

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

AUG 19 2016

Form C-141
Revised August 8, 2011

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

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: BP	Contact: Steve Moskal
Address: 200 Energy Court, Farmington, NM 87401	Telephone No.: 505-326-9497
Facility Name: Schwerdtfeger A 002X	Facility Type: Natural gas well
Surface Owner: Federal	Mineral Owner: Federal
API No. 3004511905	

LOCATION OF RELEASE

Unit Letter D	Section 31	Township 28N	Range 08W	Feet from the 1,190	North/South Line North	Feet from the 790	East/West Line West	County: San Juan
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Latitude 36.64497° Longitude -108.06758°

NATURE OF RELEASE

Type of Release: Natural Gas Condensate and other production fluids	Volume of Release: Unknown	Volume Recovered: none
Source of Release: Former earthen pit	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery: June 23, 2016; 7:00AM
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* During final reclamation of the site, a buried earthen pit was discovered. The site was fully delineated and excavated.		
Describe Area Affected and Cleanup Action Taken.* The former earthen pit impacts were excavated to a final dimension of 50'x40'x20' deep with a total of 1,550 cubic yards of soil transported offsite for landfarm treatment. Confirmation soil samples were collected for laboratory analysis at various stages of the excavation. A field report and laboratory results are attached.		
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.		

OIL CONSERVATION DIVISION

Signature: 	Approved by Environmental Specialist: 	
Printed Name: Steve Moskal	Approval Date: <u>10/5/2016</u>	Expiration Date:
Title: Field Environmental Coordinator	Conditions of Approval:	
E-mail Address: steven.moskal@bp.com	<u>NCS1618255556</u>	Attached <input type="checkbox"/>
Date: August 18, 2016	Phone: 505-326-9497	

* Attach Additional Sheets If Necessary

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BP America
Schwerdtfeger A 2X
(D) Sec 31 – T28N – R8W
San Juan County, New Mexico
API: 30-045-11905

Summary Record of Impact Remediation

June 22, 2016 Soils potentially impacted with hydrocarbons encountered during re-contouring with dozer at the PxA'd location. A rectangular shaped zone, approximately 30' x 20' in dimension, uncovered at a surface spot about 60' northwest of the PxA marker.

June 23, 2016 The potentially impacted surface spot sampled with a 5-point composite at a depth of 2 feet below surface grade. Lab BTEX and chlorides tested non-detect. Lab TPH by U.S. EPA Method 8015 tested gasoline range organics (GRO) at non-detect, diesel range organics (DRO) at 4,600 ppm and motor oil range organics (MRO) at 3,700 ppm.

Site Closure Standard Determined at 100 ppm TPH based on:

Horizontal Distance to USGS Topo Sheet Blue Line < 200 feet (20 points)
Nearest Water Well > 1,000 feet (0 points)
Depth to Groundwater based on nearby below grade tank permit > 100 feet (0 points)

June 20, 2016 Begin remediation of impacts by excavation with trackhoe. Grab sample at the 16' depth in the center of the impact area collected for lab TPH testing. GRO = ND and DRO = 250 ppm. MRO not tested.

July 6, 2016 Excavation size approximately 40' x 30' x 20' deep. Conduct sidewall and base sampling. East and North sidewall and base pass lab testing for TPH, BTEX and Chlorides. South and West sidewalls do not pass and remediation is advanced along those walls.

July 11, 2016 Excavation size approximately 50' x 40' x 20' deep. Conduct South and West sidewall sampling for closure. Both walls pass testing.

July 12, 2016 Completed lab reports submitted electronically to NMOCD and BLM with request for site closure. Both agencies provided approval on the request for closure.

July 15, 2016 Backfill of remedial excavation completed and site closed out. Approximate soil volume transported to Envirotech Landfarm = 1,550 cubic yards.

July 6, 2016
North Sidewall 5-pt (8' - 18')
Field OVM: 1.1 ppm
Lab TPH (GRO+DRO): 52 ppm
Lab TPH (MRO): 120 ppm

July 6, 2016
East Sidewall 5-pt (8' - 18')
Field OVM: 2.2 ppm
Lab TPH (GRO+DRO+MRO): ND

Power Pole

Impact Discovery
Surface Footprint
30' x 20' Rectangle

Remedial Excavation:
50' x 40' x 20' Deep

July 11, 2016
Extended South Sidewall 5-pt (8' - 18')
Field OVM: 0.6 ppm
Lab TPH: (GRO+DRO+MRO) = ND

July 11, 2016
Extended West Sidewall 5-pt (8' - 18')
Field OVM: 0.9 ppm
Lab TPH: (GRO+DRO+MRO) = ND

