 AM 61024 mg/Kg **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: SB Diesel Range Organics (DRO) 6/27/2021 11:41:07 AM 60943 11 9.4 mg/Kg Motor Oil Range Organics (MRO) ND 47 6/27/2021 11:41:07 AM 60943 mg/Kg 1 Surr: DNOP 116 70-130 %Rec 6/27/2021 11:41:07 AM 60943 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 4.9 mg/Kg 1 6/30/2021 3:19:32 PM 60933 Surr: BFB 104 70-130 %Rec 1 6/30/2021 3:19:32 PM 60933 **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 0.024 mg/Kg 1 6/30/2021 3:19:32 PM 60933 Toluene ND 0.049 mg/Kg 1 6/30/2021 3:19:32 PM 60933 Ethylbenzene ND 0.049 mg/Kg 1 6/30/2021 3:19:32 PM 60933 Xylenes, Total ND 0.097 mg/Kg 6/30/2021 3:19:32 PM 60933 Surr: 4-Bromofluorobenzene 105 70-130 %Rec 6/30/2021 3:19:32 PM 60933

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

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Lab Order: **2106D58**Date Reported: **7/1/2021** 

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 2106D58

**Project:** Brannigan ANF Federal #5 Battery

**Lab ID:** 2106D58-004 **Collection Date:** 6/24/2021 6:45:00 AM

Client Sample ID: BH-35 Matrix: SOIL

Analyses	Result	RL Q	Qual Units	DF	Date Analyzed B	atch ID
EPA METHOD 300.0: ANIONS					Analys	: VP
Chloride	160	60	mg/Kg	20	6/30/2021 3:36:46 AM	61024
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analys	: SB
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	6/27/2021 12:19:00 PM	60943
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	6/27/2021 12:19:00 PM	60943
Surr: DNOP	95.8	70-130	%Rec	1	6/27/2021 12:19:00 PM	60943
EPA METHOD 8015D: GASOLINE RANGE					Analys	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	6/30/2021 3:43:03 PM	60933
Surr: BFB	103	70-130	%Rec	1	6/30/2021 3:43:03 PM	60933
EPA METHOD 8021B: VOLATILES					Analys	: NSB
Benzene	ND	0.024	mg/Kg	1	6/30/2021 3:43:03 PM	60933
Toluene	ND	0.048	mg/Kg	1	6/30/2021 3:43:03 PM	60933
Ethylbenzene	ND	0.048	mg/Kg	1	6/30/2021 3:43:03 PM	60933
Xylenes, Total	ND	0.097	mg/Kg	1	6/30/2021 3:43:03 PM	60933
Surr: 4-Bromofluorobenzene	104	70-130	%Rec	1	6/30/2021 3:43:03 PM	60933

**Lab ID:** 2106D58-005 **Collection Date:** 6/24/2021 6:50:00 AM

Client Sample ID: BH-36 Matrix: SOIL

Analyses	Result	RL Qu	ual Units	DF	Date Analyzed B	atch ID
EPA METHOD 300.0: ANIONS					Analyst	: <b>VP</b>
Chloride	300	60	mg/Kg	20	6/30/2021 3:49:10 AM	61024
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Analyst	: SB
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	6/27/2021 12:32:00 PM	60943
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	6/27/2021 12:32:00 PM	60943
Surr: DNOP	104	70-130	%Rec	1	6/27/2021 12:32:00 PM	60943
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	6/30/2021 4:06:38 PM	60933
Surr: BFB	104	70-130	%Rec	1	6/30/2021 4:06:38 PM	60933
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	6/30/2021 4:06:38 PM	60933
Toluene	ND	0.047	mg/Kg	1	6/30/2021 4:06:38 PM	60933
Ethylbenzene	ND	0.047	mg/Kg	1	6/30/2021 4:06:38 PM	60933
Xylenes, Total	ND	0.095	mg/Kg	1	6/30/2021 4:06:38 PM	60933
Surr: 4-Bromofluorobenzene	104	70-130	%Rec	1	6/30/2021 4:06:38 PM	60933

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

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Lab Order: **2106D58** 

### Hall Environmental Analysis Laboratory, Inc.

Date Reported: 7/1/2021

CLIENT: GHD Lab Order: 2106D58

**Project:** Brannigan ANF Federal #5 Battery

**Lab ID:** 2106D58-006 **Collection Date:** 6/24/2021 6:55:00 AM

Client Sample ID: BH-37 Matrix: SOIL

Result **RL Oual Units DF** Date Analyzed **Analyses Batch ID EPA METHOD 300.0: ANIONS** Analyst: VP Chloride 300 60 6/30/2021 4:01:35 AM 61024 mg/Kg **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: SB Diesel Range Organics (DRO) 6/27/2021 12:44:00 PM 60943 ND 9.6 mg/Kg Motor Oil Range Organics (MRO) ND 6/27/2021 12:44:00 PM 60943 48 mg/Kg 1 Surr: DNOP 120 70-130 %Rec 6/27/2021 12:44:00 PM 60943 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 4.9 mg/Kg 1 6/30/2021 4:30:04 PM 60933 Surr: BFB 101 70-130 %Rec 1 6/30/2021 4:30:04 PM 60933 **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 0.024 mg/Kg 1 6/30/2021 4:30:04 PM 60933 Toluene ND 0.049 mg/Kg 1 6/30/2021 4:30:04 PM 60933 Ethylbenzene ND 0.049 mg/Kg 1 6/30/2021 4:30:04 PM 60933 Xylenes, Total ND 0.097 mg/Kg 6/30/2021 4:30:04 PM 60933 Surr: 4-Bromofluorobenzene 102 70-130 %Rec 6/30/2021 4:30:04 PM 60933

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

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Lab Order: **2106D58**Date Reported: **7/1/2021** 

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 2106D58

**Project:** Brannigan ANF Federal #5 Battery

**Lab ID:** 2106D58-007 **Collection Date:** 6/24/2021 7:15:00 AM

Client Sample ID: BH-38 Matrix: SOIL

Analyses	Result	RL (	Qual Units	DF	Date Analyzed Batch ID	
EPA METHOD 300.0: ANIONS					Analyst: <b>VP</b>	
Chloride	370	60	mg/Kg	20	6/30/2021 4:14:00 AM 61024	
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: SB	
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	6/27/2021 12:57:00 PM 60943	
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	6/27/2021 12:57:00 PM 60943	
Surr: DNOP	114	70-130	%Rec	1	6/27/2021 12:57:00 PM 60943	
EPA METHOD 8015D: GASOLINE RANGE					Analyst: mb	
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/30/2021 11:28:00 AM 60934	
Surr: BFB	93.5	70-130	%Rec	1	6/30/2021 11:28:00 AM 60934	
EPA METHOD 8021B: VOLATILES					Analyst: mb	
Benzene	ND	0.025	mg/Kg	1	6/30/2021 11:28:00 AM 60934	
Toluene	ND	0.049	mg/Kg	1	6/30/2021 11:28:00 AM 60934	
Ethylbenzene	ND	0.049	mg/Kg	1	6/30/2021 11:28:00 AM 60934	
Xylenes, Total	ND	0.099	mg/Kg	1	6/30/2021 11:28:00 AM 60934	
Surr: 4-Bromofluorobenzene	90.3	70-130	%Rec	1	6/30/2021 11:28:00 AM 60934	

**Lab ID:** 2106D58-008 **Collection Date:** 6/24/2021 7:20:00 AM

Client Sample ID: BH-39 Matrix: SOIL

Analyses	Result	RL Q	Qual Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS					Analy	st: <b>VP</b>
Chloride	420	60	mg/Kg	20	6/30/2021 4:26:24 Al	M 61024
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analy	st: SB
Diesel Range Organics (DRO)	26	8.8	mg/Kg	1	6/27/2021 1:10:00 PI	M 60943
Motor Oil Range Organics (MRO)	ND	44	mg/Kg	1	6/27/2021 1:10:00 PI	M 60943
Surr: DNOP	100	70-130	%Rec	1	6/27/2021 1:10:00 PI	M 60943
EPA METHOD 8015D: GASOLINE RANGE					Analy	st: <b>mb</b>
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/30/2021 12:27:00 F	PM 60934
Surr: BFB	88.2	70-130	%Rec	1	6/30/2021 12:27:00 F	PM 60934
EPA METHOD 8021B: VOLATILES					Analy	st: <b>mb</b>
Benzene	ND	0.024	mg/Kg	1	6/30/2021 12:27:00 F	PM 60934
Toluene	ND	0.049	mg/Kg	1	6/30/2021 12:27:00 F	PM 60934
Ethylbenzene	ND	0.049	mg/Kg	1	6/30/2021 12:27:00 F	PM 60934
Xylenes, Total	ND	0.098	mg/Kg	1	6/30/2021 12:27:00 F	PM 60934
Surr: 4-Bromofluorobenzene	89.1	70-130	%Rec	1	6/30/2021 12:27:00 F	PM 60934

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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

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Lab Order: **2106D58**Date Reported: **7/1/2021** 

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Lab Order: 2106D58

**Project:** Brannigan ANF Federal #5 Battery

**Lab ID:** 2106D58-009 **Collection Date:** 6/24/2021 7:25:00 AM

Client Sample ID: BH-40 Matrix: SOIL

Result **RL Oual Units DF** Date Analyzed **Analyses Batch ID EPA METHOD 300.0: ANIONS** Analyst: VP Chloride 310 60 6/30/2021 4:38:48 AM 61024 mg/Kg 20 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: SB Diesel Range Organics (DRO) 6/27/2021 1:23:06 PM ND 8.7 mg/Kg 60943 Motor Oil Range Organics (MRO) ND 6/27/2021 1:23:06 PM 43 mg/Kg 1 60943 Surr: DNOP 117 70-130 %Rec 6/27/2021 1:23:06 PM 60943 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: mb 6/30/2021 1:27:00 PM Gasoline Range Organics (GRO) ND 4.7 mg/Kg 1 60934 Surr: BFB 90.7 70-130 %Rec 1 6/30/2021 1:27:00 PM 60934 **EPA METHOD 8021B: VOLATILES** Analyst: mb Benzene ND 0.024 mg/Kg 1 6/30/2021 1:27:00 PM 60934 Toluene ND 0.047 mg/Kg 1 6/30/2021 1:27:00 PM 60934 Ethylbenzene ND 0.047 mg/Kg 1 6/30/2021 1:27:00 PM 60934 Xylenes, Total ND 0.095 mg/Kg 6/30/2021 1:27:00 PM 60934 Surr: 4-Bromofluorobenzene 87.0 70-130 %Rec 6/30/2021 1:27:00 PM 60934

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

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **2106D58** *01-Jul-21* 

Client: GHD

**Project:** Brannigan ANF Federal #5 Battery

Sample ID: MB-61024 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 61024 RunNo: 79428

Prep Date: 6/29/2021 Analysis Date: 6/30/2021 SeqNo: 2793007 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-61024 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 61024 RunNo: 79428

Prep Date: 6/29/2021 Analysis Date: 6/30/2021 SeqNo: 2793008 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 94.0 90 110

#### 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

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### Hall Environmental Analysis Laboratory, Inc.

