

**From:** [Yu, Olivia, EMNRD](#)  
**To:** [Bernard.Bockisch@ghd.com](mailto:Bernard.Bockisch@ghd.com); [Mann, Ryan](#)  
**Cc:** [Alan.Brandon@ghd.com](mailto:Alan.Brandon@ghd.com); [Zane Kurtz](#)  
**Subject:** RE: Jolly Roger (1RP-3541) Request for Closure  
**Date:** Friday, May 11, 2018 3:12:00 PM  
**Attachments:** approved\_088210-21 Final C-141.pdf

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Dear Mr. Bockisch/Kurtz:

Thank you for the confirmatory data.

The available information indicates **OPERATOR** has met the requirements of 19.15.29 NMAC and no further corrective action is required. NMOCD considers **1RP-3541** closed. This determination by the Oil Conservation Division does not relieve Operator of responsibility should future information indicate a threat to ground water, surface water, human health, or the environment. Furthermore, it does not relieve Operator of responsibility for compliance with any federal, state, or local laws and/or regulations.

Like approval from NMSLO required.

Thanks,

Olivia Yu  
Environmental Specialist  
NMOCD, District I  
[Olivia.yu@state.nm.us](mailto:Olivia.yu@state.nm.us)  
575-393-6161 x113

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

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**From:** Bernard.Bockisch@ghd.com <Bernard.Bockisch@ghd.com>  
**Sent:** Thursday, May 10, 2018 2:05 PM  
**To:** Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>  
**Cc:** Alan.Brandon@ghd.com; Zane Kurtz <Zane\_Kurtz@eogresources.com>  
**Subject:** FW: Jolly Roger (1RP-3541) Request for Closure

Olivia,

I have attached a figure showing the soil samples collected from the backfill at the Jolly Roger. Each sample is a composite collected from one foot and three feet below ground surface. I have also included the laboratory analytical results for the samples collected. Based on these results, we are

requesting site closure on behalf of EOG Resources. Please feel free to contact us if you have any questions.

Bernie

**Bernard Bockisch, PMP**  
**Senior Project Manager**

**GHD**

T: +1 505 884 0672 | M: +1 505 280 0572 | VOIP Ext: 867310 | E: [Bernard.Bockisch@ghd.com](mailto:Bernard.Bockisch@ghd.com)  
6121 Indian School Rd. NE Albuquerque New Mexico 87110 | [www.ghd.com](http://www.ghd.com)  
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**From:** Yu, Olivia, EMNRD [<mailto:Olivia.Yu@state.nm.us>]  
**Sent:** Wednesday, March 14, 2018 7:09 AM  
**To:** Bernard Bockisch <[Bernard.Bockisch@ghd.com](mailto:Bernard.Bockisch@ghd.com)>  
**Cc:** Naranjo, Mark <[MNaranjo@slo.state.nm.us](mailto:MNaranjo@slo.state.nm.us)>; Zane Kurtz <[Zane\\_Kurtz@eogresources.com](mailto:Zane_Kurtz@eogresources.com)>  
**Subject:** RE: Jolly Roger (1RP-3541) Request for Closure

Good morning Mr. Bockisch:

Excellent. Thank you.

Olivia

---

**From:** [Bernard.Bockisch@ghd.com](mailto:Bernard.Bockisch@ghd.com) [<mailto:Bernard.Bockisch@ghd.com>]  
**Sent:** Tuesday, March 13, 2018 5:59 PM  
**To:** Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>  
**Cc:** Naranjo, Mark <[MNaranjo@slo.state.nm.us](mailto:MNaranjo@slo.state.nm.us)>; Zane Kurtz <[Zane\\_Kurtz@eogresources.com](mailto:Zane_Kurtz@eogresources.com)>  
**Subject:** Re: Jolly Roger (1RP-3541) Request for Closure

We'll get them.

Sent from my iPhone

On Mar 13, 2018, at 4:34 PM, Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)> wrote:

Mr. Bockisch:

Yes; that would be optimal. Since Figure 2 in the closure report for 1RP-3541 does not have a scale, please collect representative samples approximately 50 ft. interval or one sample every 75 cubic yards. Please confirm or inform for clarification.

