May 30, 2017 Reference No. 088210-21

Ms. Olivia Yu
New Mexico Oil Conservation Division
Energy, Minerals and Natural Resources Department
1625 N. French Dr.
Hobbs, NM 88240

Ms. Amber Groves
New Mexico State Land Office
Field Operations Division
2827 N. Dal Paso, Suite 117
Hobbs, NM 88260

Dear Ms. Yu and Ms. Tucker:

Re: Closure Request
Jolly Roger 16 State No. 1 (API #30-025-41665)
1RP-3541
EOG Resources, Inc.
Site Location: Unit C, Sec. 16, T 24-S, R 34-E
(Lat 32.2244°, Long -103.4762°)
Lea County, New Mexico

GHD Services, Inc. (GHD), on behalf of EOG Resources (EOG) is requesting that no further action status be granted for the Jolly Roger State 16 State No.1 (hereafter referred to as the "Site").

In an Assessment Report dated November 14, 2016 (attached) GHD recommended the following scope items be completed following delineation of the soil impacts in order to achieve no further action;

- Blend the on-site stockpile with clean soil to reduce chloride concentrations to below 600 milligrams per kilograms (mg/kg). Re-sample the blended stockpile to confirm concentrations are below 600 mg/kg then use the soil for backfill material.
- Placement of a 20 mil polyethylene liner in the bottom of the excavation at a depth of 4 ft bgs at the location indicated on Figure 2.
- Backfilling of the excavation with the blended backfill material and wheel compacting to grade.
- Fertilizing and reseeding of the disturbed area with BLM seed mix no. 2 without lovegrass.

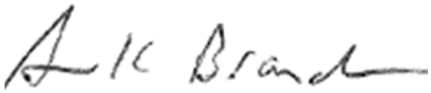
GHD Services Inc.
6121 Indian School Road NE Suite 200 Albuquerque New Mexico 87110 USA
T 505 884 0672 **F** 505 884 4932 **W** www.ghd.com

The work scope was approved by Ms. Kristen Lynch with the New Mexico Oil Conservation Division on December 1, 2016. The New Mexico State Land Office approved the report on January 27, 2017. As of the date of this letter, the above scope items have been completed and are documented in the attached completion photos and final C-141 for the Site; therefore, No Further Action is being requested.

Your timely response to this requested is greatly appreciated. Should you have any questions, or require additional information regarding this submittal, please feel free to contact myself or Bernie Bockisch at (505) 884-0672 or Bernard.Bockisch@ghd.com.

Sincerely,

GHD



Alan Brandon
Senior Project Manager

Bernard Bockisch
Senior Project Manager

AB/mc/03

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

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company EOG Resources, Inc.	Contact Zane Kurtz
Address 5509 Champions Drive, Midland, TX 79706	Telephone No. 432-425-2023
Facility Name Jolly Roger 16 State #1	Facility Type active well

Surface Owner NM	Mineral Owner NM	API No. 300254166500

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	16	24S	34E	150	N	2250	W	Lea

Latitude 32.2244 **Longitude** -103.4762

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 50 bbls	Volume Recovered 0 bbls
Source of Release 3" valve left open and discovered by subsequent person arriving on site	Date and Hour of Occurrence 2/10/2015	Date and Hour of Discovery 2/10/2015
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

RECEIVED
By OCD; Dr. Oberding at 8:35 am, Feb 20, 2015

Describe Cause of Problem and Remedial Action Taken.*
Lease operator arrived on location on 10 February 2015 and noticed the open 3-inch valve and release of produced water. CH2M HILL will collect soil samples on behalf of EOG Resources, Inc. on 16 February 2015 to delineate vertical and horizontal impacts.

Describe Area Affected and Cleanup Action Taken.*

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

Signature: Zane Kurtz

Printed Name: Zane Kurtz

Title: Sr. Environmental Representative

E-mail Address: zane_kurtz@eogresources.com

Date: 2/18/2015 Phone: 432-425-2023

OIL CONSERVATION DIVISION

Hydrologist

Approved by ~~Environmental Specialist~~: PKO

Approval Date: 02/20/2015 Expiration Date: 04/20/2015

Conditions of Approval:

Site samples required. Delineate and remediate as per NMOCD guides.

Attached ☐

1RP-3541 7377

nTO1505130661

pTO1505130826

* Attach Additional Sheets If Necessary

Photo 1 - Liner placement

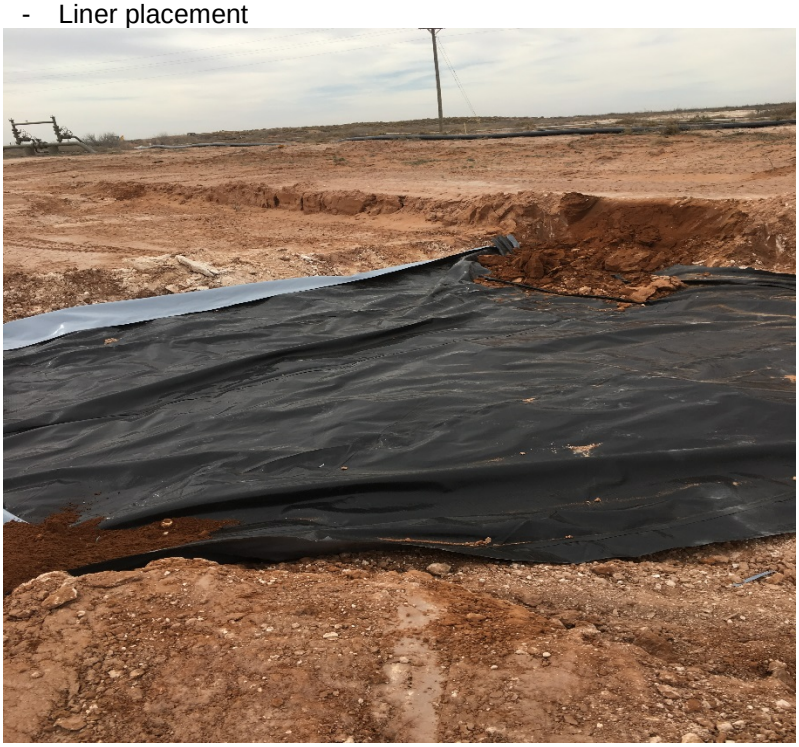


Photo 2 - Liner placement

Site Photographs

Photo 3 - Backfilled excavation and wheel compacted

Photo 4 - Backfilled excavation and wheel compacted

APPROVED
By Kristen Lynch at 11:20 am, Dec 01, 2016

November 14, 2016 Reference No. 088210-21

Mr. Zane Kurtz
Sr. Safety and Environmental Representative
5509 Champions Dr.
Midland, TX 79706
VIA E-Mail: zane_kurtz@eogresources.com

Dear Mr. Kurtz:

Re: Assessment Summary Report
Jolly Roger 16 State No. 1 (API #30-025-41665)
1RP-3541
EOG Resources, Inc.
Site Location: Unit C, Sec. 16, T 24-S, R 34-E
(Lat 32.2244°, Long -103.4762°)
Lea County, New Mexico

GHD Services, Inc. (GHD) is pleased to present this report for the above referenced site. Assessment activities were performed at the Jolly Roger 15 State No. 1 (hereafter referred to as the "Site"), from February 16, 2015 through May 20, 2015 by CH2M Hill and March 31, 2016 through August 11, 2016 by GHD. The Site is located within Unit C, Section 16, Township 24 South, Range 34 East, in Lea County, New Mexico (Figure 1).

The Site is an active well site approximately 20 miles west-northwest of Jal, New Mexico. According to EOG personnel, a release of approximately 50 barrels (bbls) of produced water occurred when a 3 inch valve was left in the open position. The release was discovered on February 10, 2015. A C-141 Form was submitted to the New Mexico Oil Conservation Division (NMOCD) on February 18, 2015 and remediation permit (RP) number 1RP-3541 was assigned.

Initial soil sampling of the release area was performed by CH2M Hill on February 16 and 17 and May 20, 2015. Four of 16 soil samples collected by CH2M Hill returned chloride concentrations in soil exceeding the 250 mg/kg the Recommended Remediation Action Limit (RRAL) for chloride. Subsequent soil sampling was performed by GHD beginning in March through October of 2016 and is discussed further in this report.

1. Introduction

A C-141 Form was submitted to the New Mexico Oil Conservation Division (NMOCD) and remediation permit (RP) number 1RP-3541 was assigned.

There are relatively few groundwater wells in the area of the Site with which to obtain a depth to groundwater. Based on information available from the United States Geological Survey, two wells are located within Section 10, approximately 1 mile northeast of the Site. The depth to groundwater in these

wells ranged from 69.73 ft bgs to 71.91 ft bgs (see Appendix A). Based on this, the depth to groundwater in the vicinity of the site appears to be between 50 and 100 ft bgs.

There do not appear to be any well head protection areas and no surface water bodies within 200 to 1000 ft of the Site. Therefore, the preliminary total ranking score for the Site is 10 (see table below).