WO#: **2106D58** *01-Jul-21* 

Client: GHD

**Project:** Brannigan ANF Federal #5 Battery

Sample ID: MB-60915 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: **PBS** Batch ID: **60915** RunNo: **79325** 

Prep Date: 6/24/2021 Analysis Date: 6/26/2021 SegNo: 2789501 Units: %Rec

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

Surr: DNOP 9.8 10.00 98.4 70 130

Sample ID: LCS-60915 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 60915 RunNo: 79325

Prep Date: 6/24/2021 Analysis Date: 6/26/2021 SeqNo: 2789503 Units: %Rec

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: DNOP 4.7 5.000 93.7 70 130

Sample ID: LCS-60942 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 60942 RunNo: 79325 Prep Date: 6/26/2021 Analysis Date: 6/27/2021 SeqNo: 2789806 Units: mq/Kq Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Analyte Qual

 Diesel Range Organics (DRO)
 47
 10
 50.00
 0
 94.9
 68.9
 141

 Surr: DNOP
 3.7
 5.000
 74.6
 70
 130

Sample ID: MB-60942 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: PBS Batch ID: 60942 RunNo: 79325

Prep Date: 6/26/2021 Analysis Date: 6/27/2021 SeqNo: 2789807

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO) ND 10

Units: mg/Kg

Motor Oil Range Organics (MRO)

ND

50

Surr: DNOP 7.4 10.00 74.2 70 130

Sample ID: MB-60943 TestCode: EPA Method 8015M/D: Diesel Range Organics SampType: MBLK Client ID: PBS Batch ID: 60943 RunNo: 79391 Analysis Date: 6/27/2021 Prep Date: 6/26/2021 SeqNo: 2790235 Units: mg/Kg SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result PQL LowLimit HighLimit Qual Diesel Range Organics (DRO) ND 10

Motor Oil Range Organics (MRO)

Surr: DNOP

11

10.00

 Surr: DNOP
 11
 10.00
 107
 70
 130

Sample ID: LCS-60943 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 60943 RunNo: 79391

Prep Date: 6/26/2021 Analysis Date: 6/27/2021 SeqNo: 2790236 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

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### Hall Environmental Analysis Laboratory, Inc.

WO#: **2106D58** *01-Jul-21* 

Client: GHD

**Project:** Brannigan ANF Federal #5 Battery

Sample ID: LCS-60943 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 60943 RunNo: 79391 Prep Date: 6/26/2021 Analysis Date: 6/27/2021 SeqNo: 2790236 Units: mg/Kg SPK value SPK Ref Val %RPD Analyte Result PQL %REC LowLimit HighLimit **RPDLimit** Qual

 Diesel Range Organics (DRO)
 45
 10
 50.00
 0
 90.3
 68.9
 141

 Surr: DNOP
 5.4
 5.000
 107
 70
 130

Sample ID: 2106D58-003AMS SampType: MS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: **SW-25** Batch ID: **60943** RunNo: **79391** 

Prep Date: 6/26/2021 Analysis Date: 6/27/2021 SeqNo: 2790237 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 56 9.2 46.21 11.09 96.3 15 184 Surr: DNOP 70 4.9 4.621 105 130

Sample ID: 2106D58-003AMSD SampType: MSD TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: SW-25 Batch ID: 60943 RunNo: 79391 Prep Date: 6/26/2021 Analysis Date: 6/27/2021 SeqNo: 2790238 Units: mg/Kg SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Analyte Result PQL LowLimit Qual

Diesel Range Organics (DRO) 42 9.4 46.90 11.09 66.2 15 184 27.5 23.9 R Surr: DNOP 4.4 4.690 94.2 70 130 0 0

TestCode: EPA Method 8015M/D: Diesel Range Organics Sample ID: MB-60944 SampType: MBLK Client ID: PBS Batch ID: 60944 RunNo: 79401 Prep Date: 6/26/2021 Analysis Date: 6/28/2021 SeqNo: 2790929 Units: %Rec PQL SPK value SPK Ref Val %REC %RPD **RPDLimit** Result LowLimit HighLimit Qual Surr: DNOP 8.2 10.00 82.1 70 130

Sample ID: LCS-60944 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 60944 RunNo: 79401 Analysis Date: 6/28/2021 SeqNo: 2790930 Prep Date: 6/26/2021 Units: %Rec SPK value SPK Ref Val %RPD **RPDLimit** Analyte Result PQL %REC LowLimit HighLimit Qual Surr: DNOP 4.0 5.000 79.9 130

Sample ID: MB-60955 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 60955 RunNo: 79401 Prep Date: 6/27/2021 Analysis Date: 6/28/2021 SeqNo: 2791434 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual

Surr: DNOP 7.7 10.00 77.0 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

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **2106D58** *01-Jul-21* 

Client: GHD

**Project:** Brannigan ANF Federal #5 Battery

Sample ID: LCS-60955 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 60955 RunNo: 79401

Prep Date: 6/27/2021 Analysis Date: 6/28/2021 SeqNo: 2791435 Units: %Rec

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

Surr: DNOP 3.5 5.000 70.4 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

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **2106D58** 

01-Jul-21

Client: GHD

**Project:** Brannigan ANF Federal #5 Battery

Sample ID: mb-60893 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: **PBS** Batch ID: **60893** RunNo: **79456** 

Prep Date: 6/24/2021 Analysis Date: 6/29/2021 SegNo: 2792789 Units: %Rec

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

Surr: BFB 990 1000 99.0 70 130

Sample ID: Ics-60893 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 60893 RunNo: 79456

Prep Date: 6/24/2021 Analysis Date: 6/29/2021 SeqNo: 2792790 Units: %Rec

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

Surr: BFB 1100 1000 112 70 130

Sample ID: mb-60933 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 60933 RunNo: 79456

Prep Date: 6/25/2021 Analysis Date: 6/30/2021 SeqNo: 2792813 Units: mg/Kg

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

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 990 1000 99.1 70 130

Sample ID: Ics-60933 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 60933 RunNo: 79456

Prep Date: 6/25/2021 Analysis Date: 6/30/2021 SeqNo: 2792814 Units: mq/Kq

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

 Gasoline Range Organics (GRO)
 23
 5.0
 25.00
 0
 91.6
 78.6
 131

 Surr: BFB
 1100
 1000
 110
 70
 130

Sample ID: mb-60946 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 60946 RunNo: 79481

Prep Date: 6/26/2021 Analysis Date: 6/30/2021 SeqNo: 2794481 Units: %Rec

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

Surr: BFB 1000 1000 103 70 130

Sample ID: Ics-60946 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 60946 RunNo: 79481

Prep Date: 6/26/2021 Analysis Date: 6/30/2021 SeqNo: 2794482 Units: %Rec

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

Surr: BFB 1100 1000 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

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### Hall Environmental Analysis Laboratory, Inc.

WO#: **2106D58** 

01-Jul-21

Client: GHD

**Project:** Brannigan ANF Federal #5 Battery

Sample ID: mb-60934 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: **PBS** Batch ID: **60934** RunNo: **79503** 

Prep Date: 6/25/2021 Analysis Date: 6/30/2021 SeqNo: 2795359 Units: mq/Kq

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

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 900 1000 89.7 70 130

Sample ID: mb-60938 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: **PBS** Batch ID: **60938** RunNo: **79503** 

Prep Date: 6/25/2021 Analysis Date: 6/30/2021 SeqNo: 2795360 Units: %Rec

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

Surr: BFB 910 1000 91.2 70 130

Sample ID: Ics-60934 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 60934 RunNo: 79503

Prep Date: 6/25/2021 Analysis Date: 6/30/2021 SeqNo: 2795361 Units: mg/Kg

Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 24 96.6 5.0 25.00 n 78.6 131 Gasoline Range Organics (GRO) Surr: BFB 1100 1000 107 70 130

Sample ID: Ics-60938 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 60938 RunNo: 79503

Prep Date: 6/25/2021 Analysis Date: 6/30/2021 SeqNo: 2795362 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: 2106D58-007ams SampType: MS TestCode: EPA Method 8015D: Gasoline Range

Client ID: **BH-38** Batch ID: **60934** RunNo: **79503** 

Prep Date: 6/25/2021 Analysis Date: 6/30/2021 SeqNo: 2795363 Units: mg/Kg

PQL SPK Ref Val %REC HighLimit %RPD **RPDLimit** Result SPK value LowLimit Qual 94.8 Gasoline Range Organics (GRO) 0 61.3 23 4.9 24.44 114

Surr: BFB 1100 977.5 108 70 130

Sample ID: 2106D58-007amsd SampType: MSD TestCode: EPA Method 8015D: Gasoline Range

Client ID: **BH-38** Batch ID: **60934** RunNo: **79503** 

Prep Date: 6/25/2021 Analysis Date: 6/30/2021 SeqNo: 2795365 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 20 22 4.8 23.90 0 90.9 61.3 114 6.40 Surr: BFB 1100 956.0 110 70 130 0 0

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical 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

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **2106D58** 

01-Jul-21

Client: GHD

**Project:** Brannigan ANF Federal #5 Battery

Sample ID: mb-60893 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: PBS Batch ID: 60893 RunNo: 79456

Prep Date: 6/24/2021 Analysis Date: 6/29/2021 SeqNo: 2792832 Units: %Rec

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

Surr: 4-Bromofluorobenzene 1.0 1.000 101 70 130

Sample ID: LCS-60893 SampType: LCS TestCode: EPA Method 8021B: Volatiles

Client ID: LCSS Batch ID: 60893 RunNo: 79456

ND

1.0

1.0

0.10

Prep Date: 6/24/2021 Analysis Date: 6/29/2021 SeqNo: 2792833 Units: %Rec

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

Surr: 4-Bromofluorobenzene 1.0 1.000 102 70 130

1.000

1.000

Sample ID: mb-60933 SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: 60933 RunNo: 79456 Prep Date: Analysis Date: 6/30/2021 SeqNo: 2792854 Units: mg/Kg 6/25/2021 PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Analyte Result Qual ND 0.025 Benzene ND 0.050 Toluene Ethylbenzene ND 0.050

100

70

70

130

130

Sample ID: LCS-60933 SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSS Batch ID: 60933 RunNo: 79456 Prep Date: 6/25/2021 Analysis Date: 6/30/2021 SeqNo: 2792856 Units: mg/Kg Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte Benzene 0.89 0.025 1.000 0 89.3 80 120 0.050 1.000 0 91.7 80 120 Toluene 0.92 0.92 0.050 0 92.2 80 Ethylbenzene 1.000 120 Xylenes, Total 2.8 0 92.1 80 0.10 3.000 120

Sample ID: mb-60946 SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: 60946 RunNo: 79481 Prep Date: Analysis Date: 6/30/2021 SeqNo: 2794525 6/26/2021 Units: %Rec LowLimit PQL SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Qual Analyte Result

Surr: 4-Bromofluorobenzene 1.0 1.000 104 70 130

#### Qualifiers:

Xylenes, Total

Surr: 4-Bromofluorobenzene

Surr: 4-Bromofluorobenzene

- \* 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

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## Hall Environmental Analysis Laboratory, Inc.