Thanks,  
Olivia

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**From:** [Bernard.Bockisch@ghd.com](mailto:Bernard.Bockisch@ghd.com) [<mailto:Bernard.Bockisch@ghd.com>]

**Sent:** Tuesday, March 13, 2018 4:21 PM

**To:** Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>; Naranjo, Mark <[MNaranjo@slo.state.nm.us](mailto:MNaranjo@slo.state.nm.us)>

**Cc:** Zane Kurtz <[Zane\\_Kurtz@eogresources.com](mailto:Zane_Kurtz@eogresources.com)>

**Subject:** RE: Fox State No. 3 and 4 (1RP-3541) Request for Closure

Olivia,

For the Jolly Roger, the site was backfilled before we collected a composite sample from the backfill. Prior to backfilling we collected two composite samples from the stockpile that was about 600 cubic yards in size. The samples were analyzed to contain 390 mg/kg and 610 mg/kg chloride. Based on this, it appears that the blended soil should be below 600 mg/kg. However, if you want we could collect some composite hand auger samples and have them analyzed.

Bernie

**Bernard Bockisch, PMP**  
**Senior Project Manager**

**GHD**

T: +1 505 884 0672 | M: +1 505 280 0572 | VOIP Ext: 867310 | E: [Bernard.Bockisch@ghd.com](mailto:Bernard.Bockisch@ghd.com)  
6121 Indian School Rd. NE Albuquerque New Mexico 87110 | [www.ghd.com](http://www.ghd.com)  
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**From:** Yu, Olivia, EMNRD [<mailto:Olivia.Yu@state.nm.us>]

**Sent:** Tuesday, March 13, 2018 10:50 AM

**To:** Bernard Bockisch <[Bernard.Bockisch@ghd.com](mailto:Bernard.Bockisch@ghd.com)>; Naranjo, Mark <[MNaranjo@slo.state.nm.us](mailto:MNaranjo@slo.state.nm.us)>

**Cc:** Zane Kurtz <[Zane\\_Kurtz@eogresources.com](mailto:Zane_Kurtz@eogresources.com)>

**Subject:** RE: Fox State No. 3 and 4 (1RP-3541) Request for Closure

Good morning Mr. Bockisch:

Please be advised that the closure report for 1RP-3541 is for Jolly Roger 16 State #1, not Fox State. Do you have field or laboratory data of the blended soil for backfilling to verify that chloride levels were  $\leq 600$  mg/kg? If so, please provide and indicate approximately at what volume per sample.

Thanks,  
Olivia

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**From:** Bockisch, Bernie [<mailto:Bernard.Bockisch@ghd.com>]  
**Sent:** Wednesday, May 31, 2017 2:01 PM  
**To:** Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>; Groves, Amber <[agroves@slo.state.nm.us](mailto:agroves@slo.state.nm.us)>  
**Cc:** Zane Kurtz <[Zane\\_Kurtz@eogresources.com](mailto:Zane_Kurtz@eogresources.com)>  
**Subject:** Fox State No. 3 and 4 (1RP-3541) Request for Closure

Olivia/Amber,

On behalf of EOG Resources, Inc. GHD is submitting the attached request for closure and final C-141 for the above referenced site. Please feel free to contact me if you have any questions.