Based on this score, the applicable NMOCD Site-specific Recommended Remediation Action Limits (RRALs) are 10 milligrams per kilogram (mg/kg) for benzene, 50 mg/kg for total benzene, toluene, ethylbenzene, and xylenes (BTEX), 1000 mg/kg for total petroleum hydrocarbons (TPH), and 250 mg/kg for chlorides.

New Mexico Oil Conservation Division Site Assessment	
Ranking Criteria	Score
Depth to Ground Water (>50 ft bgs,< 100 ft bgs)	10
Wellhead Protection Area (> 1000 ft from water source, > 200 ft from domestic source)	0
Distance to Surface Body Water (200-1000 ft)	0
Ranking Criteria Total Score	**10***
*Because the ranking criteria total score is 10, NMOCD established RRALs are 10 mg/kg for benzene, 50 mg/kg for total BTEX, 1,000 mg/kg for TPH[1], and 250 mg/kg for chlorides.	

1. NMOCD Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993

2. Assessment Activities

Site assessment activities were initially performed by CH2M Hill of Dallas, Texas February 16 and 17 and May 20, 2015. Excavation activities were performed by SDR Enterprises, LLC of Hobbs, New Mexico. Soil samples were analyzed by TraceAnalysis, Inc. (TraceAnalysis) of Lubbock, Texas.

The analytical data obtained from the soil samples collected by CH2M Hill indicated that the horizontal extent of petroleum hydrocarbon and chloride concentrations had been delineated to below RRALs. However, the vertical extent of chloride concentrations in an area denoted as the impacted area exceeded RRALs. The CH2M Hill sample results are summarized in Table 1.

Further soil sampling was performed by GHD on February 29, 2016 to assess the vertical extent of chloride concentrations in the soil in the impacted area. Nine additional soil samples were collected using a hand auger at depths of 2.5 ft bgs, 3.5 ft bgs, and 4.0 ft bgs. The samples were submitted to Xenco Laboratories of Odessa, Texas for analysis of chloride by EPA Method 300, BTEX by EPA Method 8021, and gasoline and diesel range organics TPH by EPA Method 8015 (see Appendix B).

Laboratory analytical results from this event indicate that chloride concentrations in three samples along the north berm were above the RRAL for chloride; the remaining samples that were submitted were below the RRAL for chloride (Table 1). A total of approximately 456 cubic yards of impacted soil were excavated

and transported to Lea Land for landfill disposal. Waste manifests will be provided with the final closure request.

After excavation was completed, 15 confirmation soil samples were collected on June 10, 2016 in the area of excavation. The samples were submitted to Xenco Laboratories of Odessa, Texas for analysis of chloride by EPA Method 300. Laboratory analytical results from this event indicate that chloride concentrations in the west half of the excavation area were above the RRAL. Based on this, additional soil sampling was performed.

On August 10 and 11, 2016, an additional 12 soil samples were collected to the west and south of the excavation. Based on field screening, additional impacted soil was removed from the end of the excavation. Three confirmation soil samples were collected after this soil removal. The samples were submitted to Xenco Laboratories of Odessa, Texas for analysis of chloride by EPA Method 300. Laboratory analytical results from this event indicated that chloride concentrations were below the RRAL for chloride for all sample locations, except one in the center of the excavation toward the east end (Table 1).

On October 7, 2016, additional impacted soil was removed from the southwest end of the excavation and the east end of the excavation, where previously high chloride levels were detected. Three confirmation soil samples were collected after this soil removal. The samples were submitted to Xenco Laboratories of Odessa, Texas for analysis of chloride by EPA Method 300. Laboratory analytical results from this event indicate that chloride concentrations were below the RRAL for chloride (Table 1). Based on this, it appears that the vertical and horizontal extent of chloride has been fully assessed as shown on Figure 2.

Two soil samples were collected from the stockpile soil removed during the excavation process to assess if the stockpiled soil could be used to backfill the excavation. The analytical results indicated chloride concentrations of 390 mg/kg and 610 mg/kg (Table 1). These soil samples will be blended with clean soil and resampled.

3. Summary and Recommendations

Based on the assessment of the petroleum hydrocarbon and chloride concentrations, GHD recommends the following:

- Blend the on-site stockpile with clean soil so that chloride concentrations are below 600 mg/kg. The blended stockpile will be resampled prior to make sure it is below 600 mg/kg prior to placing it in the excavation.
- Placement of a 20 mil polyethylene liner in the bottom of the excavation at a depth of 4 ft bgs.
- Use the existing stockpiled soil and blend with clean soil to backfill the excavation. The backfill material will be wheel-rolled with on-site equipment and brought up to grade.

Following completion of liner placement and excavation backfill, revegetation of the site will be performed. Disturbed areas associated with the remediation efforts will be reseeded. If after one growing season the vegetation has not taken hold, seeding may need to be repeated until revegetation is successful, as determined by the State Land Office. The seed will be spread using a hand held broadcaster and the area raked or dragged to cover the seed. Because the seed will be broadcast, the pounds per acre will be doubled. The seed mix will be provided by the NMSLO.

The site will be visited on a quarterly basis to assess the establishment of vegetative growth. Staff personnel performing the site visit will also look for the presence of noxious weeds at the site as indicated on the New Mexico Noxious Weeds List specified on the United States Department of Agriculture website. If a noxious weed is observed at the site, the NMSLO will be contacted to determine the most effective manner to eradicate it.

Following completion of the above activities EOG will request that no further action be required for the Site. Should you have any questions, or require additional information regarding this submittal, please feel free to contact myself or Bernie Bockisch at (505) 884-0672 or Bernard.Bockisch@ghd.com.

Sincerely,

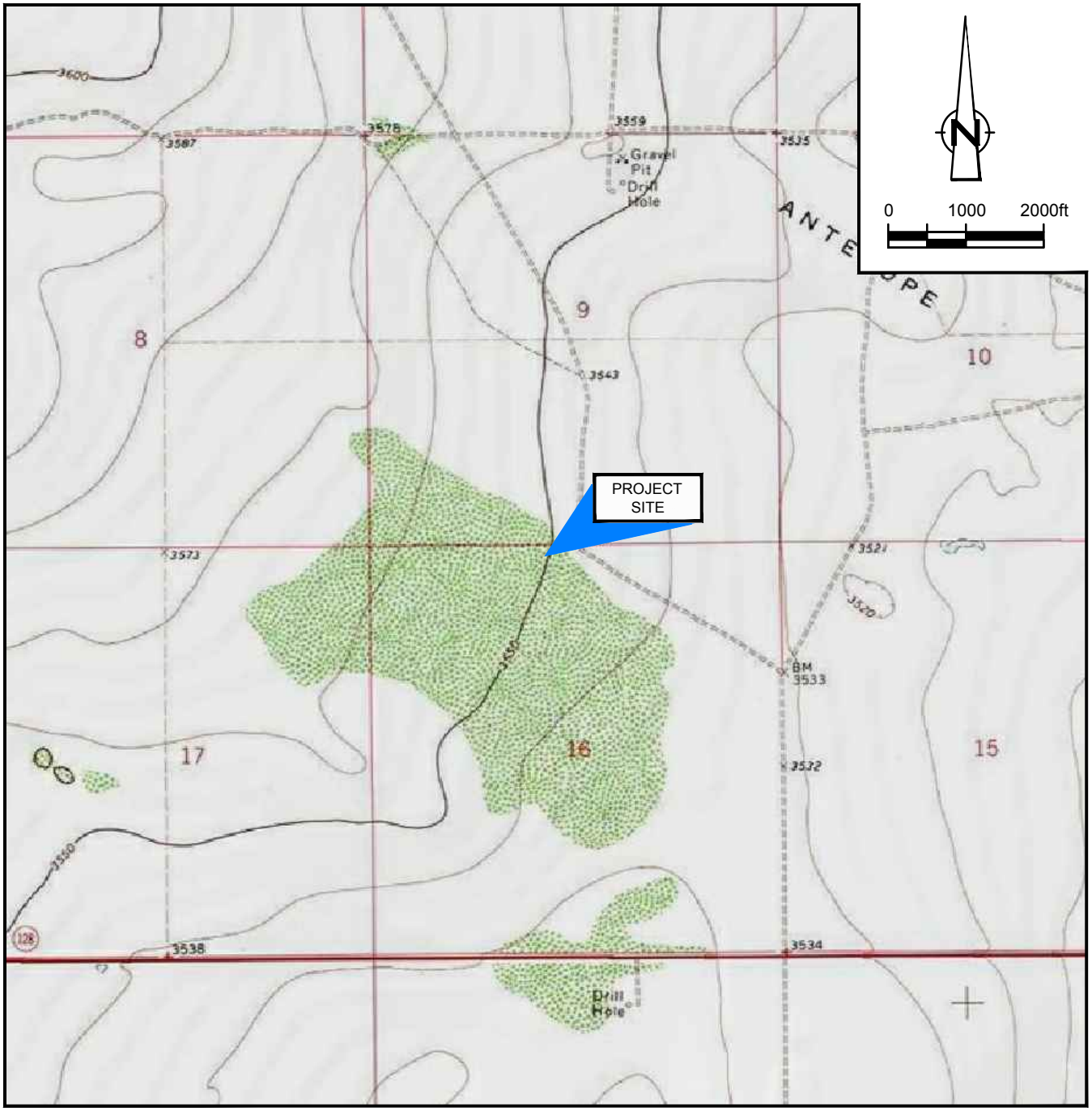
GHD

Betsy Gerwig
Senior Project Manager

Bernard Bockisch
Senior Project Manager

BB/mc/21

Figures



SOURCE: USGS 7.5 MINUTE QUAD
"WOODLEY FLAT AND BELL LAKE, NEW MEXICO"