WO#: 2106D58

01-Jul-21

**Client: GHD** 

**Project:** Brannigan ANF Federal #5 Battery

Sample ID: LCS-60946 SampType: LCS TestCode: EPA Method 8021B: Volatiles

Client ID: LCSS Batch ID: 60946 RunNo: 79481

Prep Date: Analysis Date: 6/30/2021 SeqNo: 2794526 Units: %Rec 6/26/2021

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

130 Surr: 4-Bromofluorobenzene 1.0 1.000 104 70

Sample ID: mb-60934 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: PBS Batch ID: 60934 RunNo: 79503

Prep Date: 6/25/2021 Analysis Date: 6/30/2021 SeqNo: 2795510 Units: mg/Kg

SPK value SPK Ref Val %REC LowLimit **RPDLimit** Analyte Result PQL HighLimit %RPD Qual Benzene ND 0.025 Toluene ND 0.050 ND 0.050

130

Ethylbenzene Xylenes, Total ND 0.10 0.91 Surr: 4-Bromofluorobenzene

1.000 70 91.2

Sample ID: mb-60938 TestCode: EPA Method 8021B: Volatiles SampType: MBLK

Client ID: PBS Batch ID: 60938 RunNo: 79503

Prep Date: 6/25/2021 Analysis Date: 6/30/2021 SeqNo: 2795511 Units: %Rec

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

Surr: 4-Bromofluorobenzene 0.91 1.000 91.4 70 130

Sample ID: Ics-60934 SampType: LCS TestCode: EPA Method 8021B: Volatiles

Client ID: LCSS Batch ID: 60934 RunNo: 79503

Prep Date: 6/25/2021 Analysis Date: 6/30/2021 SeqNo: 2795512 Units: mg/Kg Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte 0.95 0.025 1.000 94.7 80 120 Benzene 0 0.050 1.000 0 95.4 80 120 Toluene 0.95 0.050 0 96.9 80 Ethylbenzene 0.97 1.000 120 Xylenes, Total 0 97.4 80 2.9 0.10 3.000 120 Surr: 4-Bromofluorobenzene 0.93 1.000 93.5 70 130

Sample ID: Ics-60938 SampType: LCS TestCode: EPA Method 8021B: Volatiles

Client ID: LCSS Batch ID: 60938 RunNo: 79503

Prep Date: Analysis Date: 6/30/2021 SeqNo: 2795514 6/25/2021 Units: %Rec

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

Surr: 4-Bromofluorobenzene 0.96 1.000 96.2 70 130

#### Qualifiers:

Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

Holding times for preparation or analysis exceeded Н

Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

Value above quantitation range

Analyte detected below quantitation limits

Sample pH Not In Range

RL Reporting Limit Page 14 of 15

## Hall Environmental Analysis Laboratory, Inc.

WO#: **2106D58** 

01-Jul-21

Client: GHD

**Project:** Brannigan ANF Federal #5 Battery

Sample ID: 2106D58-008ams	Sample ID: 2106D58-008ams SampType: MS			TestCode: EPA Method 8021B: Volatiles							
Client ID: BH-39	Batcl	n ID: <b>60</b> 9	934	F	RunNo: 7	9503					
Prep Date: 6/25/2021	Analysis D	Date: <b>6/</b>	30/2021	S	SeqNo: 2	795529	Units: mg/K	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.85	0.023	0.9302	0	91.8	80	120				
Toluene	0.87	0.047	0.9302	0	93.5	80	120				
Ethylbenzene	0.89	0.047	0.9302	0	95.6	80	120				
Xylenes, Total	2.7	0.093	2.791	0	96.2	80	120				
Surr: 4-Bromofluorobenzene	0.81		0.9302		86.6	70	130				

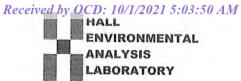
Sample ID: 2106D58-008am	sd Samp1	уре: М	SD	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: BH-39	Batcl	n ID: <b>60</b>	934	F	RunNo: <b>7</b> 9	9503				
Prep Date: 6/25/2021	Analysis D	Date: 6/	30/2021	8	SeqNo: 2	795542	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.024	0.9766	0	86.3	80	120	1.37	20	
Toluene	0.86	0.049	0.9766	0	88.2	80	120	0.903	20	
Ethylbenzene	0.88	0.049	0.9766	0	90.3	80	120	0.907	20	
Xylenes, Total	2.7	0.098	2.930	0	90.5	80	120	1.20	20	
Surr: 4-Bromofluorobenzene	0.85		0.9766		86.9	70	130	0	0	

#### Qualifiers:

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

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

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Hall Environmental Analysis Laboratory 4901 Hawkins NE

Sample Log-In Check List

Alhuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com

Client Name: GHD	Work	Order Number:	21060	58	Rcpt	No: 1
Received By: Juan Rojas	6/25/20	21 7:30:00 AM		flows	D	
Completed By: Cheyenne		21 8:26:45 AM		Charles		
Reviewed By: DAD 6.				you		
Chain of Custody						
1. Is Chain of Custody comple	ete?		Yes 5	No [	Not Present	I
2. How was the sample delive	red?		Courie	r.		
Log In						
3. Was an attempt made to co	ool the samples?		Yes 5	No [	NA [	]
4. Were all samples received a	at a temperature of >0° C t	o 6.0°C	Yes [	No No	NA [	
5. Sample(s) in proper contain	ner(s)?		Yes V	No [	7	
			,,,,,			
6. Sufficient sample volume fo			Yes V	No 🗆	]	
7. Are samples (except VOA a		d?	Yes V			
8. Was preservative added to I	pottles?		Yes [	No ⊻	NA 🗆	
9. Received at least 1 vial with	headspace <1/4" for AQ V	OA?	Yes [	No [	NA 🗸	F.
10. Were any sample container	s received broken?		Yes [	No V		
11. Does paperwork match bottl			Yes 🗸	No 🗆	# of preserved bottles checked for pH:	
(Note discrepancies on chai			[7		(\$2 Adjusted?	or >12 unless noted)
<ol> <li>Are matrices correctly identi</li> <li>Is it clear what analyses wer</li> </ol>	Salar and the salar salar salar salar		Yes V			
14. Were all holding times able	A COMPANY OF THE PROPERTY OF T		Yes V		Checked by:	T.C. 6.25 21
(If no, notify customer for au			200			
Special Handling (if appl	icable)				,	
15. Was client notified of all dis	crepancies with this order?		Yes [	No [	NA 🗹	]
Person Notified:		Date:			-	
By Whom:		Via:	eMail	Phone F	ax In Person	
Regarding:						
Client Instructions:						
16. Additional remarks:						
17. Cooler Information Cooler No Temp °C 1 -1.1	Condition Seal Intact	Seal No Se	eal Date	Signed By		

HALL ENVIRONMENTAL	ORATORY	allenvironmental.com	Hawkins NE - Albuquerque, NM 87109	505-345-3975 Fax 505-345-4107	Analysis Request		JWS ypseu	207 (SO)	NO NO	00 al .e(	thod 31(8) Seta NO (A)	81 Peg Hs by RA 8 I F, Br, 00 (VO al Colii	859 (Cl) (ED)	2		<del></del>	2						7	ā	Remarks: Please email: Chase_Settle@eogresources.com; Tom.Larson@ghd.com; Zach.Comino@ghd.com: Along with	Direct Bill to EOG Chase Settle
			490.	Tel.				OHO	17(	วยรู	9)09	108:H	DI	2		4	Q Q						→ →		remarks Tom.Lars	
Turn-Around Time:	Project Name:	And Mark	Project # 10th Froben #5 (affine	-	1162311	Project Manager:	Becky Haskell Tom Larson			olers: 1	Cooler Temp(including CF); -[., 1 -0 > -(.)	1	200	(20)	200 100	0003 0003	Jan Cook	500	900	720	008	600		Received by: Via: Date Time	Musica Wag	If necessary, samples submitted to Hall Environmental man by the Settle
Client: GHD  Client: GHD		Mailing Address:	324 W. Main St. Suite 108, Artesia NM 88210	-1	email or Fax#: Becky Hackel@akd 22	QA/QC Package	1	Accreditation:		✓ □ EDD (Type)		Date Time Matrix Sample Name	-	600	7	3 5	0		3	S160	0720 154-37	v cres		Date: Time: Relinquished by:	CBCO Zel Carine 71	If necessary, samples submitted to Hall Fourironmental manual



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

Hall Environmental Analysis Laboratory

July 19, 2021

Tom Larson GHD Midland 2135 S Loop 250 W Midland, TX 79703

TEL: (432) 686-0086

FAX:

RE: Brannigan ANF Federal 5 Battery OrderNo.: 2107467

#### Dear Tom Larson:

Hall Environmental Analysis Laboratory received 5 sample(s) on 7/10/2021 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

andy

4901 Hawkins NE

Albuquerque, NM 87109

**CLIENT:** 

### **Analytical Report**

Lab Order: 2107467

Date Reported: 7/19/2021

2107467

Hall Environmental Analysis Laboratory, Inc.

Lab Order:

GHD Midland **Project:** Brannigan ANF Federal 5 Battery

Lab ID: 2107467-001 **Collection Date:** 7/8/2021 3:13:00 PM

Matrix: SOIL Client Sample ID: BH-3A

Analyses	Result	RL Qua	al Units	DF	Date Analyzed Ba	atch ID
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	ND	60	mg/Kg	20	7/13/2021 3:47:34 PM	61263
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: SB
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	7/14/2021 11:37:18 AM	61259
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	7/14/2021 11:37:18 AM	61259
Surr: DNOP	93.3	70-130	%Rec	1	7/14/2021 11:37:18 AM	61259
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/13/2021 9:06:14 AM	61241
Surr: BFB	95.7	70-130	%Rec	1	7/13/2021 9:06:14 AM	61241
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	7/13/2021 9:06:14 AM	61241
Toluene	ND	0.049	mg/Kg	1	7/13/2021 9:06:14 AM	61241
Ethylbenzene	ND	0.049	mg/Kg	1	7/13/2021 9:06:14 AM	61241
Xylenes, Total	ND	0.099	mg/Kg	1	7/13/2021 9:06:14 AM	61241
Surr: 4-Bromofluorobenzene	99.1	70-130	%Rec	1	7/13/2021 9:06:14 AM	61241

Lab ID: 2107467-002 **Collection Date:** 7/8/2021 3:16:00 PM

Matrix: SOIL Client Sample ID: BH-4A

Analyses	Result	RL Q	ual Units	DF	Date Analyzed Ba	tch ID
EPA METHOD 300.0: ANIONS					Analyst:	VP
Chloride	ND	60	mg/Kg	20	7/13/2021 3:59:58 PM	61263
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst:	SB
Diesel Range Organics (DRO)	180	8.8	mg/Kg	1	7/14/2021 12:48:35 PM	61259
Motor Oil Range Organics (MRO)	160	44	mg/Kg	1	7/14/2021 12:48:35 PM	61259
Surr: DNOP	98.9	70-130	%Rec	1	7/14/2021 12:48:35 PM	61259
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	7/13/2021 10:16:52 AM	61241
Surr: BFB	90.6	70-130	%Rec	1	7/13/2021 10:16:52 AM	61241
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.025	mg/Kg	1	7/13/2021 10:16:52 AM	61241
Toluene	ND	0.050	mg/Kg	1	7/13/2021 10:16:52 AM	61241
Ethylbenzene	ND	0.050	mg/Kg	1	7/13/2021 10:16:52 AM	61241
Xylenes, Total	ND	0.099	mg/Kg	1	7/13/2021 10:16:52 AM	61241
Surr: 4-Bromofluorobenzene	93.7	70-130	%Rec	1	7/13/2021 10:16:52 AM	61241

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix

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

Page 1 of 8

Lab Order: 2107467

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 7/19/2021

CLIENT: GHD Midland Lab Order: 2107467

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2107467-003 **Collection Date:** 7/8/2021 3:43:00 PM

Client Sample ID: SW-1A Matrix: SOIL

Result **RL Oual Units DF** Date Analyzed **Analyses Batch ID EPA METHOD 300.0: ANIONS** Analyst: VP Chloride 61 60 7/13/2021 4:12:22 PM 61263 mg/Kg **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: SB Diesel Range Organics (DRO) 7/14/2021 1:12:20 PM 180 9.6 mg/Kg 61259 mg/Kg Motor Oil Range Organics (MRO) 210 7/14/2021 1:12:20 PM 61259 48 1 Surr: DNOP 92.6 70-130 %Rec 7/14/2021 1:12:20 PM 61259 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 4.9 mg/Kg 1 7/13/2021 11:27:38 AM 61241 Surr: BFB 96.1 70-130 %Rec 1 7/13/2021 11:27:38 AM 61241 **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 0.025 mg/Kg 7/13/2021 11:27:38 AM 61241 Toluene ND 0.049 mg/Kg 7/13/2021 11:27:38 AM 61241 Ethylbenzene ND 0.049 mg/Kg 1 7/13/2021 11:27:38 AM 61241 Xylenes, Total ND 0.099 mg/Kg 7/13/2021 11:27:38 AM 61241 Surr: 4-Bromofluorobenzene 101 70-130 %Rec 7/13/2021 11:27:38 AM 61241