Bernie

**Bernard Bockisch, PMP**  
**Senior Project Manager**

**GHD**

T: +1 505 884 0672 | M: +1 505 280 0572 | VOIP Ext: 867310 | E: [Bernard.Bockisch@ghd.com](mailto:Bernard.Bockisch@ghd.com)  
6121 Indian School Rd. NE Albuquerque New Mexico 87110 | [www.ghd.com](http://www.ghd.com)  
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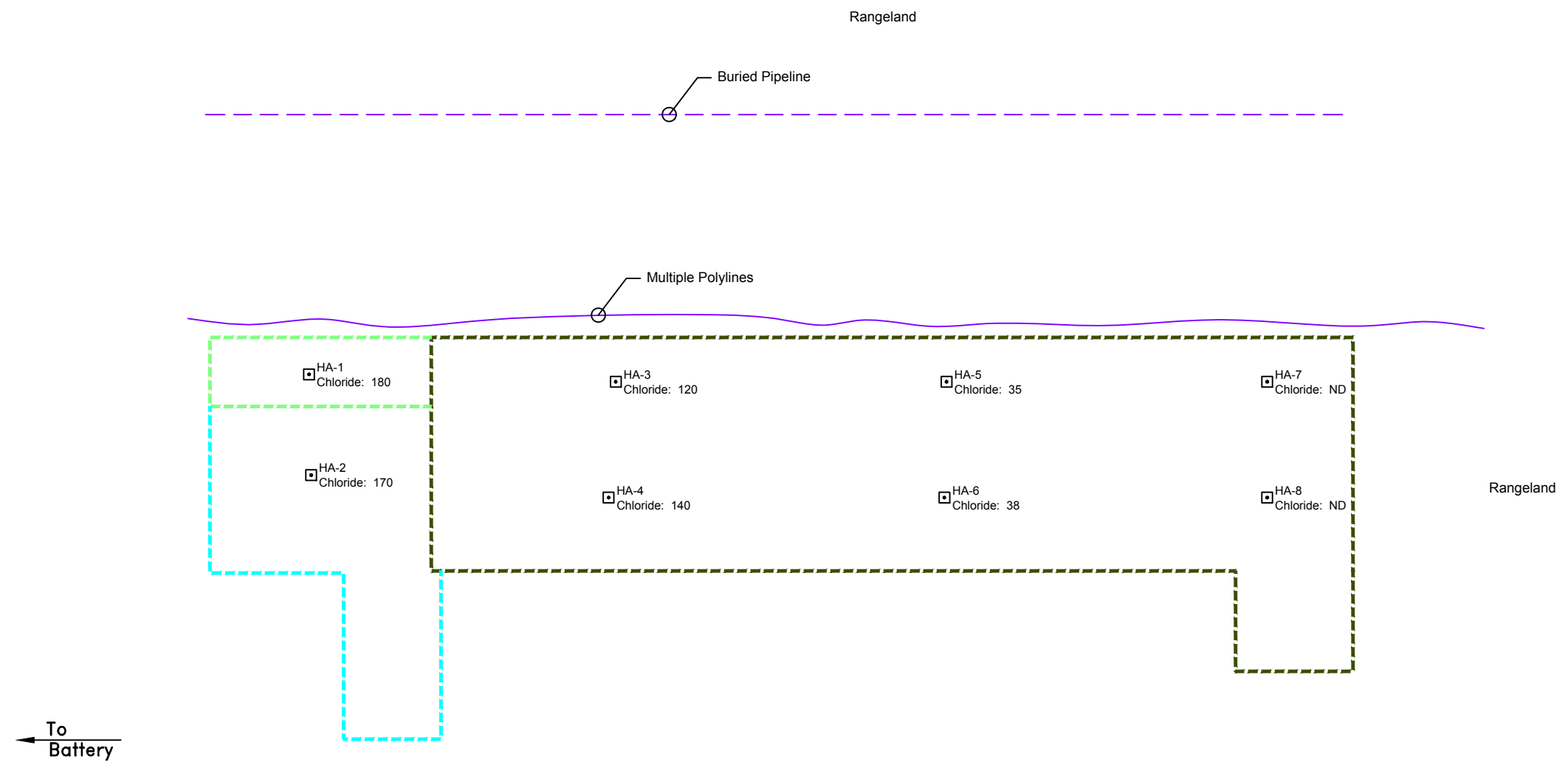
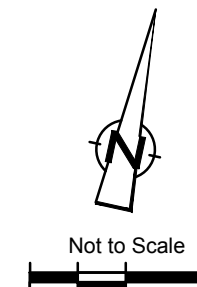
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LEGEND	
	Backfill Composite Soil Sample Location
	Impacted Area
	Buried Pipeline
ND	Not Detected

**NOTES:**

1. Sample results are in milligram per kilogram (mg/kg).
2. Locations are approximate.

Figure 3  
BACKFILL COMPOSITE SOIL SAMPLE LOCATION MAP  
JOLLY ROGER 16 STATE 1  
LEA COUNTY, NEW MEXICO  
*EOG Resources*





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

March 28, 2018

Bernie Bockisch

GHD

6121 Indian School Road, NE #200

Albuquerque, NM 87110

TEL: (505) 884-0672

FAX

RE: Jolly Roger

OrderNo.: 1803B78

Dear Bernie Bockisch:

Hall Environmental Analysis Laboratory received 8 sample(s) on 3/21/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order: 1803B78

Date Reported: 3/28/2018

**CLIENT:** GHD  
**Project:** Jolly Roger

**Lab Order:** 1803B78

**Lab ID:** 1803B78-001 **Collection Date:** 3/19/2018 12:40:00 PM  
**Client Sample ID:** S-088210-21-031918-MG-HA-1 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b> Analyst: MRA							
Chloride	180	30		mg/Kg	20	3/27/2018 2:34:36 PM	37258