LAT/LONG: 32.2244° NORTH, 103.4762° WEST
COORDINATE: NAD83 DATUM, U.S. FOOT
STATE PLANE ZONE - NEW MEXICO EAST

Figure 1

SITE LOCATION MAP
JOLLY ROGER 16 STATE 1
LEA COUNTY, NEW MEXICO
EOG Resources

GHD

088210-21(000)GN-DL001 APR 27/2016

Not to Scale

Rangeland

Buried Pipeline

Multiple Polylines

S-088210-21-081116-SP-01
Depth: 4' Chloride: 39

S-088210-21-081116-SP-02
Depth: 4' Chloride: 130

S-088210-21-081116-SP-04
Depth: 4' Chloride: 34

S-088210-21-080216-SP-04
Depth: 4' Chloride: 36

S-088210-21-081016-SP-07
Depth: 4' Chloride: <30

S-088210-21-080216-SP-06
Depth: 4' Chloride: 120

S-088210-21-081116-SP-06
Depth: 9' Chloride: 200

S-088210-21-061016-SP-14
Depth: 4' Chloride: 1400

S-088210-21-061016-SP-01
Depth: 4' Chloride: ND

S-088210-21-061016-SP-08
Depth: 4' Chloride: 350

S-088210-21-061016-SP-06
Depth: 4' Chloride: 53

S-088210-21-100716-SP-03
Depth: 6' Chloride: <30

S-088210-21-081116-SP-05
Depth: 4' Chloride: <30

S-088210-21-081116-SP-08
Depth: 4' Chloride: 140

S-088210-21-061016-SP-10
Depth: 4' Chloride: 420

S-088210-21-061016-SP-11
Depth: 6' Chloride: 130

S-088210-21-061016-SP-12
Depth: 8' Chloride: 400

S-088210-21-061016-SP-13
Depth: 10' Chloride: 340

S-088210-21-081116-SP-03
Depth: 12' Chloride: 290

S-088210-21-081116-SP-07
Depth: 4' Chloride: 92

Rangeland

S-088210-21-061016-SP-07
Depth: 4' Chloride: 160

S-088210-21-061016-SP-02
Depth: 4' Chloride: 280

S-088210-21-061016-SP-05
Depth: 4' Chloride: ND

S-088210-21-080216-SP-03
Depth: 4' Chloride: 130

S-088210-21-100716-SP-01
Depth: 6' Chloride: <30

S-088210-21-061016-SP-09
Depth: 4' Chloride: 750

S-088210-21-061016-SP-04
Depth: 4' Chloride: ND

S-088210-21-081016-SP-01
Depth: 4' Chloride: 110

S-088210-21-081016-SP-02
Depth: 4' Chloride: 120

S-088210-21-081016-SP-06
Depth: 4' Chloride: 100

S-088210-21-061016-SP-03
Depth: 4' Chloride: ND

S-088210-21-080216-SP-05
Depth: 4' Chloride: 130

S-088210-21-081016-SP-04
Depth: 6' Chloride: 35

S-088210-21-061016-SP-15
Depth: 4' Chloride: 97

S-088210-21-080216-SP-01
Depth: 4' Chloride: 330

S-088210-21-081016-SP-03
Depth: 4' Chloride: 100

S-088210-21-081016-SP-05
Depth: 4' Chloride: 65

To Battery

S-088210-21-080216-SP-02
Depth: 4' Chloride: 80

S-088210-21-100716-SP-02
Depth: 6' Chloride: <30

LEGEND

- Soil Sample Location (June 2016)
- Soil Sample Location (August 2, 2016)
- Soil Sample Location (August 10, 2016)
- Soil Sample Location (August 11, 2016)
- Soil Sample Location (October 7, 2016)
- Impacted Area
- Buried Pipeline
- ND Not Detected

GHD

Figure 2

SITE DETAIL MAP
JOLLY ROGER 16 STATE 1
LEA COUNTY, NEW MEXICO
EOG Resources

088210-21(000)GN-DL002 NOV 8, 2016

Tables

Table 1

Jolly Roger 16 State No. 1 Soil Analytical Data

Sample ID	Depth (ft. bgs)	Date	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	TPH (GRO)	TPH (DRO)	Total TPH	Chloride
CH2M Hill Sample Collection											
JR2-0-1-02172015	1.0	2/17/2015	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	**6,640**
JR2-3-4-02172015	4.0	2/17/2015	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	117
JR3-01-02172015	1.0	2/17/2015	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	50.7
JR4-0-1-02172015	1.0	2/17/2015	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<25.0
JR5-0-1-02172015	1.0	2/17/2015	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	**2,940**
JR5-1-2-02172015	2.0	2/17/2015	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	**595**
JR1-02162015	1.0	2/16/2015	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	87.3	87.3	**1,100**
Northeast Stockpile (JR16-NESP-05202015)	4-part comp	5/20/2015	<0.00491	<0.00505	<0.00842	<0.00406	<0.02244	<0.708	40.1	40.1	634
Off-pad East (OPE) (JR16-0.0-0.25-OPE-05202015)	0.25	5/20/2015	-	-	-	-	-	-	-	-	<21.0
Off-pad North (OPN) (JR16-0.0-0.25-OPN-05202015)	0.25	5/20/2015	-	-	-	-	-	-	-	-	**5,680**
North Stockpile (JR16-NSP-05202015)	4-part comp	5/20/2015	<0.00502	<0.00516	<0.00861	<0.00415	<0.02294	<0.724	8.88	8.88	<21.8
JR2 Resample (JR16-0.0-0.5-C-05202015)	0.5	5/20/2015	-	-	-	-	-	-	-	-	212
10' North of JR2 (JR16-0.0-0.5-N-05202015)	0.5	5/20/2015	-	-	-	-	-	-	-	-	215
5' South of JR2 (JR16-0.0-0.5-S-05202015)	0.5	5/20/2015	-	-	-	-	-	-	-	-	**368**
10' East of JR2 (JR16-0.0-0.5-E-05202015)	0.5	5/20/2015	-	-	-	-	-	-	-	-	110
10' West of JR2 (JR16-0.0-0.5-W-05202015)	0.5	5/20/2015	-	-	-	-	-	-	-	-	118
GHD Sample Collection											
S-088210-21-033116-SP-1	4.0	31/03/2016	<0.024	<0.048	<0.048	<0.097	<0.217	<4.8	<9.9	<14.7	**1,400**
S-088210-21-033116-SP-2	4.0	31/03/2016	<0.025	<0.049	<0.049	<0.099	<0.222	<4.9	<9.3	<14.2	<30
S-088210-21-033116-SP-3	2.5	31/03/2016	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<9.7	<14.5	**1,700**
S-088210-21-033116-SP-4	2.5	31/03/2016	<0.024	<0.049	<0.049	<0.097	<0.219	<4.9	<9.4	<14.3	<30
S-088210-21-033116-SP-5	4.0	31/03/2016	<0.023	<0.047	<0.047	<0.094	<0.211	<4.7	<9.9	<14.6	**1,200**
S-088210-21-033116-SP-6	3.5	31/03/2016	<0.023	<0.046	<0.046	<0.093	<0.208	<4.6	<9.4	<14	36
S-088210-21-033116-SP-7	4.0	31/03/2016	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<10	<14.8	190
S-088210-21-033116-SP-8	3.0	31/03/2016	<0.024	<0.047	<0.047	<0.094	<0.212	<4.7	<9.3	<14	43
S-088210-21-033116-SP-9	2.5	31/03/2016	<0.025	<0.050	<0.050	<0.10	<0.225	<5.0	<9.2	<14.2	<30
S-088210-21-061016-SP-01	4.0	10/06/2016	-	-	-	-	-	-	-	-	<30
S-088210-21-061016-SP-02	4.0	10/06/2016	-	-	-	-	-	-	-	-	**280**
S-088210-21-061016-SP-03	4.0	10/06/2016	-	-	-	-	-	-	-	-	<30
S-088210-21-061016-SP-04	4.0	10/06/2016	-	-	-	-	-	-	-	-	<30
S-088210-21-061016-SP-05	4.0	10/06/2016	-	-	-	-	-	-	-	-	<30
S-088210-21-061016-SP-06	4.0	10/06/2016	-	-	-	-	-	-	-	-	53
S-088210-21-061016-SP-07	4.0	10/06/2016	-	-	-	-	-	-	-	-	160
S-088210-21-061016-SP-08	4.0	10/06/2016	-	-	-	-	-	-	-	-	**350**
S-088210-21-061016-SP-09	4.0	10/06/2016	-	-	-	-	-	-	-	-	**750**
S-088210-21-061016-SP-10	4.0	10/06/2016	-	-	-	-	-	-	-	-	**420**
S-088210-21-061016-SP-11	6.0	10/06/2016	-	-	-	-	-	-	-	-	130
S-088210-21-061016-SP-12	8.0	10/06/2016	-	-	-	-	-	-	-	-	**400**
S-088210-21-061016-SP-13	10.0	10/06/2016	-	-	-	-	-	-	-	-	**340**
S-088210-21-061016-SP-14	4.0	10/06/2016	-	-	-	-	-	-	-	-	**1,400**
S-088210-21-061016-SP-15	4.0	10/06/2016	-	-	-	-	-	-	-	-	97
S-088210-21-080216-SP-01	4.0	2/08/2016	-	-	-	-	-	-	-	-	**330**
S-088210-21-080216-SP-02	4.0	2/08/2016	-	-	-	-	-	-	-	-	80
S-088210-21-080216-SP-03	4.0	2/08/2016	-	-	-	-	-	-	-	-	130
S-088210-21-080216-SP-04	4.0	2/08/2016	-	-	-	-	-	-	-	-	36
S-088210-21-080216-SP-05	4.0	2/08/2016	-	-	-	-	-	-	-	-	130
S-088210-21-080216-SP-06	4.0	2/08/2016	-	-	-	-	-	-	-	-	120
S-088210-21-081016-SP-01	4.0	10/08/2016	-	-	-	-	-	-	-	-	110
S-088210-21-081016-SP-02	4.0	10/08/2016	-	-	-	-	-	-	-	-	120
S-088210-21-081016-SP-03	4.0	10/08/2016	-	-	-	-	-	-	-	-	100
S-088210-21-081016-SP-04	6.0	10/08/2016	-	-	-	-	-	-	-	-	35
S-088210-21-081016-SP-05	4.0	10/08/2016	-	-	-	-	-	-	-	-	65
S-088210-21-081016-SP-06	4.0	10/08/2016	-	-	-	-	-	-	-	-	100
S-088210-21-081016-SP-07	4.0	10/08/2016	-	-	-	-	-	-	-	-	<30
S-088210-21-081116-SP-01	4.0	11/08/2016	-	-	-	-	-	-	-	-	39
S-088210-21-081116-SP-02	4.0	11/08/2016	-	-	-	-	-	-	-	-	130
S-088210-21-081116-SP-03	12.0	11/08/2016	-	-	-	-	-	-	-	-	**290**
S-088210-21-081116-SP-04	4.0	11/08/2016	-	-	-	-	-	-	-	-	34
S-088210-21-081116-SP-05	4.0	11/08/2016	-	-	-	-	-	-	-	-	<30
S-088210-21-081116-SP-06	9.0	11/08/2016	-	-	-	-	-	-	-	-	200
S-088210-21-081116-SP-07	4.0	11/08/2016	-	-	-	-	-	-	-	-	92
S-088210-21-081116-SP-08	4.0	11/08/2016	-	-	-	-	-	-	-	-	140
S-088210-21-081116-SP-09	stockpile	11/08/2016	-	-	-	-	-	-	-	-	390
S-088210-21-081116-SP-010	stockpile	11/08/2016	-	-	-	-	-	-	-	-	610
S-088210-21-100716-SP-01	6.0	7/10/2016	-	-	-	-	-	-	-	-	<30
S-088210-21-100716-SP-02	6.0	7/10/2016	-	-	-	-	-	-	-	-	<30
S-088210-21-100716-SP-03	6.0	7/10/2016	-	-	-	-	-	-	-	-	<30
Recommended Remediation Action Limits			**10**	**Total BTEX: 50**				**Total TPH: 1000**			**250**