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

Page 2 of 8

Lab Order: 2107467

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 7/19/2021

CLIENT: GHD Midland Lab Order: 2107467

**Project:** Brannigan ANF Federal 5 Battery

**Lab ID:** 2107467-004 **Collection Date:** 7/8/2021 3:46:00 PM

Client Sample ID: SW-5A Matrix: SOIL

Analyses	Result	RL Qua	Units	DF	Date Analyzed Batch ID
EPA METHOD 300.0: ANIONS					Analyst: <b>VP</b>
Chloride	170	60	mg/Kg	20	7/13/2021 4:24:46 PM 61263
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: SB
Diesel Range Organics (DRO)	160	9.6	mg/Kg	1	7/15/2021 11:09:18 AM 61259
Motor Oil Range Organics (MRO)	150	48	mg/Kg	1	7/15/2021 11:09:18 AM 61259
Surr: DNOP	99.3	70-130	%Rec	1	7/15/2021 11:09:18 AM 61259
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/13/2021 11:51:17 AM 61241
Surr: BFB	95.5	70-130	%Rec	1	7/13/2021 11:51:17 AM 61241
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	7/13/2021 11:51:17 AM 61241
Toluene	ND	0.049	mg/Kg	1	7/13/2021 11:51:17 AM 61241
Ethylbenzene	ND	0.049	mg/Kg	1	7/13/2021 11:51:17 AM 61241
Xylenes, Total	ND	0.098	mg/Kg	1	7/13/2021 11:51:17 AM 61241
Surr: 4-Bromofluorobenzene	99.8	70-130	%Rec	1	7/13/2021 11:51:17 AM 61241

**Lab ID:** 2107467-005 **Collection Date:** 7/8/2021 3:49:00 PM

Client Sample ID: SW-11A Matrix: SOIL

Analyses	Result	RL (	Qual Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS					Analy	st: <b>VP</b>
Chloride	78	60	mg/Kg	20	7/13/2021 4:37:10 PM	1 61263
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analy	st: SB
Diesel Range Organics (DRO)	120	9.7	mg/Kg	1	7/15/2021 2:39:32 PM	1 61259
Motor Oil Range Organics (MRO)	260	49	mg/Kg	1	7/15/2021 2:39:32 PM	1 61259
Surr: DNOP	94.6	70-130	%Rec	1	7/15/2021 2:39:32 PM	1 61259
EPA METHOD 8015D: GASOLINE RANGE					Analy	st: NSB
Gasoline Range Organics (GRO)	ND	25	mg/Kg	5	7/13/2021 12:15:02 P	M 61241
Surr: BFB	97.6	70-130	%Rec	5	7/13/2021 12:15:02 P	M 61241
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.12	mg/Kg	5	7/13/2021 12:15:02 P	M 61241
Toluene	ND	0.25	mg/Kg	5	7/13/2021 12:15:02 P	M 61241
Ethylbenzene	ND	0.25	mg/Kg	5	7/13/2021 12:15:02 P	M 61241
Xylenes, Total	ND	0.49	mg/Kg	5	7/13/2021 12:15:02 P	M 61241
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	5	7/13/2021 12:15:02 P	M 61241

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

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Lab Order: 2107467

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 7/19/2021

CLIENT: GHD Midland Lab Order: 2107467

**Project:** Brannigan ANF Federal 5 Battery

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

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

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **2107467** 

19-Jul-21

Client: GHD Midland

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: MB-61263 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 61263 RunNo: 79769

Prep Date: 7/13/2021 Analysis Date: 7/13/2021 SeqNo: 2806180 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-61263 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 61263 RunNo: 79769

Prep Date: 7/13/2021 Analysis Date: 7/13/2021 SeqNo: 2806181 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 93.9 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

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## Hall Environmental Analysis Laboratory, Inc.

WO#: 2107467

19-Jul-21

**Client:** GHD Midland

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: MB-61259 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 61259 RunNo: 79789 Prep Date: 7/13/2021 Analysis Date: 7/14/2021 SeqNo: 2806762 Units: mg/Kg SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result PQL LowLimit HighLimit Qual

Diesel Range Organics (DRO) ND 10 Motor Oil Range Organics (MRO) ND 50

Surr: DNOP 70 9.2 10.00 91.6 130

Sample ID: LCS-61259 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 61259 RunNo: 79789

Prep Date: 7/13/2021 Analysis Date: 7/14/2021 SeqNo: 2806763 Units: mg/Kg

Analyte PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 42 10 68.9 50.00 83.1 141 Surr: DNOP 4.5 5.000 90.9 70 130

Sample ID: 2107467-001AMS SampType: MS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: BH-3A Batch ID: 61259 RunNo: 79789

Prep Date: 7/13/2021 Analysis Date: 7/14/2021 SeqNo: 2806765 Units: mg/Kg

HighLimit Result PQL SPK value SPK Ref Val %REC LowLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 40 47.13 0 84.2 15 9.4 184

TestCode: EPA Method 8015M/D: Diesel Range Organics

Surr: DNOP 4.3 4.713 92.0 70 130

Client ID: BH-3A Batch ID: 61259 RunNo: 79789

SampType: MSD

Prep Date: 7/13/2021 Analysis Date: 7/14/2021 SeqNo: 2806766

Units: mg/Kg Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte Diesel Range Organics (DRO) 39 9.3 46.30 0 85.2 15 184 0.660 23.9 Surr: DNOP 4.630 4.3 93.5 70 130 0 0

#### Qualifiers:

- Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Н
- Not Detected at the Reporting Limit

Sample ID: 2107467-001AMSD

- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix

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

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **2107467** 

19-Jul-21

**Client:** GHD Midland

Sample ID: 2107467-001ams

**Project:** Brannigan ANF Federal 5 Battery

Sample ID: mb-61241 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 61241 RunNo: 79767

Prep Date: 7/12/2021 Analysis Date: 7/13/2021 SeqNo: 2805977 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 96.1 70 130

Sample ID: Ics-61241 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 61241 RunNo: 79767

Prep Date: 7/12/2021 Analysis Date: 7/13/2021 SeqNo: 2805978 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 5.0 25.00 O 89.0 78.6 131

TestCode: EPA Method 8015D: Gasoline Range

Surr: BFB 1100 1000 105 70 130

Client ID: BH-3A Batch ID: 61241 RunNo: 79767

SampType: MS

Prep Date: 7/12/2021 Analysis Date: 7/13/2021 SeqNo: 2805980 Units: mg/Kg

%REC Result SPK value SPK Ref Val %RPD **RPDLimit** Analyte PQL LowLimit HighLimit Qual Gasoline Range Organics (GRO) 25 5.0 24.95 0 99.2 61.3 114 Surr: BFB 998.0 1000 105 70 130

Sample ID: 2107467-001amsd SampType: MSD TestCode: EPA Method 8015D: Gasoline Range

Client ID: BH-3A Batch ID: 61241 RunNo: 79767

Prep Date: 7/12/2021 Analysis Date: 7/13/2021 SeqNo: 2805981 Units: mq/Kq

SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Result PQL LowLimit Qual Gasoline Range Organics (GRO) 24 5.0 24.78 95.8 61.3 4.14114 20 Surr: BFB 1000 991.1 105 70 130 0 0

#### Qualifiers:

\* Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical 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

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### Hall Environmental Analysis Laboratory, Inc.

WO#: **2107467** 

19-Jul-21

Client: GHD Midland

**Project:** Brannigan ANF Federal 5 Battery

 Sample ID:
 mb-61241
 SampType:
 MBLK
 TestCode:
 EPA Method 8021B:
 Volatiles

 Client ID:
 PBS
 Batch ID:
 61241
 RunNo:
 79767

 Prep Date:
 7/12/2021
 Analysis Date:
 7/13/2021
 SeqNo:
 2806025
 Units:
 mg/Kg

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

Benzene ND 0.025

 Toluene
 ND
 0.050

 Ethylbenzene
 ND
 0.050

 Xylenes, Total
 ND
 0.10

 Surr: 4-Bromofluorobenzene
 1.0
 1.000
 101
 70
 130

0.9524

0.96

Sample ID: LCS-61241 SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSS Batch ID: 61241 RunNo: 79767 SeqNo: 2806026 Analysis Date: 7/13/2021 Prep Date: 7/12/2021 Units: mg/Kg PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 1.000 0.93 0.025 n 93.4 80 120 Benzene Toluene 0.96 0.050 1.000 0 95.6 80 120 0 96.0 80 0.96 0.050 1.000 120 Ethylbenzene 0 95.9 Xylenes, Total 2.9 0.10 3.000 80 120 130 Surr: 4-Bromofluorobenzene 1.0 1.000 101 70

Sample ID: 2107467-002ams SampType: MS TestCode: EPA Method 8021B: Volatiles Client ID: BH-4A Batch ID: 61241 RunNo: 79767 Prep Date: 7/12/2021 Analysis Date: 7/13/2021 SeqNo: 2806029 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 96.5 80 0.92 0.024 0.9524 120 Benzene O Toluene 0.94 0.9524 0 99.1 80 120 0.048 0.9524 0 98.4 80 120 Ethylbenzene 0.94 0.048 Xylenes, Total 2.8 0.095 2.857 n 99.4 80 120

TestCode: EPA Method 8021B: Volatiles Sample ID: 2107467-002amsd SampType: MSD Client ID: BH-4A Batch ID: 61241 RunNo: 79767 Prep Date: 7/12/2021 Analysis Date: 7/13/2021 SeqNo: 2806030 Units: mg/Kg SPK value SPK Ref Val %REC **RPDLimit** Analyte Result PQL LowLimit HighLimit %RPD Qual 0.93 0.024 0.9662 0 96.6 80 120 1.54 20 Benzene Toluene 0.95 0.048 0.9662 0 98.1 80 120 0.465 20 Ethylbenzene 0.95 0.048 0.9662 0 98.4 80 120 1.38 20 Xylenes, Total 2.9 0.097 2.899 0 98.7 80 120 0.749 20 Surr: 4-Bromofluorobenzene 0.9662 103 70 130 0 0 1.0

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix

Surr: 4-Bromofluorobenzene

- 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

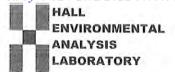
101

70

130

- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 8 of 8



Hall Environmental Analysis Laboratory 4901 Hawkins NE

Website: clients.hallenvironmental.com

Sample Log-In Check List Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

Client Name:	GHD Midland	Work Order Nun	nber: 2107467		RcptNo: 1
Received By:	Cheyenne Cason	7/10/2021 8:00:00	AM	Chul	
Completed By:	Cheyenne Cason	7/10/2021 8:41:41	AM	Chul	
Reviewed By:	@ 07/10/2021				
Chain of Cus	stody				
1. Is Chain of C	custody complete?		Yes 🗸	No 🗆	Not Present
2. How was the	sample delivered?		Courier		
Log In					
(V	mpt made to cool the sample	es?	Yes 🗸	No 🗌	NA 🗆
4. Were all sam	ples received at a temperati	ure of >0° C to 6.0°C	Yes 🗸	No 🗌	NA 🗆
5. Sample(s) in	proper container(s)?		Yes 🗸	No 🗌	
6. Sufficient san	nple volume for indicated tes	st(s)?	Yes 🗸	No 🗌	
	(except VOA and ONG) prop		Yes 🗸	No 🗆	
8. Was preserva	ative added to bottles?		Yes	No 🗸	NA 🗆
9. Received at le	east 1 vial with headspace <	1/4" for AQ VOA?	Yes	No 🗌	NA 🗹
10. Were any sar	mple containers received bro	oken?	Yes	No 🗸	# of preserved
11 250 550 5					bottles checked
	ork match bottle labels? ancies on chain of custody)		Yes 🗸	No 🗀	for pH: (<2 or >12 unless noted)
	correctly identified on Chain	of Custody?	Yes 🗸	No 🗌	Adjusted?
13. Is it clear wha	it analyses were requested?		Yes 🗸	No 🗌	
	ing times able to be met?		Yes 🗹	No 🗌	Checked by: Cer 7/10/4
Special Hand	ling (if applicable)				
	otified of all discrepancies w	ith this order?	Yes 🗌	No 🗌	NA 🔽
Person	Notified:	Date	e:		
By Who	om:	Via:	A	Phone Fax	In Person
Regard	ling:				
Client I	nstructions:				
16. Additional re	emarks:				
17. <u>Cooler Information</u> Cooler No.	The state of the s	Seal Intact   Seal No	Seal Date	Signed By	

HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com kins NE - Albuquerque, NM 87109 345-3975 Fax 505-345-4107 Analysis Request		Remarks: Please email: Chase_Settle@eogresources.com; Tom.Larson@ghd.com; Zach.Comino@ghd.com: Along with Becky Haskell listed above. Direct Bill to EOG Chase Settle
I ob-1 IALL ENVIRONN NALYSIS LABO www.hallenvironmental.com ns NE - Albuquerque, NM 87- 5-3975 Fax 505-345-4107 Analysis Request	Total Coliform (Present/Absent)	ase email: Chase_Settle@eograghd.com; Zach.Comino@ghd.co Becky Haskell listed above. Direct Bill to EOG Chase Settle
/IRO /IRO S LAE mental.cc lerque, NI 505-345-	(AOV-iməS) 0728	Settle minoo sted a
LYSIX LYSIX allenviron - Albuqu 6 Fax Analysis	(AOV) 09S8	ch. Co.
LY LY naller	CI, F, Br, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub>	iii: Ch
NA Nww. F s NE 5-397	PAHs by 8310 or 8270SIMS RCRA 8 Metals	ema L.com ecky
HALL ANAL www.ha Hawkins NE 505-345-3975	EDB (Method 504.1)	@ghc
	8081 Pesticides/8082 PCB's	(S: P
4901	TPH:8015D(GRO ) DRO J MRO	m. La
	STEX! MTBE / TMB's (802T)	
Project Name:    Description   Common   Common		Time: Relinquished by:  Received by:  Received by:  WMMMM, Soo  Tom  The:  Received by:  Via:  Pow  WMMMM, Soo  Tom  Thola (\$80C)
Client: GHD  Mailing Address:  324 W. Main St. Suite 108, Artesia NM 88210 Phone #: (505)377-4218 email or Fax#: Becky.Haskell@ghd.com	OAVOC Package:  □ Standard  Accreditation: □ Az Compliance □ NELAC □ Other □ EDD (Type) □ EDD (Type) □ Standard □ EDD (Type) □ Standard □ EDD (Type) □ Standard □ NELAC □ Other □ Standard □ Sta	Date: Time: Relinquished by:  Oxfiz: C26 Courb.  Date: Time: Relinquished by:  If M 1900 WWW. A Manual Is a linguished to Hall Relinguished to the Hall Relinguished to t



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

July 28, 2021

Becky Haskell GHD Midland 2135 S Loop 250 W Midland, TX 79703

TEL: (432) 686-0086

**FAX** 

RE: Brannigan ANF Federal #5 Battery OrderNo.: 2107925

#### Dear Becky Haskell:

Hall Environmental Analysis Laboratory received 18 sample(s) on 7/20/2021 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

andy

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 2107925

Date Reported: 7/28/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland Client Sample ID: BH-2A

Project: Brannigan ANF Federal #5 Battery Collection Date: 7/16/2021 9:20:00 AM

Lab ID: 2107925-001 Matrix: SOIL Received Date: 7/20/2021 7:30:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	ND	60	mg/Kg	20	7/26/2021 1:21:33 PM	61547
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: SB
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	7/21/2021 1:28:59 PM	61434
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	7/21/2021 1:28:59 PM	61434
Surr: DNOP	110	70-130	%Rec	1	7/21/2021 1:28:59 PM	61434
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: mb
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/21/2021 10:27:00 PM	61430
Surr: BFB	113	70-130	%Rec	1	7/21/2021 10:27:00 PM	61430
EPA METHOD 8021B: VOLATILES					Analyst	: mb
Benzene	ND	0.025	mg/Kg	1	7/21/2021 10:27:00 PM	61430
Toluene	ND	0.049	mg/Kg	1	7/21/2021 10:27:00 PM	61430
Ethylbenzene	ND	0.049	mg/Kg	1	7/21/2021 10:27:00 PM	61430
Xylenes, Total	ND	0.098	mg/Kg	1	7/21/2021 10:27:00 PM	61430
Surr: 4-Bromofluorobenzene	106	70-130	%Rec	1	7/21/2021 10:27:00 PM	61430

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

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Lab Order **2107925** 

Date Reported: 7/28/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland Client Sample ID: BH-4B

Project: Brannigan ANF Federal #5 Battery Collection Date: 7/16/2021 9:25:00 AM

Lab ID: 2107925-002 Matrix: SOIL Received Date: 7/20/2021 7:30:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	ND	60	mg/Kg	20	7/26/2021 1:33:57 PM	61547
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: SB
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	7/21/2021 2:00:11 PM	61434
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	7/21/2021 2:00:11 PM	61434
Surr: DNOP	97.4	70-130	%Rec	1	7/21/2021 2:00:11 PM	61434
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: mb
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	7/21/2021 10:47:00 PM	61430
Surr: BFB	105	70-130	%Rec	1	7/21/2021 10:47:00 PM	61430
EPA METHOD 8021B: VOLATILES					Analyst	: mb
Benzene	ND	0.023	mg/Kg	1	7/21/2021 10:47:00 PM	61430
Toluene	ND	0.046	mg/Kg	1	7/21/2021 10:47:00 PM	61430
Ethylbenzene	ND	0.046	mg/Kg	1	7/21/2021 10:47:00 PM	61430
Xylenes, Total	ND	0.092	mg/Kg	1	7/21/2021 10:47:00 PM	61430
Surr: 4-Bromofluorobenzene	107	70-130	%Rec	1	7/21/2021 10:47:00 PM	61430

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

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Lab Order 2107925

Date Reported: 7/28/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland Client Sample ID: BH-6A

 Project:
 Brannigan ANF Federal #5 Battery
 Collection Date: 7/16/2021 9:30:00 AM

 Lab ID:
 2107925-003
 Matrix: SOIL
 Received Date: 7/20/2021 7:30:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	ND	60	mg/Kg	20	7/26/2021 1:46:21 PM	61547
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: SB
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	7/21/2021 2:12:00 PM	61434
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	7/21/2021 2:12:00 PM	61434
Surr: DNOP	101	70-130	%Rec	1	7/21/2021 2:12:00 PM	61434
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: mb
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	7/21/2021 11:07:00 PM	61430
Surr: BFB	103	70-130	%Rec	1	7/21/2021 11:07:00 PM	61430
EPA METHOD 8021B: VOLATILES					Analyst	: mb
Benzene	ND	0.023	mg/Kg	1	7/21/2021 11:07:00 PM	61430
Toluene	ND	0.047	mg/Kg	1	7/21/2021 11:07:00 PM	61430
Ethylbenzene	ND	0.047	mg/Kg	1	7/21/2021 11:07:00 PM	61430
Xylenes, Total	ND	0.094	mg/Kg	1	7/21/2021 11:07:00 PM	61430
Surr: 4-Bromofluorobenzene	104	70-130	%Rec	1	7/21/2021 11:07:00 PM	61430

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

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Lab Order 2107925

Date Reported: 7/28/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland Client Sample ID: BH-9A

Project: Brannigan ANF Federal #5 Battery Collection Date: 7/16/2021 9:35:00 AM

Lab ID: 2107925-004 Matrix: SOIL Received Date: 7/20/2021 7:30:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	ND	60	mg/Kg	20	7/26/2021 1:58:46 PM	61547
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: SB
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	7/21/2021 2:35:49 PM	61434
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	7/21/2021 2:35:49 PM	61434
Surr: DNOP	101	70-130	%Rec	1	7/21/2021 2:35:49 PM	61434
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: mb
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/21/2021 11:27:00 PM	61430
Surr: BFB	105	70-130	%Rec	1	7/21/2021 11:27:00 PM	61430
<b>EPA METHOD 8021B: VOLATILES</b>					Analyst	: mb
Benzene	ND	0.024	mg/Kg	1	7/21/2021 11:27:00 PM	61430
Toluene	ND	0.049	mg/Kg	1	7/21/2021 11:27:00 PM	61430
Ethylbenzene	ND	0.049	mg/Kg	1	7/21/2021 11:27:00 PM	61430
Xylenes, Total	ND	0.098	mg/Kg	1	7/21/2021 11:27:00 PM	61430
Surr: 4-Bromofluorobenzene	106	70-130	%Rec	1	7/21/2021 11:27:00 PM	61430

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

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Lab Order **2107925** 

Date Reported: 7/28/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland Client Sample ID: BH-7A

Project: Brannigan ANF Federal #5 Battery Collection Date: 7/16/2021 9:40:00 AM

Lab ID: 2107925-005 Matrix: SOIL Received Date: 7/20/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: VP
Chloride	ND	60		mg/Kg	20	7/26/2021 2:11:11 PM	61547
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	: SB
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/21/2021 9:06:19 AM	61437
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/21/2021 9:06:19 AM	61437
Surr: DNOP	149	70-130	S	%Rec	1	7/21/2021 9:06:19 AM	61437
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	7/22/2021 5:58:47 PM	61436
Surr: BFB	100	70-130		%Rec	1	7/22/2021 5:58:47 PM	61436
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.023		mg/Kg	1	7/22/2021 5:58:47 PM	61436
Toluene	ND	0.046		mg/Kg	1	7/22/2021 5:58:47 PM	61436
Ethylbenzene	ND	0.046		mg/Kg	1	7/22/2021 5:58:47 PM	61436
Xylenes, Total	ND	0.091		mg/Kg	1	7/22/2021 5:58:47 PM	61436
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	7/22/2021 5:58:47 PM	61436

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

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Lab Order 2107925

Date Reported: 7/28/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland Client Sample ID: BH-10A

Project: Brannigan ANF Federal #5 Battery Collection Date: 7/16/2021 9:45:00 AM

Lab ID: 2107925-006 Matrix: SOIL Received Date: 7/20/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: VP
Chloride	ND	60		mg/Kg	20	7/26/2021 1:47:27 PM	61549
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: SB
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/21/2021 9:35:08 AM	61437
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/21/2021 9:35:08 AM	61437
Surr: DNOP	177	70-130	S	%Rec	1	7/21/2021 9:35:08 AM	61437
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/22/2021 7:10:06 PM	61436
Surr: BFB	101	70-130		%Rec	1	7/22/2021 7:10:06 PM	61436
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.023		mg/Kg	1	7/22/2021 7:10:06 PM	61436
Toluene	ND	0.047		mg/Kg	1	7/22/2021 7:10:06 PM	61436
Ethylbenzene	ND	0.047		mg/Kg	1	7/22/2021 7:10:06 PM	61436
Xylenes, Total	ND	0.094		mg/Kg	1	7/22/2021 7:10:06 PM	61436
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	7/22/2021 7:10:06 PM	61436

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

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

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Lab Order 2107925

Date Reported: 7/28/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland Client Sample ID: BH-13A

Project: Brannigan ANF Federal #5 Battery Collection Date: 7/16/2021 9:50:00 AM

Lab ID: 2107925-007 Matrix: SOIL Received Date: 7/20/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: VP
Chloride	ND	60		mg/Kg	20	7/26/2021 1:59:52 PM	61549
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: SB
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/21/2021 10:01:49 AM	61437
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/21/2021 10:01:49 AM	61437
Surr: DNOP	174	70-130	S	%Rec	1	7/21/2021 10:01:49 AM	61437
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	7/22/2021 8:21:07 PM	61436
Surr: BFB	101	70-130		%Rec	1	7/22/2021 8:21:07 PM	61436
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.023		mg/Kg	1	7/22/2021 8:21:07 PM	61436
Toluene	ND	0.046		mg/Kg	1	7/22/2021 8:21:07 PM	61436
Ethylbenzene	ND	0.046		mg/Kg	1	7/22/2021 8:21:07 PM	61436
Xylenes, Total	ND	0.092		mg/Kg	1	7/22/2021 8:21:07 PM	61436
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	7/22/2021 8:21:07 PM	61436

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

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Lab Order 2107925

Date Reported: 7/28/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland Client Sample ID: BH-15A