**Lab ID:** 1803B78-002 **Collection Date:** 3/19/2018 12:42:00 PM  
**Client Sample ID:** S-088210-21-031918-MG-HA-2 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b> Analyst: MRA							
Chloride	170	30		mg/Kg	20	3/27/2018 2:47:00 PM	37258

**Lab ID:** 1803B78-003 **Collection Date:** 3/19/2018 12:45:00 PM  
**Client Sample ID:** S-088210-21-031918-MG-HA-3 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b> Analyst: MRA							
Chloride	120	30		mg/Kg	20	3/27/2018 2:59:25 PM	37258

**Lab ID:** 1803B78-004 **Collection Date:** 3/19/2018 12:47:00 PM  
**Client Sample ID:** S-088210-21-031918-MG-HA-4 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b> Analyst: MRA							
Chloride	140	30		mg/Kg	20	3/27/2018 3:11:49 PM	37258

**Lab ID:** 1803B78-005 **Collection Date:** 3/19/2018 12:50:00 PM  
**Client Sample ID:** S-088210-21-031918-MG-HA-5 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b> Analyst: MRA							
Chloride	35	30		mg/Kg	20	3/27/2018 3:24:14 PM	37258

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

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

**Analytical Report**Lab Order: **1803B78**Date Reported: **3/28/2018****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** GHD  
**Project:** Jolly Roger**Lab Order:** 1803B78**Lab ID:** 1803B78-006 **Collection Date:** 3/19/2018 12:52:00 PM  
**Client Sample ID:** S-088210-21-031918-MG-HA-6 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	38	30		mg/Kg	20	3/27/2018 3:36:38 PM	37258

**Lab ID:** 1803B78-007 **Collection Date:** 3/19/2018 12:55:00 PM  
**Client Sample ID:** S-088210-21-031918-MG-HA-7 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	3/27/2018 4:13:52 PM	37258

**Lab ID:** 1803B78-008 **Collection Date:** 3/19/2018 12:57:00 PM  
**Client Sample ID:** S-088210-21-031918-MG-HA-8 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	3/27/2018 4:26:16 PM	37258

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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#: 1803B78

28-Mar-18

Client: GHD  
Project: Jolly Roger

Sample ID	MB-37258	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	37258	RunNo:	50104					
Prep Date:	3/27/2018	Analysis Date:	3/27/2018	SeqNo:	1623718	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-37258	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	37258	RunNo:	50104					
Prep Date:	3/27/2018	Analysis Date:	3/27/2018	SeqNo:	1623719	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.1	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
PQL Practical Quantitative Limit	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  
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: 1803B78

RcptNo: 1

Received By: Mandy Woods 3/21/2018 9:30:00 AM

Completed By: Ashley Gallegos 3/21/2018 12:51:20 PM

Reviewed By: DDS 3/22/18

mw 3/22/18

### Chain of Custody

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

### Log In

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

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

### Special Handling (if applicable)

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

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:

### 17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.6	Good	Yes			

# Chain-of-Custody Record

Client: GHD Services

Mailing Address: 421 Indian School Rd Ste 200

NE 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)

Date Time Matrix Sample Request ID

3/19/18 1240 S 5-055210-21-031918-MG-HA1

1242 5-055210-21-031918-MG-HA2

1245 5-055210-21-031918-MG-HA3

1247 5-055210-21-031918-MG-HA4

1250 5-055210-21-031918-MG-HA5

1252 5-055210-21-031918-MG-HA6

1255 5-055210-21-031918-MG-HA7

1257 5-055210-21-031918-MG-HA8

Date: 3/21/18 Time: 1400

Date: 3/21/18 Time: 1700

Date: 3/21/18 Time: 1900

Date: 3/21/18 Time: 1900

Date: 3/21/18 Time: 1900

Date: 3/21/18 Time: 1900

Turn-Around Time: 3 day Turn  
☐ Standard ☐ Rush

Project Name: Jolly Roger

Project #: 088210.21

Project Manager: Bernard Bockisch

Sampler: MG

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.6°

Container Type and #

Preservative Type

HEAL No. 1803B78

-001

-002

-003

-004

-005

-006

-007

-008



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

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<sub>3</sub>, NO<sub>2</sub>, PO<sub>4</sub>, SO<sub>4</sub>)

8081 Pesticides / 8082 PCB's

8260B (VOA)

8270 (Semi-VOA)

Chloride 300