Notes:
All samples are in milligrams per kilogram
Bolded numbers are above the RRAL
TraceAnalysis, Inc. completed analsys of CH2M Hill samples.
Hall Environmental Analysis Laboratory completed the analysis for GHD samples.

Appendices

Appendix A
Water Well Records

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

Click to hideNews Bulletins

Please see news on new formats
- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 321402103274801

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 321402103274801 24S.34E.10.11221

Lea County, New Mexico
Latitude 32°14'02", Longitude 103°27'48" NAD27
Land-surface elevation 3,535 feet above NAVD88
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurem
1968-06-12		D	71.42			2		U		
1970-12-08		D	69.73			2		U		

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	U	Unknown
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

USGS science for a changing world

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

Click to hideNews Bulletins

Please see news on new formats
- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 321402103275001

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 321402103275001 24S.34E.10.11212

Lea County, New Mexico
Latitude 32°14'02", Longitude 103°27'50" NAD27
Land-surface elevation 3,536 feet above NAVD88
The depth of the well is 83 feet below land surface.
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurem
1953-04-27		D	71.75			2		U		
1955-06-03		D	71.91			2		U		

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	U	Unknown
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms

Appendix B
Laboratory Analytical Data

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

April 15, 2016

Bernie Bockish

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

RE: Jolly Roger 16 State #1 OrderNo.: 1604273

Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 9 sample(s) on 4/6/2016 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 qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: S-088210-21-033116-SP-01
Project: Jolly Roger 16 State #1
Collection Date: 3/31/2016 3:25:00 PM
Lab ID: 1604273-001 **Matrix:** SOIL **Received Date:** 4/6/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	1400	75		mg/Kg	50	4/13/2016 2:47:54 PM	24742
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/11/2016 2:27:07 PM	24685
Surr: DNOP	78.3	70-130		%Rec	1	4/11/2016 2:27:07 PM	24685
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/8/2016 10:34:57 AM	24681
Surr: BFB	103	66.2-112		%Rec	1	4/8/2016 10:34:57 AM	24681
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	4/8/2016 10:34:57 AM	24681
Toluene	ND	0.048		mg/Kg	1	4/8/2016 10:34:57 AM	24681
Ethylbenzene	ND	0.048		mg/Kg	1	4/8/2016 10:34:57 AM	24681
Xylenes, Total	ND	0.097		mg/Kg	1	4/8/2016 10:34:57 AM	24681
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	4/8/2016 10:34:57 AM	24681

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: S-088210-21-033116-SP-02
Project: Jolly Roger 16 State #1
Collection Date: 3/31/2016 3:45:00 PM
Lab ID: 1604273-002 **Matrix:** SOIL **Received Date:** 4/6/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	4/11/2016 6:57:35 PM	24742
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/11/2016 3:31:33 PM	24685
Surr: DNOP	77.1	70-130		%Rec	1	4/11/2016 3:31:33 PM	24685
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/8/2016 11:45:26 AM	24681
Surr: BFB	98.9	66.2-112		%Rec	1	4/8/2016 11:45:26 AM	24681
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	4/8/2016 11:45:26 AM	24681
Toluene	ND	0.049		mg/Kg	1	4/8/2016 11:45:26 AM	24681
Ethylbenzene	ND	0.049		mg/Kg	1	4/8/2016 11:45:26 AM	24681
Xylenes, Total	ND	0.099		mg/Kg	1	4/8/2016 11:45:26 AM	24681
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	4/8/2016 11:45:26 AM	24681

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: S-088210-21-033116-SP-03
Project: Jolly Roger 16 State #1
Collection Date: 3/31/2016 4:05:00 PM
Lab ID: 1604273-003 **Matrix:** SOIL **Received Date:** 4/6/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	1700	75		mg/Kg	50	4/13/2016 3:00:18 PM	24742
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/11/2016 3:53:05 PM	24685
Surr: DNOP	72.6	70-130		%Rec	1	4/11/2016 3:53:05 PM	24685
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/8/2016 12:55:56 PM	24681
Surr: BFB	101	66.2-112		%Rec	1	4/8/2016 12:55:56 PM	24681
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	4/8/2016 12:55:56 PM	24681
Toluene	ND	0.048		mg/Kg	1	4/8/2016 12:55:56 PM	24681
Ethylbenzene	ND	0.048		mg/Kg	1	4/8/2016 12:55:56 PM	24681
Xylenes, Total	ND	0.096		mg/Kg	1	4/8/2016 12:55:56 PM	24681
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	4/8/2016 12:55:56 PM	24681

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: S-088210-21-033116-SP-04
Project: Jolly Roger 16 State #1
Collection Date: 3/31/2016 4:30:00 PM
Lab ID: 1604273-004 **Matrix:** SOIL **Received Date:** 4/6/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	4/11/2016 7:22:23 PM	24742
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/11/2016 4:14:28 PM	24685
Surr: DNOP	79.8	70-130		%Rec	1	4/11/2016 4:14:28 PM	24685
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/8/2016 1:19:25 PM	24681
Surr: BFB	101	66.2-112		%Rec	1	4/8/2016 1:19:25 PM	24681
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	4/8/2016 1:19:25 PM	24681
Toluene	ND	0.049		mg/Kg	1	4/8/2016 1:19:25 PM	24681
Ethylbenzene	ND	0.049		mg/Kg	1	4/8/2016 1:19:25 PM	24681
Xylenes, Total	ND	0.097		mg/Kg	1	4/8/2016 1:19:25 PM	24681
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	4/8/2016 1:19:25 PM	24681