Project: Brannigan ANF Federal #5 Battery Collection Date: 7/16/2021 9:55:00 AM

Lab ID: 2107925-008 Matrix: SOIL Received Date: 7/20/2021 7:30:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	ND	59	mg/Kg	20	7/26/2021 3:26:43 PM	61549
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: SB
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	7/21/2021 10:11:24 AM	61437
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	7/21/2021 10:11:24 AM	61437
Surr: DNOP	128	70-130	%Rec	1	7/21/2021 10:11:24 AM	61437
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	7/22/2021 8:44:44 PM	61436
Surr: BFB	99.4	70-130	%Rec	1	7/22/2021 8:44:44 PM	61436
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.023	mg/Kg	1	7/22/2021 8:44:44 PM	61436
Toluene	ND	0.046	mg/Kg	1	7/22/2021 8:44:44 PM	61436
Ethylbenzene	ND	0.046	mg/Kg	1	7/22/2021 8:44:44 PM	61436
Xylenes, Total	ND	0.091	mg/Kg	1	7/22/2021 8:44:44 PM	61436
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	1	7/22/2021 8:44:44 PM	61436

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

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Lab Order 2107925

Date Reported: 7/28/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland Client Sample ID: BH-11A

Project: Brannigan ANF Federal #5 Battery Collection Date: 7/16/2021 10:00:00 AM

Lab ID: 2107925-009 Matrix: SOIL Received Date: 7/20/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: VP
Chloride	ND	60		mg/Kg	20	7/26/2021 3:39:08 PM	61549
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: SB
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/21/2021 10:21:03 AM	61437
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/21/2021 10:21:03 AM	61437
Surr: DNOP	143	70-130	S	%Rec	1	7/21/2021 10:21:03 AM	61437
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/22/2021 9:08:25 PM	61436
Surr: BFB	98.6	70-130		%Rec	1	7/22/2021 9:08:25 PM	61436
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.025		mg/Kg	1	7/22/2021 9:08:25 PM	61436
Toluene	ND	0.049		mg/Kg	1	7/22/2021 9:08:25 PM	61436
Ethylbenzene	ND	0.049		mg/Kg	1	7/22/2021 9:08:25 PM	61436
Xylenes, Total	ND	0.098		mg/Kg	1	7/22/2021 9:08:25 PM	61436
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	7/22/2021 9:08:25 PM	61436

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

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Lab Order 2107925

Date Reported: 7/28/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland Client Sample ID: BH-12A

 Project:
 Brannigan ANF Federal #5 Battery
 Collection Date: 7/16/2021 10:05:00 AM

 Lab ID:
 2107925-010
 Matrix: SOIL
 Received Date: 7/20/2021 7:30:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	ND	59	mg/Kg	20	7/26/2021 3:51:32 PM	61549
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: SB
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	7/21/2021 10:30:42 AM	61437
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	7/21/2021 10:30:42 AM	61437
Surr: DNOP	119	70-130	%Rec	1	7/21/2021 10:30:42 AM	61437
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	7/22/2021 9:31:58 PM	61436
Surr: BFB	96.6	70-130	%Rec	1	7/22/2021 9:31:58 PM	61436
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.023	mg/Kg	1	7/22/2021 9:31:58 PM	61436
Toluene	ND	0.047	mg/Kg	1	7/22/2021 9:31:58 PM	61436
Ethylbenzene	ND	0.047	mg/Kg	1	7/22/2021 9:31:58 PM	61436
Xylenes, Total	ND	0.093	mg/Kg	1	7/22/2021 9:31:58 PM	61436
Surr: 4-Bromofluorobenzene	99.5	70-130	%Rec	1	7/22/2021 9:31:58 PM	61436

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

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

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Lab Order **2107925** 

Date Reported: 7/28/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland Client Sample ID: BH-29A

 Project:
 Brannigan ANF Federal #5 Battery
 Collection Date: 7/16/2021 10:10:00 AM

 Lab ID:
 2107925-011
 Matrix: SOIL
 Received Date: 7/20/2021 7:30:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	ND	60	mg/Kg	20	7/26/2021 4:03:56 PM	61549
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: SB
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	7/21/2021 10:40:23 AM	61437
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	7/21/2021 10:40:23 AM	61437
Surr: DNOP	128	70-130	%Rec	1	7/21/2021 10:40:23 AM	61437
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	7/22/2021 9:55:33 PM	61436
Surr: BFB	96.5	70-130	%Rec	1	7/22/2021 9:55:33 PM	61436
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.023	mg/Kg	1	7/22/2021 9:55:33 PM	61436
Toluene	ND	0.047	mg/Kg	1	7/22/2021 9:55:33 PM	61436
Ethylbenzene	ND	0.047	mg/Kg	1	7/22/2021 9:55:33 PM	61436
Xylenes, Total	ND	0.094	mg/Kg	1	7/22/2021 9:55:33 PM	61436
Surr: 4-Bromofluorobenzene	100	70-130	%Rec	1	7/22/2021 9:55:33 PM	61436

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

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

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Lab Order 2107925

Date Reported: 7/28/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland Client Sample ID: BH-41

Project: Brannigan ANF Federal #5 Battery Collection Date: 7/16/2021 10:12:00 AM

Lab ID: 2107925-012 Matrix: SOIL Received Date: 7/20/2021 7:30:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	ND	60	mg/Kg	20	7/26/2021 4:16:20 PM	61549
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst	: SB
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	7/21/2021 10:50:03 AM	61437
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	7/21/2021 10:50:03 AM	61437
Surr: DNOP	129	70-130	%Rec	1	7/21/2021 10:50:03 AM	61437
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	7/22/2021 10:19:05 PM	61436
Surr: BFB	98.0	70-130	%Rec	1	7/22/2021 10:19:05 PM	61436
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	7/22/2021 10:19:05 PM	61436
Toluene	ND	0.050	mg/Kg	1	7/22/2021 10:19:05 PM	61436
Ethylbenzene	ND	0.050	mg/Kg	1	7/22/2021 10:19:05 PM	61436
Xylenes, Total	ND	0.10	mg/Kg	1	7/22/2021 10:19:05 PM	61436
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	7/22/2021 10:19:05 PM	61436

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

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Lab Order 2107925

Date Reported: 7/28/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland
Client Sample ID: SW-17A
Project: Brannigan ANF Federal #5 Battery
Collection Date: 7/16/2021

**Lab ID:** 2107925-013 **Matrix:** SOIL **Received Date:** 7/20/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	:: VP
Chloride	140	60		mg/Kg	20	7/26/2021 4:28:45 PM	61549
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	:: SB
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/21/2021 10:59:44 AM	1 61437
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/21/2021 10:59:44 AM	1 61437
Surr: DNOP	139	70-130	S	%Rec	1	7/21/2021 10:59:44 AM	1 61437
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/22/2021 10:42:37 PM	1 61436
Surr: BFB	97.9	70-130		%Rec	1	7/22/2021 10:42:37 PM	1 61436
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.023		mg/Kg	1	7/22/2021 10:42:37 PM	1 61436
Toluene	ND	0.047		mg/Kg	1	7/22/2021 10:42:37 PM	1 61436
Ethylbenzene	ND	0.047		mg/Kg	1	7/22/2021 10:42:37 PM	1 61436
Xylenes, Total	ND	0.093		mg/Kg	1	7/22/2021 10:42:37 PM	1 61436
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	7/22/2021 10:42:37 PM	1 61436

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

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Lab Order **2107925** 

Date Reported: 7/28/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland
Client Sample ID: SW-18A
Project: Brannigan ANF Federal #5 Battery
Collection Date: 7/16/2021

**Lab ID:** 2107925-014 **Matrix:** SOIL **Received Date:** 7/20/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: VP
Chloride	100	60		mg/Kg	20	7/26/2021 5:05:57 PM	61549
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: SB
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/21/2021 11:09:28 AM	61437
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/21/2021 11:09:28 AM	61437
Surr: DNOP	141	70-130	S	%Rec	1	7/21/2021 11:09:28 AM	61437
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/22/2021 11:06:07 PM	61436
Surr: BFB	99.2	70-130		%Rec	1	7/22/2021 11:06:07 PM	61436
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	7/22/2021 11:06:07 PM	61436
Toluene	ND	0.048		mg/Kg	1	7/22/2021 11:06:07 PM	61436
Ethylbenzene	ND	0.048		mg/Kg	1	7/22/2021 11:06:07 PM	61436
Xylenes, Total	ND	0.096		mg/Kg	1	7/22/2021 11:06:07 PM	61436
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	7/22/2021 11:06:07 PM	61436

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

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Lab Order **2107925** 

Date Reported: 7/28/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland Client Sample ID: SW-26

Project: Brannigan ANF Federal #5 Battery Collection Date: 7/16/2021

**Lab ID:** 2107925-015 **Matrix:** SOIL **Received Date:** 7/20/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: VP
Chloride	ND	60		mg/Kg	20	7/26/2021 5:18:22 PM	61549
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: SB
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/21/2021 11:19:11 AM	61437
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/21/2021 11:19:11 AM	61437
Surr: DNOP	141	70-130	S	%Rec	1	7/21/2021 11:19:11 AM	61437
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/23/2021 12:16:44 AM	61436
Surr: BFB	98.5	70-130		%Rec	1	7/23/2021 12:16:44 AM	61436
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	7/23/2021 12:16:44 AM	61436
Toluene	ND	0.047		mg/Kg	1	7/23/2021 12:16:44 AM	61436
Ethylbenzene	ND	0.047		mg/Kg	1	7/23/2021 12:16:44 AM	61436
Xylenes, Total	ND	0.094		mg/Kg	1	7/23/2021 12:16:44 AM	61436
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	7/23/2021 12:16:44 AM	61436

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

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

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Lab Order 2107925

Date Reported: 7/28/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland Client Sample ID: SW-11B

Project: Brannigan ANF Federal #5 Battery Collection Date: 7/16/2021

**Lab ID:** 2107925-016 **Matrix:** SOIL **Received Date:** 7/20/2021 7:30:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	ND	60	mg/Kg	20	7/26/2021 5:30:46 PM	61549
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: SB
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	7/21/2021 11:28:56 AM	61437
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	7/21/2021 11:28:56 AM	61437
Surr: DNOP	127	70-130	%Rec	1	7/21/2021 11:28:56 AM	61437
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/23/2021 12:40:10 AM	61436
Surr: BFB	97.6	70-130	%Rec	1	7/23/2021 12:40:10 AM	61436
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	7/23/2021 12:40:10 AM	61436
Toluene	ND	0.049	mg/Kg	1	7/23/2021 12:40:10 AM	61436
Ethylbenzene	ND	0.049	mg/Kg	1	7/23/2021 12:40:10 AM	61436
Xylenes, Total	ND	0.098	mg/Kg	1	7/23/2021 12:40:10 AM	61436
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	1	7/23/2021 12:40:10 AM	61436

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

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

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Lab Order 2107925

Date Reported: 7/28/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland Client Sample ID: SW-1B

Project: Brannigan ANF Federal #5 Battery Collection Date: 7/16/2021

**Lab ID:** 2107925-017 **Matrix:** SOIL **Received Date:** 7/20/2021 7:30:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	ND	59	mg/Kg	20	7/26/2021 5:43:11 PM	61549
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: SB
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	7/21/2021 11:38:42 AM	61437
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	7/21/2021 11:38:42 AM	61437
Surr: DNOP	119	70-130	%Rec	1	7/21/2021 11:38:42 AM	61437
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	7/23/2021 1:03:46 AM	61436
Surr: BFB	95.2	70-130	%Rec	1	7/23/2021 1:03:46 AM	61436
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.023	mg/Kg	1	7/23/2021 1:03:46 AM	61436
Toluene	ND	0.046	mg/Kg	1	7/23/2021 1:03:46 AM	61436
Ethylbenzene	ND	0.046	mg/Kg	1	7/23/2021 1:03:46 AM	61436
Xylenes, Total	ND	0.091	mg/Kg	1	7/23/2021 1:03:46 AM	61436
Surr: 4-Bromofluorobenzene	98.4	70-130	%Rec	1	7/23/2021 1:03:46 AM	61436

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

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Lab Order 2107925

Date Reported: 7/28/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Midland Client Sample ID: SW-5B

Project: Brannigan ANF Federal #5 Battery Collection Date: 7/16/2021

**Lab ID:** 2107925-018 **Matrix:** SOIL **Received Date:** 7/20/2021 7:30:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: VP
Chloride	ND	60	mg/Kg	20	7/26/2021 5:55:35 PM	61549
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: SB
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	7/21/2021 11:48:27 AM	61437
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	7/21/2021 11:48:27 AM	61437
Surr: DNOP	115	70-130	%Rec	1	7/21/2021 11:48:27 AM	61437
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	7/23/2021 1:27:16 AM	61436
Surr: BFB	96.8	70-130	%Rec	1	7/23/2021 1:27:16 AM	61436
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	7/23/2021 1:27:16 AM	61436
Toluene	ND	0.048	mg/Kg	1	7/23/2021 1:27:16 AM	61436
Ethylbenzene	ND	0.048	mg/Kg	1	7/23/2021 1:27:16 AM	61436
Xylenes, Total	ND	0.097	mg/Kg	1	7/23/2021 1:27:16 AM	61436
Surr: 4-Bromofluorobenzene	99.5	70-130	%Rec	1	7/23/2021 1:27:16 AM	61436

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

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

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#### Hall Environmental Analysis Laboratory, Inc.