July 6, 2016
Base 5-pt @ 20'
Field OVM: 4.1 ppm
Lab TPH (GRO+DRO): 91 ppm
Lab TPH (MRO): 120 ppm

Schwerdtfeger A 2X

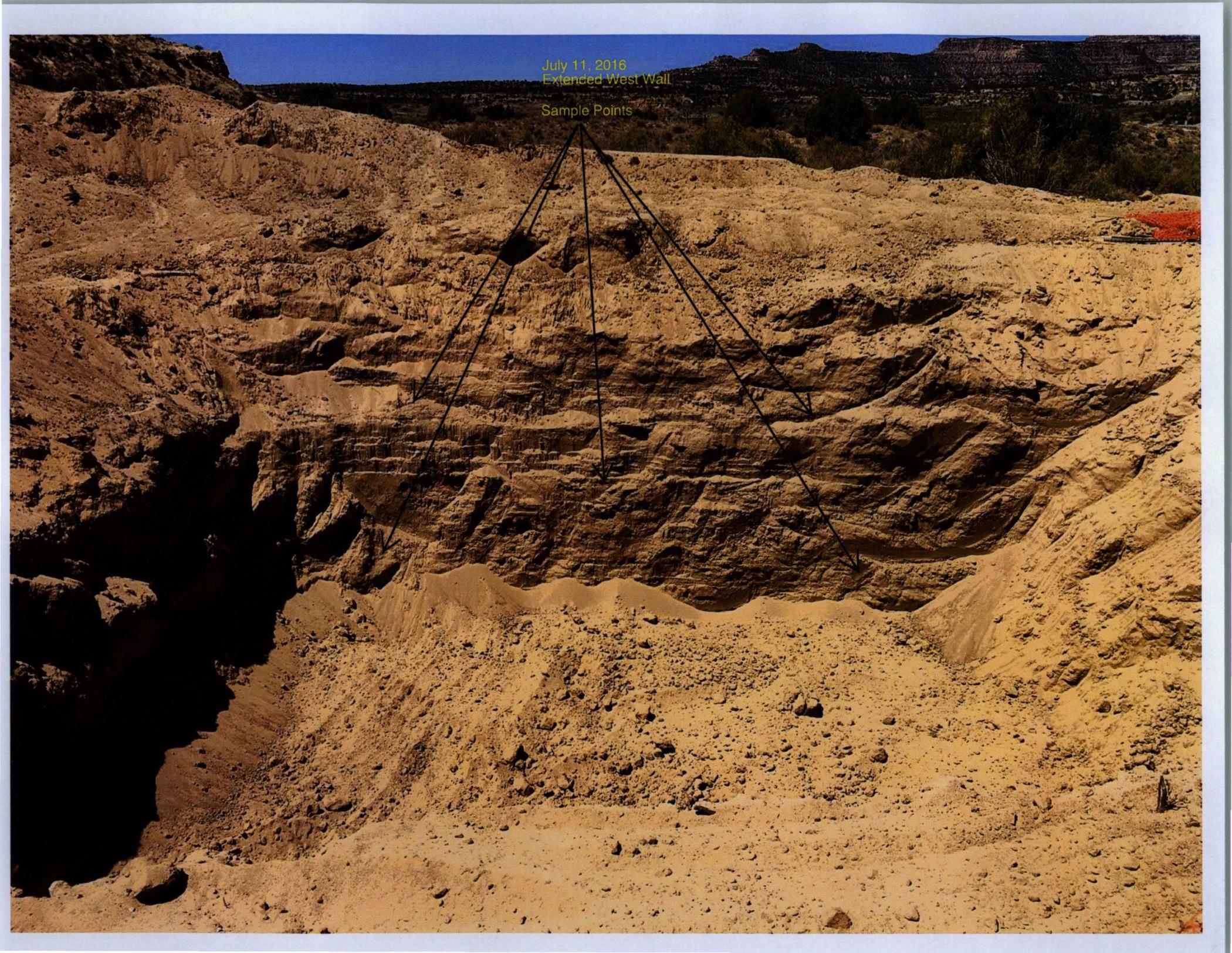
Google earth

60 ft



July 11, 2016
Extended West Wall

Sample Points



July 11, 2016
Extended South Wall

Sample Points



Looking at North Wall
(Sampled July 6, 2016)

Sample Points





Original Surface Grade

Looking at East Wall
(Sampled July 6, 2016)

Sample Points



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

July 11, 2016

Jeff Blagg
Blagg Engineering
P. O. Box 87
Bloomfield, NM 87413
TEL:
FAX

RE: Schwerdtfeger A 2X

OrderNo.: 1607258

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 5 sample(s) on 7/7/2016 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 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 light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering **Client Sample ID:** South Sidewall 5-pt (8'-18')