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: S-088210-21-033116-SP-05
Project: Jolly Roger 16 State #1
Collection Date: 3/31/2016 4:50:00 PM
Lab ID: 1604273-005 **Matrix:** SOIL **Received Date:** 4/6/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	1200	75		mg/Kg	50	4/13/2016 3:12:43 PM	24742
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/11/2016 4:36:01 PM	24685
Surr: DNOP	76.7	70-130		%Rec	1	4/11/2016 4:36:01 PM	24685
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/8/2016 1:42:52 PM	24681
Surr: BFB	101	66.2-112		%Rec	1	4/8/2016 1:42:52 PM	24681
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	4/8/2016 1:42:52 PM	24681
Toluene	ND	0.047		mg/Kg	1	4/8/2016 1:42:52 PM	24681
Ethylbenzene	ND	0.047		mg/Kg	1	4/8/2016 1:42:52 PM	24681
Xylenes, Total	ND	0.094		mg/Kg	1	4/8/2016 1:42:52 PM	24681
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	4/8/2016 1:42:52 PM	24681

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: S-088210-21-033116-SP-06
Project: Jolly Roger 16 State #1
Collection Date: 3/31/2016 5:10:00 PM
Lab ID: 1604273-006 **Matrix:** SOIL **Received Date:** 4/6/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	36	30		mg/Kg	20	4/11/2016 7:47:12 PM	24742
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/11/2016 4:57:29 PM	24685
Surr: DNOP	76.0	70-130		%Rec	1	4/11/2016 4:57:29 PM	24685
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/8/2016 2:06:16 PM	24681
Surr: BFB	102	66.2-112		%Rec	1	4/8/2016 2:06:16 PM	24681
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	4/8/2016 2:06:16 PM	24681
Toluene	ND	0.046		mg/Kg	1	4/8/2016 2:06:16 PM	24681
Ethylbenzene	ND	0.046		mg/Kg	1	4/8/2016 2:06:16 PM	24681
Xylenes, Total	ND	0.093		mg/Kg	1	4/8/2016 2:06:16 PM	24681
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	4/8/2016 2:06:16 PM	24681

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: S-088210-21-033116-SP-07
Project: Jolly Roger 16 State #1
Collection Date: 3/31/2016 5:30:00 PM
Lab ID: 1604273-007 **Matrix:** SOIL **Received Date:** 4/6/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	190	30		mg/Kg	20	4/11/2016 8:24:26 PM	24742
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/12/2016 8:39:13 AM	24685
Surr: DNOP	72.2	70-130		%Rec	1	4/12/2016 8:39:13 AM	24685
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/8/2016 2:29:45 PM	24681
Surr: BFB	102	66.2-112		%Rec	1	4/8/2016 2:29:45 PM	24681
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	4/8/2016 2:29:45 PM	24681
Toluene	ND	0.048		mg/Kg	1	4/8/2016 2:29:45 PM	24681
Ethylbenzene	ND	0.048		mg/Kg	1	4/8/2016 2:29:45 PM	24681
Xylenes, Total	ND	0.096		mg/Kg	1	4/8/2016 2:29:45 PM	24681
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	4/8/2016 2:29:45 PM	24681

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: S-088210-21-033116-SP-08
Project: Jolly Roger 16 State #1
Collection Date: 3/31/2016 5:50:00 PM
Lab ID: 1604273-008 **Matrix:** SOIL **Received Date:** 4/6/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	43	30		mg/Kg	20	4/11/2016 8:36:50 PM	24742
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/12/2016 9:00:42 AM	24685
Surr: DNOP	71.8	70-130		%Rec	1	4/12/2016 9:00:42 AM	24685
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/8/2016 2:53:12 PM	24681
Surr: BFB	102	66.2-112		%Rec	1	4/8/2016 2:53:12 PM	24681
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	4/8/2016 2:53:12 PM	24681
Toluene	ND	0.047		mg/Kg	1	4/8/2016 2:53:12 PM	24681
Ethylbenzene	ND	0.047		mg/Kg	1	4/8/2016 2:53:12 PM	24681
Xylenes, Total	ND	0.094		mg/Kg	1	4/8/2016 2:53:12 PM	24681
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	4/8/2016 2:53:12 PM	24681

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: S-088210-21-033116-SP-09
Project: Jolly Roger 16 State #1
Collection Date: 3/31/2016 6:00:00 PM
Lab ID: 1604273-009 **Matrix:** SOIL **Received Date:** 4/6/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	4/11/2016 8:49:15 PM	24742
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/11/2016 6:02:08 PM	24685
Surr: DNOP	72.9	70-130		%Rec	1	4/11/2016 6:02:08 PM	24685
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/8/2016 3:16:38 PM	24681
Surr: BFB	102	66.2-112		%Rec	1	4/8/2016 3:16:38 PM	24681
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	4/8/2016 3:16:38 PM	24681
Toluene	ND	0.050		mg/Kg	1	4/8/2016 3:16:38 PM	24681
Ethylbenzene	ND	0.050		mg/Kg	1	4/8/2016 3:16:38 PM	24681
Xylenes, Total	ND	0.10		mg/Kg	1	4/8/2016 3:16:38 PM	24681
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	4/8/2016 3:16:38 PM	24681

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1604273**

15-Apr-16

Client: GHD

Project: Jolly Roger 16 State #1

Sample ID	**MB-24742**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**24742**	RunNo:	**33467**					
Prep Date:	**4/11/2016**	Analysis Date:	**4/11/2016**	SeqNo:	**1029376**	Units:	**mg/Kg**			

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

Sample ID	**LCS-24742**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**24742**	RunNo:	**33467**					
Prep Date:	**4/11/2016**	Analysis Date:	**4/11/2016**	SeqNo:	**1029377**	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.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1604273**

15-Apr-16

Client: GHD

Project: Jolly Roger 16 State #1

Sample ID **1604273-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-088210-21-033116**	Batch ID: **24685**	RunNo: **33431**
Prep Date: **4/7/2016**	Analysis Date: **4/11/2016**	SeqNo: **1028302** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.51	0	90.5	31.2	162			
Surr: DNOP	3.9		5.051		77.1	70	130			

Sample ID **1604273-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-088210-21-033116**	Batch ID: **24685**	RunNo: **33431**
Prep Date: **4/7/2016**	Analysis Date: **4/11/2016**	SeqNo: **1028303** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.8	48.92	0	97.3	31.2	162	4.06	31.7	
Surr: DNOP	3.9		4.892		79.8	70	130	0	0	

Sample ID **LCS-24685**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **24685**	RunNo: **33431**
Prep Date: **4/7/2016**	Analysis Date: **4/11/2016**	SeqNo: **1028306** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.9	65.8	136			
Surr: DNOP	4.1		5.000		82.1	70	130			

Sample ID **MB-24685**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **24685**	RunNo: **33431**
Prep Date: **4/7/2016**	Analysis Date: **4/11/2016**	SeqNo: **1028307** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	7.9		10.00		79.4	70	130			

Sample ID **LCS-24721**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **24721**	RunNo: **33451**
Prep Date: **4/11/2016**	Analysis Date: **4/12/2016**	SeqNo: **1028810** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.9		5.000		78.3	70	130			

Sample ID **MB-24721**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **24721**	RunNo: **33451**
Prep Date: **4/11/2016**	Analysis Date: **4/12/2016**	SeqNo: **1028811** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.1		10.00		80.7	70	130			

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1604273**

15-Apr-16

Client: GHD

Project: Jolly Roger 16 State #1

Sample ID	**LCS-24759**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**24759**		RunNo:	**33451**				
Prep Date:	**4/12/2016**	Analysis Date:	**4/13/2016**		SeqNo:	**1030989**	Units:	**%Rec**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.7		5.000		73.6	70	130			

Sample ID	**MB-24759**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**24759**		RunNo:	**33451**				
Prep Date:	**4/12/2016**	Analysis Date:	**4/13/2016**		SeqNo:	**1030990**	Units:	**%Rec**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.5		10.00		74.8	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1604273**

15-Apr-16

Client: GHD

Project: Jolly Roger 16 State #1

Sample ID	**MB-24681**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**24681**	RunNo:	**33413**					
Prep Date:	**4/7/2016**	Analysis Date:	**4/8/2016**	SeqNo:	**1027435**	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		98.8	66.2	112			

Sample ID	**LCS-24681**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**24681**	RunNo:	**33413**					
Prep Date:	**4/7/2016**	Analysis Date:	**4/8/2016**	SeqNo:	**1027436**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	5.0	25.00	0	82.0	80	120			
Surr: BFB	1100		1000		109	66.2	112			

Sample ID	**1604273-002AMS**	SampType:	**MS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**S-088210-21-033116**	Batch ID:	**24681**	RunNo:	**33413**					
Prep Date:	**4/7/2016**	Analysis Date:	**4/8/2016**	SeqNo:	**1027439**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	4.6	23.02	0	82.5	59.3	143			
Surr: BFB	1000		920.8		111	66.2	112			

