

BP America
Pritchard SWD 1
(C) Sec 34 – T31N – R9W
San Juan County, New Mexico
API: 30-045-28351

Summary Record of Impact Remediation

July 16, 2017 Loss of approximately 16 barrels produced water entered and overflowed at 95 barrel BGT.

July 18, 2017 Initial site sampling. A 5-point composite soil sample collected at 12-inches below grade tested TPH at 810 mg/Kg, BTEX at non-detect and chlorides at 130 ppm. Lab results submitted to NMOCD via email. Release reported to NMOCD on form C-141. Authorization granted to proceed with remediation via excavation.

Site NMOCD/BLM closure standard determined at 100 ppm TPH based on:

Horizontal Distance to Dry Wash < 200 feet (20 points)
Nearest Water Well > 1,000 feet (0 points)
Depth to Groundwater > 50 feet (10 points)

August 23, 2017 Conduct site remediation via excavation. Final excavation size approximately 14' x 14' x 7.5' average depth. Collect 5-point composite base sample and 4-point sidewall sample (at 4' depth) for laboratory analysis. Both samples reported non-detect for TPH and BTEX. Chlorides tested at 38 ppm and 130 ppm respectively.

August 25, 2017 Complete backfilling operations.

Pritchard SWD 1

95 BGT (B)
(in round steel cellar)

August 23, 2017
Remedial Excavation
14' x 14' x 7.5' Deep

Pump
Building

Produced Water Tanks





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

August 27, 2017

Steve Moskal
Blagg Engineering
P. O. Box 87
Bloomfield, NM 87413
TEL: (505) 632-1199
FAX (505) 632-3903

RE: Pritchard SWD 1

OrderNo.: 1708D71

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 2 sample(s) on 8/24/2017 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: 95 BGT Spill 5-pt @ 7.5'

Project: Pritchard SWD 1

Collection Date: 8/23/2017 2:57:00 PM

Lab ID: 1708D71-001

Matrix: MEOH (SOIL)

Received Date: 8/24/2017 6:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	38	30		mg/Kg	20	8/24/2017 11:59:56 AM	33539
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/24/2017 9:48:05 AM	33533
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/24/2017 9:48:05 AM	33533
Surr: DNOP	95.3	70-130		%Rec	1	8/24/2017 9:48:05 AM	33533
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	8/24/2017 9:39:55 AM	33513
Surr: BFB	89.5	54-150		%Rec	1	8/24/2017 9:39:55 AM	33513
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.017		mg/Kg	1	8/24/2017 9:39:55 AM	33513
Toluene	ND	0.034		mg/Kg	1	8/24/2017 9:39:55 AM	33513
Ethylbenzene	ND	0.034		mg/Kg	1	8/24/2017 9:39:55 AM	33513
Xylenes, Total	ND	0.069		mg/Kg	1	8/24/2017 9:39:55 AM	33513
Surr: 4-Bromofluorobenzene	99.1	66.6-132		%Rec	1	8/24/2017 9:39:55 AM	33513

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

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

CLIENT: Blagg Engineering

Client Sample ID: 95 BGT Spill 4-pt Wall @ 4'

Project: Pritchard SWD 1

Collection Date: 8/23/2017 3:05:00 PM

Lab ID: 1708D71-002

Matrix: MEOH (SOIL)

Received Date: 8/24/2017 6:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	130	30		mg/Kg	20	8/24/2017 12:12:21 PM	33539
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	8/24/2017 10:15:50 AM	33533
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/24/2017 10:15:50 AM	33533
Surr: DNOP	95.6	70-130		%Rec	1	8/24/2017 10:15:50 AM	33533
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	8/24/2017 10:03:32 AM	33513
Surr: BFB	89.6	54-150		%Rec	1	8/24/2017 10:03:32 AM	33513
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	8/24/2017 10:03:32 AM	33513
Toluene	ND	0.040		mg/Kg	1	8/24/2017 10:03:32 AM	33513
Ethylbenzene	ND	0.040		mg/Kg	1	8/24/2017 10:03:32 AM	33513
Xylenes, Total	ND	0.080		mg/Kg	1	8/24/2017 10:03:32 AM	33513
Surr: 4-Bromofluorobenzene	98.8	66.6-132		%Rec	1	8/24/2017 10:03:32 AM	33513

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	Page 2 of 6
	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#: 1708D71

27-Aug-17

Client: Blagg Engineering

Project: Pritchard SWD 1

Sample ID	MB-33539	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	33539	RunNo:	45189					
Prep Date:	8/24/2017	Analysis Date:	8/24/2017	SeqNo:	1432108	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-33539	SampType:	Ics	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	33539	RunNo:	45189					
Prep Date:	8/24/2017	Analysis Date:	8/24/2017	SeqNo:	1432109	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.3	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 |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1708D71

27-Aug-17

Client: Blagg Engineering

Project: Pritchard SWD 1

Sample ID	LCS-33533	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	33533	RunNo:	45181					
Prep Date:	8/24/2017	Analysis Date:	8/24/2017	SeqNo:	1430495	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	95.1	73.2	114			
Surr: DNOP	4.6		5.000		93.0	70	130			

Sample ID	MB-33533	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	33533	RunNo:	45181					
Prep Date:	8/24/2017	Analysis Date:	8/24/2017	SeqNo:	1430496	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.9		10.00		99.1	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1708D71

27-Aug-17

Client: Blagg Engineering

Project: Pritchard SWD 1

Sample ID MB-33513	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 33513		RunNo: 45186							
Prep Date: 8/23/2017	Analysis Date: 8/24/2017		SeqNo: 1431549		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	900		1000		89.5	54	150			

Sample ID LCS-33513	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 33513		RunNo: 45186							
Prep Date: 8/23/2017	Analysis Date: 8/24/2017		SeqNo: 1431550		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.8	76.4	125			
Surr: BFB	970		1000		97.0	54	150			

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 |
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1708D71

27-Aug-17

Client: Blagg Engineering

Project: Pritchard SWD 1

Sample ID MB-33513	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 33513		RunNo: 45186							
Prep Date: 8/23/2017	Analysis Date: 8/24/2017		SeqNo: 1431581		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		100	66.6	132			

Sample ID LCS-33513	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 33513		RunNo: 45186							
Prep Date: 8/23/2017	Analysis Date: 8/24/2017		SeqNo: 1431582		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	90.4	80	120			
Toluene	0.91	0.050	1.000	0	91.4	80	120			
Ethylbenzene	0.93	0.050	1.000	0	93.0	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.1	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	66.6	132			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
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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: **BLAGG**

Work Order Number: **1708D71**

RcptNo: **1**

Received By: **Ashley Gallegos** **8/24/2017 6:15:00 AM**
 Completed By: **Ashley Gallegos** **8/24/2017 6:47:18 AM**
 Reviewed By: **ENM** **8/24/17**

AG
AG

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	1.1	Good	Yes			