WO#: **2107925 28-Jul-21** 

**Client:** GHD Midland

**Project:** Brannigan ANF Federal #5 Battery

Sample ID: MB-61547 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 61547 RunNo: 80053

Prep Date: 7/26/2021 Analysis Date: 7/26/2021 SeqNo: 2818226 Units: mq/Kq

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

Chloride ND 1.5

Sample ID: LCS-61547 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 61547 RunNo: 80053

Prep Date: 7/26/2021 Analysis Date: 7/26/2021 SeqNo: 2818227 Units: mg/Kg

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

Chloride 15 1.5 15.00 0 97.4 90 110

Sample ID: MB-61549 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 61549 RunNo: 80086

Prep Date: 7/26/2021 Analysis Date: 7/26/2021 SeqNo: 2818838 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-61549 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 61549 RunNo: 80086

Prep Date: 7/26/2021 Analysis Date: 7/26/2021 SeqNo: 2818839 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 95.7 90 110

#### Qualifiers:

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

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

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **2107925** 

28-Jul-21

Client: GHD Midland

**Project:** Brannigan ANF Federal #5 Battery

Sample ID: MB-61434	Samp1	уре: МЕ	BLK	Tes	estCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: PBS	Batcl	h ID: <b>61</b>	434	F	RunNo: <b>7</b>	9955					
Prep Date: 7/20/2021	Analysis D	Date: <b>7/</b>	21/2021	5	SeqNo: 2	813627	Units: mg/h	<b>(</b> g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	10		10.00		101	70	130				
Sample ID: LCS-61434	Samp1	ype: <b>LC</b>	s	Tes	TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: LCSS	Batcl	h ID: <b>61</b>	434	RunNo: <b>79955</b>							
Prep Date: <b>7/20/2021</b>	Analysis [	Date: 7/	21/2021	5	SeqNo: 2	813628	Units: mg/k	<b>(</b> g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	41	10	50.00	0	81.6	68.9	141				
Surr: DNOP	4.2		5.000		84.3	70	130				
Sample ID: MB-61437	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics		
Client ID: PBS	Batcl	h ID: <b>61</b>	437	RunNo: <b>79982</b>							
Prep Date: 7/20/2021	Analysis E	Date: 7/	21/2021	SeqNo: 2814484			Units: mg/h	<b>(</b> g			
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	17		10.00		173	70	130			S	
Sample ID: LCS-61437	Samp1	ype: <b>LC</b>	s	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics		
Client ID: LCSS	Batcl	h ID: <b>61</b>	437	F	RunNo: 7	9982					
Prep Date: <b>7/20/2021</b>	Analysis [	Date: 7/	21/2021	5	SeqNo: 2	814486	Units: mg/k	<b>(</b> g			
	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Analyte			50.00	0	170	68.9	141			S	
Analyte Diesel Range Organics (DRO)	85	10	50.00	J							
,	85 8.8	10	5.000		176	70	130			S	

#### Qualifiers:

Analyte

Surr: DNOP

- 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

Client ID: BH-7A

Prep Date: 7/20/2021

Diesel Range Organics (DRO)

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

RunNo: 79982

109

114

SeqNo: 2814488

Units: mg/Kg

184

130

%RPD

**RPDLimit** 

Qual

HighLimit

15

70

- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range

SPK value SPK Ref Val %REC LowLimit

5.324

RL Reporting Limit

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Batch ID: 61437

Analysis Date: 7/21/2021

PQL

9.9

49.26

4.926

Result

59

5.6

#### Hall Environmental Analysis Laboratory, Inc.

WO#: **2107925** 

Qual

28-Jul-21

**Client:** GHD Midland

**Project:** Brannigan ANF Federal #5 Battery

Sample ID: 2107925-005AMSD SampType: MSD TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: BH-7A Batch ID: 61437 RunNo: 79982

Prep Date: 7/20/2021 Analysis Date: 7/21/2021 SeqNo: 2814490 Units: mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	(
Diesel Range Organics (DRO)	58	9.5	47.35	5.324	110	15	184	2.89	23.9	
Surr: DNOP	5.3		4.735		112	70	130	0	0	

#### Qualifiers:

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

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

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#### Hall Environmental Analysis Laboratory, Inc.

WO#: 2107925

28-Jul-21

**Client:** GHD Midland

**Project:** Brannigan ANF Federal #5 Battery

Sample ID: mb-61430 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 61430 RunNo: 79951

Analysis Date: 7/21/2021 SeqNo: 2814610 Prep Date: 7/20/2021 Units: mg/Kg

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

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 1100 1000 111 70 130

Sample ID: Ics-61430 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 61430 RunNo: 79951

Prep Date: 7/20/2021 Analysis Date: 7/21/2021 SeqNo: 2814611 Units: mg/Kg

HighLimit Analyte Result PQL SPK value SPK Ref Val %REC LowLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 24 5.0 25.00 O 94.6 78.6 131 Surr: BFB 1200 1000 121 70 130

Sample ID: mb-61436 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 61436 RunNo: 80010

Prep Date: 7/20/2021 Analysis Date: 7/22/2021 SeqNo: 2815323 Units: mg/Kg

SPK value SPK Ref Val %REC LowLimit %RPD **RPDLimit** Analyte Result PQL HighLimit Qual Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 1100 1000 105 70 130

Sample ID: Ics-61436 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Batch ID: 61436 Client ID: LCSS RunNo: 80010

Prep Date: 7/20/2021 Analysis Date: 7/22/2021 SeqNo: 2815324 Units: mg/Kg

SPK value SPK Ref Val %REC %RPD **RPDLimit** Result PQL LowLimit HighLimit Qual Gasoline Range Organics (GRO) 25 5.0 0 102 25.00 78.6 131

Surr: BFB 1100 1000 108 70 130

Sample ID: 2107925-005ams SampType: MS TestCode: EPA Method 8015D: Gasoline Range

Client ID: BH-7A Batch ID: 61436 RunNo: 80010

Prep Date: 7/20/2021 Analysis Date: 7/22/2021 SeqNo: 2815326 Units: mq/Kq

Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 23 4.6 0 61.3 22.79 103 114 Surr: BFB 1000 911.6 114 70 130

TestCode: EPA Method 8015D: Gasoline Range Sample ID: 2107925-005amsd SampType: MSD

Client ID: BH-7A Batch ID: 61436 RunNo: 80010

Prep Date: 7/20/2021 Units: mg/Kg Analysis Date: 7/22/2021 SeqNo: 2815327

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

#### Qualifiers:

Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

Holding times for preparation or analysis exceeded Н

Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

Value above quantitation range

Analyte detected below quantitation limits

Sample pH Not In Range

RL Reporting Limit Page 22 of 25

#### Hall Environmental Analysis Laboratory, Inc.

WO#: **2107925** 

28-Jul-21

Client: GHD Midland

**Project:** Brannigan ANF Federal #5 Battery

Sample ID: 2107925-005amsd SampType: MSD TestCode: EPA Method 8015D: Gasoline Range

Client ID: BH-7A Batch ID: 61436 RunNo: 80010

Prep Date: 7/20/2021 Analysis Date: 7/22/2021 SeqNo: 2815327 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 0 61.3 7.72 20 Gasoline Range Organics (GRO) 25 4.9 24.53 103 114 Surr: BFB 1100 981.4 114 70 130 0 0

#### Qualifiers:

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

Page 23 of 25

## Hall Environmental Analysis Laboratory, Inc.

WO#: **2107925** 

28-Jul-21

Client: GHD Midland

**Project:** Brannigan ANF Federal #5 Battery

Sample ID: mb-61430 SampType: MBLK			BLK	TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	ID: PBS Batch ID: 61430			RunNo: <b>79951</b>						
Prep Date: 7/20/2021	Analysis D	Analysis Date: <b>7/21/2021</b>			SeqNo: 2	814634	<b>(</b> g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		109	70	130			

Sample ID: Ics-61430	SampT	ype: <b>LC</b>	S	TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch ID: 61430			F	RunNo: <b>7</b> 9					
Prep Date: 7/20/2021	Analysis D	Date: <b>7/</b>	21/2021	5	SeqNo: 2					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	95.3	80	120			
Toluene	0.96	0.050	1.000	0	96.3	80	120			
Ethylbenzene	0.98	0.050	1.000	0	97.6	80	120			
Xylenes, Total	2.9	0.10	3.000	0	98.1	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		111	70	130			

Sample ID: mb-61436 SampType: MBLK				TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Client ID: PBS Batch ID: 61436				RunNo: 8	0010				
Prep Date: 7/20/2021	Analysis D	22/2021	8	SeqNo: 2815364 Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		103	70	130			

Sample ID: LCS-61436	SampT	ype: <b>LC</b>	S	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: LCSS	Batcl	h ID: <b>61</b> 4	136	F	RunNo: 8	0010				
Prep Date: 7/20/2021	Analysis D	Date: <b>7/</b> 2	22/2021	9	SeqNo: 2	815365	Units: mg/K	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	95.6	80	120			
Toluene	0.97	0.050	1.000	0	96.9	80	120			
Ethylbenzene	0.97	0.050	1.000	0	97.2	80	120			
Xylenes, Total	2.9	0.10	3.000	0	98.1	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	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

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

Page 24 of 25

## Hall Environmental Analysis Laboratory, Inc.

WO#: **2107925** 

28-Jul-21

**Client:** GHD Midland

**Project:** Brannigan ANF Federal #5 Battery

Sample ID: 2107925-006ams	SampT	ype: MS	3	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: BH-10A	Batch	n ID: <b>61</b> 4	436	F	RunNo: 8	0010				
Prep Date: 7/20/2021	Analysis D	ate: <b>7/</b>	22/2021	\$	SeqNo: 2	815368	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.023	0.9166	0	99.3	80	120			
Toluene	0.92	0.046	0.9166	0	101	80	120			
Ethylbenzene	0.92	0.046	0.9166	0	100	80	120			
Xylenes, Total	2.8	0.092	2.750	0	101	80	120			
Surr: 4-Bromofluorobenzene	0.96		0.9166		105	70	130			

Sample ID: 2107925-006amsd	SampT	уре: МS	SD	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: BH-10A	Batcl	n ID: <b>61</b> 4	436	F	RunNo: 8	0010				
Prep Date: 7/20/2021	Analysis D	ate: <b>7/</b>	22/2021	S	SeqNo: 2	815369	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.023	0.9234	0	97.5	80	120	1.09	20	
Toluene	0.90	0.046	0.9234	0	97.0	80	120	3.04	20	
Ethylbenzene	0.91	0.046	0.9234	0	98.0	80	120	1.40	20	
Xylenes, Total	2.7	0.092	2.770	0	98.9	80	120	1.52	20	
Surr: 4-Bromofluorobenzene	0.98		0.9234		106	70	130	0	0	