Sample ID	**1604273-002AMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**S-088210-21-033116**	Batch ID:	**24681**	RunNo:	**33413**					
Prep Date:	**4/7/2016**	Analysis Date:	**4/8/2016**	SeqNo:	**1027440**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	4.7	23.63	0	78.7	59.3	143	2.15	20	
Surr: BFB	1000		945.2		111	66.2	112	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1604273**

15-Apr-16

Client: GHD

Project: Jolly Roger 16 State #1

Sample ID	**MB-24681**	SampType: **MBLK**		TestCode: **EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID: **24681**		RunNo: **33413**					
Prep Date:	**4/7/2016**	Analysis Date: **4/8/2016**		SeqNo: **1027450**		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	80	120			

Sample ID	**LCS-24681**	SampType: **LCS**		TestCode: **EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID: **24681**		RunNo: **33413**					
Prep Date:	**4/7/2016**	Analysis Date: **4/8/2016**		SeqNo: **1027451**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.025	1.000	0	87.0	75.3	123			
Toluene	0.83	0.050	1.000	0	83.3	80	124			
Ethylbenzene	0.81	0.050	1.000	0	81.4	82.8	121			S
Xylenes, Total	2.4	0.10	3.000	0	81.4	83.9	122			S
Surr: 4-Bromofluorobenzene	1.1		1.000		109	80	120			

Sample ID	**1604273-001AMS**	SampType: **MS**		TestCode: **EPA Method 8021B: Volatiles**					
Client ID:	**S-088210-21-033116**	Batch ID: **24681**		RunNo: **33413**					
Prep Date:	**4/7/2016**	Analysis Date: **4/8/2016**		SeqNo: **1027453**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.024	0.9671	0	103	71.5	122			
Toluene	1.0	0.048	0.9671	0.01361	103	71.2	123			
Ethylbenzene	1.0	0.048	0.9671	0	105	75.2	130			
Xylenes, Total	3.0	0.097	2.901	0	105	72.4	131			
Surr: 4-Bromofluorobenzene	1.1		0.9671		112	80	120			

Sample ID	**1604273-001AMSD**	SampType: **MSD**		TestCode: **EPA Method 8021B: Volatiles**					
Client ID:	**S-088210-21-033116**	Batch ID: **24681**		RunNo: **33413**					
Prep Date:	**4/7/2016**	Analysis Date: **4/8/2016**		SeqNo: **1027454**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.024	0.9785	0	94.7	71.5	122	7.37	20	
Toluene	0.96	0.049	0.9785	0.01361	96.5	71.2	123	5.28	20	
Ethylbenzene	0.99	0.049	0.9785	0	102	75.2	130	2.01	20	
Xylenes, Total	3.0	0.098	2.935	0	101	72.4	131	2.70	20	
Surr: 4-Bromofluorobenzene	1.1		0.9785		111	80	120	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: GHD | Work Order Number: 1604273 | RcptNo: 1

Received by/date: 04/06/16

Logged By: **Ashley Gallegos** 4/6/2016 9:40:00 AM

Completed By: **Ashley Gallegos** 4/7/2016 11:02:23 AM

Reviewed By: 04/07/16

Chain of Custody

1. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	Client		

Log In

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

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

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.7	Good	Yes			

Chain-of-Custody Record

Client: GHD - Albuquerque

Mailing Address: 6121 Indian School Rd NE

Ste 200, Albuquerque, NM, 87110

Phone #: 505-884-0672

email or Fax#: Bernard.Bockisch@ghd.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

☑ Standard ☐ Rush _____

Project Name: Jolly Roger 16 State #1

Project #: 088210/21

Project Manager: Bernard Bockisch 505-884-0672

Sampler: Steve Perez

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.7

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1604273	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride 300.0	BTEX 8021	TPH 8015 GRO/DRO		Air Bubbles (Y or N)
3/31-16	1525	Soil	S-088210-21-033116-SP-01	4oz Glass-1	Ice	-001												X	X	X		
	1545		S-088210-21-033116-SP-02			-002																
	1605		S-088210-21-033116-SP-03			-003																
	1630		S-088210-21-033116-SP-04			-004																
	1650		S-088210-21-033116-SP-05			-005																
	1710		S-088210-21-033116-SP-06			-006																
	1730		S-088210-21-033116-SP-07			-007																
	1750		S-088210-21-033116-SP-08			-008																
↓	1800	↓	S-088210-21-033116-SP-09	↓	↓	-009												↓	↓	↓		
			4/4/16 PER SAR																			

Date	Time	Relinquished by:	Received by:	Date	Time
3/31-16		Steven Perez			
4/1/16	0940			4/1/16	0940

Remarks:

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

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

June 24, 2016

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

RE: Jolly Roger 16 State 1 OrderNo.: 1606765

Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 15 sample(s) on 6/14/2016 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 qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: Jolly Roger 16 State 1
Lab Order: 1606765

Lab ID: 1606765-001 **Collection Date:** 6/10/2016 9:23:00 AM
Client Sample ID: S-088210-21-061016-SP-01 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	6/16/2016 10:20:14 PM	25913

Lab ID: 1606765-002 **Collection Date:** 6/10/2016 10:13:00 AM
Client Sample ID: S-088210-21-061016-SP-02 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	280	30		mg/Kg	20	6/16/2016 10:57:29 PM	25913

Lab ID: 1606765-003 **Collection Date:** 6/10/2016 10:44:00 AM
Client Sample ID: S-088210-21-061016-SP-03 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	6/16/2016 11:34:43 PM	25913

Lab ID: 1606765-004 **Collection Date:** 6/10/2016 11:18:00 AM
Client Sample ID: S-088210-21-061016-SP-04 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	6/16/2016 11:47:08 PM	25913

Lab ID: 1606765-005 **Collection Date:** 6/10/2016 12:07:00 PM
Client Sample ID: S-088210-21-061016-SP-05 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	6/16/2016 11:59:33 PM	25913

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: Jolly Roger 16 State 1
Lab Order: 1606765

Lab ID: 1606765-006 **Collection Date:** 6/10/2016 12:10:00 PM
Client Sample ID: S-088210-21-061016-SP-06 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	53	30		mg/Kg	20	6/17/2016 12:11:57 AM	25913

Lab ID: 1606765-007 **Collection Date:** 6/10/2016 12:42:00 PM
Client Sample ID: S-088210-21-061016-SP-07 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	160	30		mg/Kg	20	6/17/2016 12:24:22 AM	25913

Lab ID: 1606765-008 **Collection Date:** 6/10/2016 2:48:00 PM
Client Sample ID: S-088210-21-061016-SP-08 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	350	30		mg/Kg	20	6/17/2016 12:36:47 AM	25913

Lab ID: 1606765-009 **Collection Date:** 6/10/2016 2:53:00 PM
Client Sample ID: S-088210-21-061016-SP-09 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	750	30		mg/Kg	20	6/17/2016 12:49:12 AM	25913

Lab ID: 1606765-010 **Collection Date:** 6/10/2016 3:15:00 PM
Client Sample ID: S-088210-21-061016-SP-10 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	420	30		mg/Kg	20	6/17/2016 1:01:36 AM	25913

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: Jolly Roger 16 State 1
Lab Order: 1606765

Lab ID: 1606765-011 **Collection Date:** 6/10/2016 3:17:00 PM
Client Sample ID: S-088210-21-061016-SP-11 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	130	30		mg/Kg	20	6/17/2016 1:14:00 AM	25913

Lab ID: 1606765-012 **Collection Date:** 6/10/2016 3:20:00 PM
Client Sample ID: S-088210-21-061016-SP-12 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	400	30		mg/Kg	20	6/17/2016 1:26:25 AM	25913

Lab ID: 1606765-013 **Collection Date:** 6/10/2016 3:25:00 PM
Client Sample ID: S-088210-21-061016-SP-13 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	340	30		mg/Kg	20	6/17/2016 2:03:38 AM	25913

Lab ID: 1606765-014 **Collection Date:** 6/10/2016 3:52:00 PM
Client Sample ID: S-088210-21-061016-SP-14 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	1400	75		mg/Kg	50	6/18/2016 5:32:27 AM	25913

Lab ID: 1606765-015 **Collection Date:** 6/10/2016 4:00:00 PM
Client Sample ID: S-088210-21-061016-SP-15 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	97	30		mg/Kg	20	6/17/2016 2:28:28 AM	25913

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1606765**

24-Jun-16

Client: GHD

Project: Jolly Roger 16 State 1

Sample ID	**MB-25913**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**25913**	RunNo:	**34989**					
Prep Date:	**6/16/2016**	Analysis Date:	**6/16/2016**	SeqNo:	**1081418**	Units:	**mg/Kg**			

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

Sample ID	**LCS-25913**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**25913**	RunNo:	**34989**					
Prep Date:	**6/16/2016**	Analysis Date:	**6/16/2016**	SeqNo:	**1081419**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.6	90	110			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **GHD** Work Order Number: **1606765** RcptNo: **1**