#### Qualifiers:

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

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

Page 25 of 25



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

# Sample Log-In Check List

LABORATORY	TEL: 505-345- Website: clien	3975 FAX: 505-345 ts.hallenvironmente	5-4107	mpre deg in eneek diet
Client Name: GHD Midland	Work Order Nun	nber: 2107925		RcptNo: 1
Received By: Cheyenne Cason	7/19/2021 3:00:00	РМ	Chul	
Completed By: Cheyenne Cason	7/20/2021 8:03:16	АМ	Chul	
Reviewed By: In 7/20/2	1			
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 s	amples?	Yes 🗸	No 🗌	NA 🗆
4. Were all samples received at a tem	perature of >0° C to 6.0°C	Yes 🔽	No 🗆	NA 🗆
5. Sample(s) in proper container(s)?		Yes 🔽	No 🗌	
6. Sufficient sample volume for indicate	ed 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 headspa	ace <1/4" for AQ VOA?	Yes	No 🗆	NA 🗹
10. Were any sample containers receive		Yes 🗆	No 🗹	# of preserved
11. Does paperwork match bottle labels' (Note discrepancies on chain of cust		Yes 🗸	No 🗌	bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on C	Chain of Custody?	Yes 🗸	No 🗌	Adjusted?
13. Is it clear what analyses were reques		Yes 🗸	No 🗌	/
<ol> <li>Were all holding times able to be me (If no, notify customer for authorization)</li> </ol>		Yes 🗸	No 🗆	Checked by: TMC 7-19-21
Special Handling (if applicable)	1		/	

## S 15.

Was client notified of all discrepancies with this order?	Yes	No 🗌	NA 🗸
Person Notified:	Date:		
By Whom:	Via: ☐ eMail ☐ Pi	none  Fax	In Person
Regarding:		Server Colonia	
Client Instructions:			
Additional remarks:			

16.

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.6	Good			15/2/// 10/19	-13/104 27

															TRONGENIAL	_
				Project Name	ard Rush	in S-2kg			-	ANAL		YSIS	7	BO	ABORATORY	\$
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324 W.	Main St	324 W. Main St. Suite 108,	08, Artesia NM 88210	Project #:	7		X	ā	505-3	505-345-3975		Fav	205 37	50E 34E 4107	3	
Phone #:	#:	(505)37	(505)377-4218		11778319					2	Ana	1000	Recilies	101 7		
email or Fax#:	r Fax#:	Becky. F	Becky. Haskell@ghd.com	Project Manag			(	((	-		*(		, ,	20		
QAVQC	QA/QC Package:			Becky Haskell			120		•	S	OS		uos	Z		
□ Stan	Standard		☐ Level 4 (Full Validation)		-		(8) s		a^	WIS	†Oc		940/	000		
Accreditation:	tation:	□ Az C			Zach Comino	0	WB.			072	I ,sC		ţues	112		
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				Cooler Ten	Cooler Temp(including CF): U(	6-0-4.6-	TМ				_		- 170 A	W.		
Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL	\ X∃I	108:He	M) ac	d sHA	8 AЯС В , Я ,	) 09	58) 07. o2 let	رام/		
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	5360		13H-1574			88										
	1000		BH-11A			300							H			
	1005		RH-124			010				-			$\vdash$			
	1010	)	13H-29A	1		01.10							+	-		
	7	>	13H-41	>		270	>	>		-			H	>		
Date:	Time:	Relinquished by	ed by:	Received by:	Via:	Date Time	N.	emark	s: Ple	ase er son@i	nail: C ghd.cc	hase m; Za	Settle ch.Co	@eogre	Remarks: Please email: Chase_Settle@eogresources.com; Tom.Larson@ghd.com; Zach.Comino@ghd.com	E.
Date:		Relinquished by	ed by:	Received by:	Via:	Z		Matth	ew.La	ughlin	@ghd	.com:	Along	with Be	Matthew.Laughlin@ghd.com: Along with Becky Haskell	
lahi	1900	GA	Mari	CEL	Com 1	1900 Granding Cel Cow 7/20/4 C73c Direct Bill to EOG Chase Settle				Direct	Bill to	isted above.	Chase	Direct Bill to EOG Chase Settle		

Client: GHD							1		-			
Project Name   Project Name   Project Name   Project Name   CSV21124218   CSV2124218   CSV	1 [	D Standar		300		ПГ	HAI		N	IRON	MENTA	T
Standard		Project Nam		0						LAD	O RESIDENCE	<b>-</b>
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100   100	Suite 108,	Project #:	1		4	505-	45-39	. 4	anhao	טב אב עי	07 103	
Standard			M2292719					Ana	VSIS	edillest	101	
Standard   Sampler   S		Project Man	ager		1	-		7(		(1	X	
Standard     Level 4 (Full Validation)   Tom Larson   Creditation:   Az Compliance   Sampler:   Zach Comino   Parent	QA/QC Package:	Beckv Hask	) =		_	S	S	os '		uəs	3	
Sampler: Zach Comino   Sampler: Zach Container   Preservative   HEAL No.   Sampler: Zach Container   Preservative   HEAL No.   Sampler: Zach Container   Sampler: Sampler: Sampler: Zach Container   Sampler:	Standard				-		WIS	<sup>†</sup> Ос		dAl	্যক্ত	
Second State   Content	□ Az Cor		1				-	J 'ZC		juəs	112	
Type     # of Coolers     # of Coolers	NELAC	On Ice.						N			h	
Time   Matrix   Sample   Name   Type and # Type	☐ EDD (Type)	# of Coolers					0 0	_				
Time         Matrix         Sample Name         Container         Preservative         HEAL No.         MALANA           GR20         SR4-2A         January         J		Cooler Tem	D(including CF);				83	_			क्रा	
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97.5 BH-48  97.5 BH-64  97.5 BH-124  97.5 BH-124  97.5 BH-124  10.0 BH-124  10.0 BH-294  10.10 BH-29	Pro C	1	246.				/d					1
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1005   12H-12H   15H-29H   1010   13H-29H   1010   15H-41   15H-41   16H-12H   17H-12H   17H-1	RH					+	1	+	1	+		
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Turn-Around Time:	A)Standard 🗆 Rush S		Banka, All Collins	10/ Feeta	(1225C)	Project Manager:	Becky Haskell	Tom Larson	Sampler: Zach Comino	10000		Cooler Temp(including CF):		Type and # Type	J.									Received by: Via: Date Time	Received by: Via: Date Time
	Client: GHD		Mailing Address:	324 W. Main St. Suite 108, Artesia NM 88210	Phone #: (505)377-4218	email or Fax#: Becky. Haskell@ghd.com	QAVQC Package:	☐ Standard ☐ Level 4 (Full Validation)	:uc	□ Other	☐ EDD (Type)		Time O	Inne Marrix Oampie Name	7-17	SU)-184	SW. 26	547-113	\$10-13	S.J578				Date: Time: Relinquished by: Re	OTRA CREC Zuch Countries   Reinquished by:   Pate: Time: Reinquished by: Reinquished by: Reinquished by: Reinquished to Hall Environmental may be subcontri

# Attachment D Approved C-138

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 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505

#### State of New Mexico Energy Minerals and Natural Resources

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

Form C-138 Revised August 1, 2011 \*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE
1. Generator Name and Address: EOG Resources, Inc. 104 South Fourth Street, Artesia, NM 88210
2. Originating Site: Brannigan ANF Federal Battery
3. Location of Material (Street Address, City, State or ULSTR): Section 6-T22S-R24E, Eddy County, NM
4. Source and Description of Waste: Soil impacted by produced water and oil
EOG Resources, Inc. authorizes Gandy Marley to complete the required testing and sign the Generator Waste Testing Certificate.
Estimated Volume 1,325 yd3/bbls Known Volume (to be entered by the operator at the end of the haul) yd3/bbls  5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS
I, Tina Huerta Tina Huerta, representative or authorized agent for EOG Resources, Inc do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)
□ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency □ Monthly □ Weekly □ Per Load
RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)
☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS
I,
5. Transporter: BDS
OCD Permitted Surface Waste Management Facility
Name and Facility Permit #: Lea Land, LLC Permit #WM-1-035
Address of Facility: MM64 US Highway 62/180 East, Carlsbad, NM 88220
Method of Treatment and/or Disposal:
☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other
Waste Acceptance Status:  APPROVED  DENIED (Must Be Maintained As Permanent Record)
PRINT NAME: Shelley Denton TITLE: Manager DATE: 5-26-21 SIGNATURE: Dully Dens TELEPHONE NO.: 405-136-4257
SIGNATURE:

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

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

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REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE
1. Generator Name and Address: EOG Resources, Inc. 104 South Fourth Street, Artesia, NM 88210
2. Originating Site: Brannigan ANF Federal Battery
3. Location of Material (Street Address, City, State or ULSTR): Section 6-22S-R24E, Eddy County, NM
4. Source and Description of Waste: Soil impacted by produced water and oil
EOG Resources, Inc. authorizes Lea Land, LLC to complete the required testing and sign the Generator Waste Testing Certificate.
Estimated Volume 1325 yd3/bbls Known Volume (to be entered by the operator at the end of the haul) yd3/bbls  5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS  FOG Recovered by
I, Tina Huerta Tina Huerta, representative or authorized agent for EOG Resources, Inc do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 198 regulatory determination, the above described waste is: (Check the appropriate classification)
RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.  **Operator Use Only: Waste Acceptance Frequency** Monthly** Meekly** Per Load**
RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous be characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)
☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS
I,
5. Transporter: CCI
OCD Permitted Surface Waste Management Facility
Name and Facility Permit #: Lea Land, LLC Permit #WM-1-035
Address of Facility: MM64 US Highway 62/180 East, Carlsbad, NM 88220
Method of Treatment and/or Disposal:
☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☒ Landfill ☐ Other
Waste Acceptance Status:
APPROVED DENIED (Must Be Maintained As Permanent Record)
SIGNATURE: Sheller Denton TITLE: Manage DATE: 6-14-21  SIGNATURE: TELEPHONE NO.: 45-236-427
SIGNATURE: TELEPHONE NO.: TELEPHONE NO.:

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

Form C-138
Revised August 1, 2011
ce Waste Management Facility Operator

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 \*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE
1. Generator Name and Address: EOG Resources, Inc. 104 South Fourth Street, Artesia, NM 88210
2. Originating Site: Brannigan ANF Federal Battery
3. Location of Material (Street Address, City, State or ULSTR): Section 6-22S-R24E, Eddy County, NM
4. Source and Description of Waste: Soil impacted by produced water and oil
EOG Resources, Inc. authorizes Lea Land, LLC to complete the required testing and sign the Generator Waste Testing Certificate.
Estimated Volume  1325  yd³/bbls Known Volume (to be entered by the operator at the end of the haul)  yd³/bbls  5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS  I, Tina Huerta Tina Huerta, representative or authorized agent for certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)
RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.  Operator Use Only: Waste Acceptance Frequency Monthly Meekly Per Load
RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous be characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)
☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS
I,, representative for do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.
5. Transporter: CCI
OCD Permitted Surface Waste Management Facility
Name and Facility Permit #: Lea Land, LLC Permit #WM-1-035
Address of Facility: MM64 US Highway 62/180 East, Carlsbad, NM 88220
Method of Treatment and/or Disposal:
☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☒ Landfill ☐ Other
Waste Acceptance Status:  APPROVED  DENIED (Must Be Maintained As Permanent Record)
PRINT NAME: Shelley Denton TITLE: 199095 DATE: 7-9-21  SIGNATURE: Dully Denton TELEPHONE NO.: 4W-236-4257

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

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 53401

#### **CONDITIONS**

Operator:	OGRID:	
EOG RESOURCES INC	7377	
P.O. Box 2267	Action Number:	
Midland, TX 79702	53401	
	Action Type:	
	[C-141] Release Corrective Action (C-141)	

#### CONDITIONS

Created By	Condition	Condition Date
chensley	None	10/15/2021