Received by/date: 06/14/16

Logged By: **Lindsay Mangin** **6/14/2016 10:00:00 AM**

Completed By: **Lindsay Mangin** **6/14/2016 3:17:56 PM**

Reviewed By: 06/15/16

Chain of Custody

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

Log In

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

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.7	Good	Yes			

Chain-of-Custody Record

ent: GHD - Albuquerque

ailing Address: 6121 Indian School Rd NE
200, Albuquerque, NM, 87110

one #: 505-884-0672

ail or Fax#: Bernard.Bockisch@ghd.com

/QC Package:
Standard ☐ Level 4 (Full Validation)

creditation
NELAP ☐ Other _____

EDD (Type) _____

Turn-Around Time:
☑ Standard ☐ Rush _____

Project Name:
Jolly Roger 16 State #1

Project #:
088210/21

Project Manager:
Bernard Bockisch
505-280-0572

Sampler: Steve Perez

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.7

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1606765	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride 300.0				Air Bubbles (Y or N)
10-16	923	Soil	S-088210-21-061016-SP-01	4oz-glass-1	ICE	-001												X				
	1013		S-088210-21-061016-SP-02			-002																
	1044		S-088210-21-061016-SP-03			-003																
	1118		S-088210-21-061016-SP-04			-004																
	1207		S-088210-21-061016-SP-05			-005																
	1210		S-088210-21-061016-SP-06			-006																
	1242		S-088210-21-061016-SP-07			-007																
	1448		S-088210-21-061016-SP-08			-008																
	1453		S-088210-21-061016-SP-09			-009																
	1515		S-088210-21-061016-SP-10			-010																
	1517		S-088210-21-061016-SP-11			-011																
	1520		S-088210-21-061016-SP-12	↓	↓	-012												↓				

Date:	Time:	Relinquished by:	Received by:	Date	Time
6-16	0830	Steven Perez		6/15/16	0830
13/16	1900			06/14/16	1000

Remarks:

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

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Client: GHD-Albuquerque	Turn-Around Time: ☑ Standard ☐ Rush
Mailing Address: 6121 Indian School Rd NE	Project Name: Jolly Roger 16 State #1
Suite 200, Albuquerque, NM, 87110	Project #: 088210/21
Phone #: 505-884-0672	Project Manager: Bernard Bockisch 505-280-0572
email or Fax#: Bernard.Bockisch@ghd.com	Sampler:
QA/QC Package: Standard ☐ Level 4 (Full Validation)	On Ice: ☒ Yes ☐ No
Accreditation: NELAP ☐ Other	Sample Temperature: 1.7
EDD (Type)	

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1607165	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride 300.0				Air Bubbles (Y or N)
6-16	1525	Soil	S-088210-21-061016-SP-13	4oz glass-1	ICE	-013												X				
6-16	1552	↓	S-088210-21-061016-SP-14	↓	↓	-014												X				
6-16	1600	↓	S-088210-21-061016-SP-15	↓	↓	-015												X				

Date	Time	Relinquished by	Received by	Date	Time
13/16	0830			6/13/16	0830
3/16	1900		Jane. Cent	06/14/16	1000

Remarks:

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

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

August 10, 2016

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

RE: Jolly Roger 16 State #1 OrderNo.: 1608310

Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 6 sample(s) on 8/4/2016 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 qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: Jolly Roger 16 State #1
Lab Order: 1608310

Lab ID: 1608310-001 **Collection Date:** 8/2/2016 3:24:00 PM
Client Sample ID: S-088210-21-080216-SP-01 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	330	30		mg/Kg	20	8/8/2016 1:50:22 PM	26851

Lab ID: 1608310-002 **Collection Date:** 8/2/2016 3:27:00 PM
Client Sample ID: S-088210-21-080216-SP-02 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	80	30		mg/Kg	20	8/8/2016 2:27:34 PM	26851

Lab ID: 1608310-003 **Collection Date:** 8/2/2016 3:31:00 PM
Client Sample ID: S-088210-21-080216-SP-03 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	130	30		mg/Kg	20	8/8/2016 2:39:58 PM	26851

Lab ID: 1608310-004 **Collection Date:** 8/2/2016 3:35:00 PM
Client Sample ID: S-088210-21-080216-SP-04 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	36	30		mg/Kg	20	8/8/2016 2:52:22 PM	26851

Lab ID: 1608310-005 **Collection Date:** 8/2/2016 3:38:00 PM
Client Sample ID: S-088210-21-080216-SP-05 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	130	30		mg/Kg	20	8/8/2016 3:04:47 PM	26851

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: Jolly Roger 16 State #1

Lab Order: 1608310

Lab ID: 1608310-006
Collection Date: 8/2/2016 3:42:00 PM
Client Sample ID: S-088210-21-080216-SP-06
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	120	30		mg/Kg	20	8/8/2016 3:17:12 PM	26851

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1608310**

10-Aug-16

Client: GHD

Project: Jolly Roger 16 State #1

Sample ID	**MB-26851**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**26851**	RunNo:	**36324**					
Prep Date:	**8/8/2016**	Analysis Date:	**8/8/2016**	SeqNo:	**1125060**	Units:	**mg/Kg**			

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

Sample ID	**LCS-26851**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**26851**	RunNo:	**36324**					
Prep Date:	**8/8/2016**	Analysis Date:	**8/8/2016**	SeqNo:	**1125061**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.9	90	110			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: GHD | Work Order Number: 1608310 | RcptNo: 1

Received by/date: [signature] 08/04/16

Logged By: Ashley Gallegos 8/4/2016 9:30:00 AM [signature]

Completed By: Ashley Gallegos 8/4/2016 7:20:58 PM [signature]

Reviewed By: IO 08/05/16

Chain of Custody

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

Log In

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

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.1	Good	Yes			

Chain-of-Custody Record

ent: GHD - Albuquerque

iling Address: 6121 Indian School Rd NE Ste 200, Albuquerque, NM, 87110

one #: 505-884-0672

ail or Fax#:

/QC Package: Standard ☐ Level 4 (Full Validation)

creditation: NELAP ☐ Other

EDD (Type)

Turn-Around Time: ☑ Standard ☐ Rush

Project Name: Jolly Roger 16 State #1

Project #: 08210/21

Project Manager: Bernard Bockisch

Sampler: Steve Perez

On Ice: ☐ Yes ☐ No

Sample Temperature: 4.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

ate	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1008310
-16		Soil 1524	S-088210-21-080216-SP-01	4oz glass-1	ICE	-001
		1527	S-088210-21-080216-SP-02			-002
		1531	S-088210-21-080216-SP-03			-003
		1535	S-088210-21-080216-SP-04			-004
		1538	S-088210-21-080216-SP-05			-005
		1542	S-088210-21-080216-SP-06			-006

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride 300.0				Air Bubbles (Y or N)
											X				

ate:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
-16	0810	Steven Perez		8/3/16	0810	
ate:	Time:	Relinquished by:	Received by:	Date	Time	
/16	1900			08/04/16	0930	

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

August 19, 2016

Bernie Bockish

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

RE: Jolly Roger 16 State #1 OrderNo.: 1608776

Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 7 sample(s) on 8/12/2016 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 qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: Jolly Roger 16 State #1

Lab Order: 1608776

Lab ID: 1608776-001 **Collection Date:** 8/10/2016 3:40:00 PM
Client Sample ID: S-088210-21-081016-SP-01 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	110	30		mg/Kg	20	8/17/2016 11:42:53 AM	27036

Lab ID: 1608776-002 **Collection Date:** 8/10/2016 3:43:00 PM
Client Sample ID: S-088210-21-081016-SP-02 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	120	30		mg/Kg	20	8/17/2016 12:20:07 PM	27036

Lab ID: 1608776-003 **Collection Date:** 8/10/2016 3:46:00 PM
Client Sample ID: S-088210-21-081016-SP-03 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	100	30		mg/Kg	20	8/17/2016 12:57:21 PM	27036

Lab ID: 1608776-004 **Collection Date:** 8/10/2016 3:51:00 PM
Client Sample ID: S-088210-21-081016-SP-04 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	35	30		mg/Kg	20	8/17/2016 1:09:46 PM	27036

Lab ID: 1608776-005 **Collection Date:** 8/10/2016 3:56:00 PM
Client Sample ID: S-088210-21-081016-SP-05 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	65	30		mg/Kg	20	8/17/2016 1:22:10 PM	27036

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: Jolly Roger 16 State #1

Lab Order: 1608776

Lab ID: 1608776-006 **Collection Date:** 8/10/2016 4:00:00 PM
Client Sample ID: S-088210-21-081016-SP-06 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	100	30		mg/Kg	20	8/17/2016 1:34:35 PM	27036

Lab ID: 1608776-007 **Collection Date:** 8/10/2016 4:05:00 PM
Client Sample ID: S-088210-21-081016-SP-07 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	8/17/2016 1:46:59 PM	27036

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

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **GHD** Work Order Number: **1608776** RcptNo: 1

Received by/date: AJ 08/12/16

Logged By: **Ashley Gallegos** **8/12/2016 9:40:00 AM** AJ

Completed By: **Ashley Gallegos** **8/12/2016 2:27:32 PM** AJ

Reviewed By: 08/12/16

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples?	Yes ☐	No ☑	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐ Not required	No ☑	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑ Not required	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
11. Were any sample containers received broken?	Yes ☐	No ☑	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

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

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	22.8	Good	Not Present			

Chain-of-Custody Record

Client: GHD - Albuquerque

Mailing Address: 6121 Indian School Rd NE
Ste 200, Albuquerque, NM. 87110

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: Jolly Roger 16 State #1

Project #: 088210/21

Project Manager: Bernard Bochnisch
505-280-0572

Sampler: Steve Perez

On Ice: ☐ Yes ☑ No

Sample Temperature: 22.8°C

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1608776	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride 300.0				Air Bubbles (Y or N)
10-16	1540	Soil	S-088210-21-081016-SP-01	4oz glass-1	ICE	-001												X				
	1543		S-088210-21-081016-SP-02			-002																
	1546		S-088210-21-081016-SP-03			-003																
	1551		S-088210-21-081016-SP-04			-004																
	1556		S-088210-21-081016-SP-05			-005																
	1600		S-088210-21-081016-SP-06			-006																
	1605		S-088210-21-081016-SP-07			-007																

Date:	Time:	Relinquished by:	Received by:	Date	Time
10-16	0810	Steve Perez		8/11/16	0810
10/16	1900			08/12/16	0940

Remarks:

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

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

August 22, 2016

Bernie Bockish

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

RE: Jolly Roger 16 State #1 OrderNo.: 1608927

Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 10 sample(s) on 8/16/2016 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 qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: Jolly Roger 16 State #1
Lab Order: 1608927

Lab ID: 1608927-001 **Collection Date:** 8/11/2016 10:28:00 AM
Client Sample ID: S-088210-21-081116-SP-01 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	39	30		mg/Kg	20	8/19/2016 3:06:19 PM	27084

Lab ID: 1608927-002 **Collection Date:** 8/11/2016 10:33:00 AM
Client Sample ID: S-088210-21-081116-SP-02 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	130	30		mg/Kg	20	8/19/2016 3:43:33 PM	27084

Lab ID: 1608927-003 **Collection Date:** 8/11/2016 10:38:00 AM
Client Sample ID: S-088210-21-081116-SP-03 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	290	30		mg/Kg	20	8/19/2016 3:55:57 PM	27084

Lab ID: 1608927-004 **Collection Date:** 8/11/2016 10:42:00 AM
Client Sample ID: S-088210-21-081116-SP-04 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	34	30		mg/Kg	20	8/19/2016 4:08:22 PM	27084

Lab ID: 1608927-005 **Collection Date:** 8/11/2016 2:28:00 PM
Client Sample ID: S-088210-21-081116-SP-05 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	8/19/2016 4:20:47 PM	27084

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: Jolly Roger 16 State #1
Lab Order: 1608927

Lab ID: 1608927-006 **Collection Date:** 8/11/2016 2:32:00 PM
Client Sample ID: S-088210-21-081116-SP-06 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	200	30		mg/Kg	20	8/19/2016 4:33:11 PM	27084

Lab ID: 1608927-007 **Collection Date:** 8/11/2016 2:36:00 PM
Client Sample ID: S-088210-21-081116-SP-07 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	92	30		mg/Kg	20	8/19/2016 5:10:25 PM	27084

Lab ID: 1608927-008 **Collection Date:** 8/11/2016 2:40:00 PM
Client Sample ID: S-088210-21-081116-SP-08 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	140	30		mg/Kg	20	8/19/2016 5:22:49 PM	27084

Lab ID: 1608927-009 **Collection Date:** 8/11/2016 2:45:00 PM
Client Sample ID: S-088210-21-081116-SP-09 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	390	30		mg/Kg	20	8/19/2016 5:35:14 PM	27084

Lab ID: 1608927-010 **Collection Date:** 8/11/2016 3:10:00 PM
Client Sample ID: S-088210-21-081116-SP-010 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	610	30		mg/Kg	20	8/19/2016 5:47:38 PM	27084

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1608927**

22-Aug-16

Client: GHD

Project: Jolly Roger 16 State #1

Sample ID	**MB-27084**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**27084**	RunNo:	**36654**					
Prep Date:	**8/19/2016**	Analysis Date:	**8/19/2016**	SeqNo:	**1135391**	Units:	**mg/Kg**			

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

Sample ID	**LCS-27084**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**27084**	RunNo:	**36654**					
Prep Date:	**8/19/2016**	Analysis Date:	**8/19/2016**	SeqNo:	**1135392**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.1	90	110			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: GHD | Work Order Number: 1608927 | RcptNo: 1

Received by/date: AT 08/16/16

Logged By: Anne Thorne 8/16/2016 9:15:00 AM Anne Thorne

Completed By: Anne Thorne 8/16/2016 Anne Thorne

Reviewed By: 08/16/16

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes			

Chain-of-Custody Record

Client: GHD - Albuquerque

Mailing Address:

Phone #: 505-884-0672

email or Fax#: Bernard.Bockisch@ghd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
✓ 5 day Turn
☑ Standard ☐ Rush _____

Project Name: Jolly Roger 16 State #1

Project #: 088210/21

Project Manager: Bernard Bockisch 505-280-0572

Sampler: Sfgue Pere

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.3°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix (08114/16)	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1608927	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride 300.0				Air Bubbles (Y or N)
8/11/16	1028	Soil	S-088210-21-081116-SP-01	4oz glass-1	ICE	-001												X				
	1033	Soil	S-088210-21-081116-SP-02			-002																
	1038	Soil	S-088210-21-081116-SP-03			-003																
	1042	Soil	S-088210-21-081116-SP-04			-004																
	1428	Soil	S-088210-21-081116-SP-05			-005																
	1432	Soil	S-088210-21-081116-SP-06			-006																
	1436	Soil	S-088210-21-081116-SP-07			-007																
	1440	Soil	S-088210-21-081116-SP-08			-008																
	1445	Soil	S-088210-21-081116-SP-09			-009																
	1510	Soil	S-088210-21-081116-SP-10			-010																

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
8/15/16	15:30			8/15/16	1530	
8/15/16	1900			08/16/16	0915	

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

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

October 13, 2016

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

RE: Jolly Roger 16 State #1 OrderNo.: 1610435

Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 3 sample(s) on 10/11/2016 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 qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **1610435**
Date Reported: **10/13/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: Jolly Roger 16 State #1
Lab Order: 1610435

Lab ID: 1610435-001 **Collection Date:** 10/7/2016 9:22:00 AM
Client Sample ID: S-088210-21-100716-SP-01 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	10/12/2016 12:10:50 PM	28035

Lab ID: 1610435-002 **Collection Date:** 10/7/2016 10:40:00 AM
Client Sample ID: S-088210-21-100716-SP-02 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	10/12/2016 12:48:04 PM	28035

Lab ID: 1610435-003 **Collection Date:** 10/7/2016 10:45:00 AM
Client Sample ID: S-088210-21-100716-SP-03 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	10/12/2016 1:00:29 PM	28035

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1610435**

13-Oct-16

Client: GHD

Project: Jolly Roger 16 State #1

Sample ID	**MB-28035**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**28035**	RunNo:	**37905**					
Prep Date:	**10/12/2016**	Analysis Date:	**10/12/2016**	SeqNo:	**1180837**	Units:	**mg/Kg**			

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

Sample ID	**LCS-28035**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**28035**	RunNo:	**37905**					
Prep Date:	**10/12/2016**	Analysis Date:	**10/12/2016**	SeqNo:	**1180838**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.8	90	110			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: GHD | Work Order Number: 1610435 | RcptNo: 1

Received by/date: AJ 10/11/16

Logged By: **Ashley Gallegos** 10/11/2016 9:00:00 AM

Completed By: **Ashley Gallegos** 10/11/2016 9:46:15 AM

Reviewed By: aJ 10/11/16

Chain of Custody

1. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	FedEx		

Log In

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

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

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.9	Good	Yes			

Chain-of-Custody Record

ent: GHD - Albuquerque

iling Address: 6121 Indian School Rd NE

te 200, Albuquerque, NM, 87110

one #: 505-884-0672

ail or Fax#: Bernard.Bachisch@ghd.com

/QC Package:

Standard ☐ Level 4 (Full Validation)

creditation

NELAP ☐ Other _____

EDD (Type) _____

Turn-Around Time:

☐ Standard ☐ Rush 48hr

Project Name: Jolly Roger 16 State #1

Project #: 088210/21

Project Manager: Bernard Bachisch

Sampler: Steve Perez

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.9°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1610435	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride 300.0				Air Bubbles (Y or N)
7-16	922	Soil	S-088210-21-100716-SP-01	4oz glass-1	ICE	-001												X				
↓	1040	↓	S-088210-21-100716-SP-02	↓	↓	-002												↓				
↓	1045	↓	S-088210-21-100716-SP-03	↓	↓	-003												↓				

e:	Time:	Relinquished by:	Received by:	Date	Time
10/16	14:00	Steve Perez	[signature]	10/11/16	0900
e:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

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