Project: Schwerdtfeger A 2X **Collection Date:** 7/6/2016 9:46:00 AM

Lab ID: 1607258-001 **Matrix:** MEOH (SOIL) **Received Date:** 7/7/2016 6:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	100	30		mg/Kg	20	7/7/2016 10:34:42 AM	26281
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	170	10		mg/Kg	1	7/7/2016 9:59:15 AM	26272
Motor Oil Range Organics (MRO)	290	51		mg/Kg	1	7/7/2016 9:59:15 AM	26272
Surr: DNOP	95.4	70-130		%Rec	1	7/7/2016 9:59:15 AM	26272
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	7/7/2016 10:39:53 AM	26258
Surr: BFB	100	80-120		%Rec	1	7/7/2016 10:39:53 AM	26258
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.018		mg/Kg	1	7/7/2016 10:39:53 AM	26258
Toluene	ND	0.037		mg/Kg	1	7/7/2016 10:39:53 AM	26258
Ethylbenzene	ND	0.037		mg/Kg	1	7/7/2016 10:39:53 AM	26258
Xylenes, Total	ND	0.073		mg/Kg	1	7/7/2016 10:39:53 AM	26258
Surr: 4-Bromofluorobenzene	95.2	80-120		%Rec	1	7/7/2016 10:39:53 AM	26258

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: Blagg Engineering **Client Sample ID:** East Sidewall 5-pt (8'-18')
Project: Schwerdtfeger A 2X **Collection Date:** 7/6/2016 10:02:00 AM
Lab ID: 1607258-002 **Matrix:** MEOH (SOIL) **Received Date:** 7/7/2016 6:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	230	30		mg/Kg	20	7/7/2016 10:47:06 AM	26281
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/7/2016 11:04:32 AM	26272
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/7/2016 11:04:32 AM	26272
Surr: DNOP	92.4	70-130		%Rec	1	7/7/2016 11:04:32 AM	26272
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	7/7/2016 11:03:22 AM	26258
Surr: BFB	98.1	80-120		%Rec	1	7/7/2016 11:03:22 AM	26258
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.018		mg/Kg	1	7/7/2016 11:03:22 AM	26258
Toluene	ND	0.036		mg/Kg	1	7/7/2016 11:03:22 AM	26258
Ethylbenzene	ND	0.036		mg/Kg	1	7/7/2016 11:03:22 AM	26258
Xylenes, Total	ND	0.072		mg/Kg	1	7/7/2016 11:03:22 AM	26258
Surr: 4-Bromofluorobenzene	93.9	80-120		%Rec	1	7/7/2016 11:03:22 AM	26258

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: Blagg Engineering **Client Sample ID:** Northsidewall 5-pt (8'-18')
Project: Schwerdtfeger A 2X **Collection Date:** 7/6/2016 10:10:00 AM
Lab ID: 1607258-003 **Matrix:** MEOH (SOIL) **Received Date:** 7/7/2016 6:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	130	30		mg/Kg	20	7/7/2016 10:59:31 AM	26281
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	52	9.7		mg/Kg	1	7/7/2016 11:48:11 AM	26272
Motor Oil Range Organics (MRO)	120	48		mg/Kg	1	7/7/2016 11:48:11 AM	26272
Surr: DNOP	93.0	70-130		%Rec	1	7/7/2016 11:48:11 AM	26272
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	7/7/2016 11:26:58 AM	26258
Surr: BFB	99.1	80-120		%Rec	1	7/7/2016 11:26:58 AM	26258
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.018		mg/Kg	1	7/7/2016 11:26:58 AM	26258
Toluene	ND	0.036		mg/Kg	1	7/7/2016 11:26:58 AM	26258
Ethylbenzene	ND	0.036		mg/Kg	1	7/7/2016 11:26:58 AM	26258
Xylenes, Total	ND	0.073		mg/Kg	1	7/7/2016 11:26:58 AM	26258
Surr: 4-Bromofluorobenzene	94.4	80-120		%Rec	1	7/7/2016 11:26:58 AM	26258

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.

Analytical Report

Lab Order 1607258

Date Reported: 7/11/2016

CLIENT: Blagg Engineering
Project: Schwerdtfeger A 2X
Lab ID: 1607258-004

Client Sample ID: Base 5-pt @ 20'
Collection Date: 7/6/2016 10:13:00 AM
Matrix: MEOH (SOIL) **Received Date:** 7/7/2016 6:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	130	30		mg/Kg	20	7/7/2016 11:11:56 AM	26281
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	91	10		mg/Kg	1	7/7/2016 10:55:59 AM	26272
Motor Oil Range Organics (MRO)	120	50		mg/Kg	1	7/7/2016 10:55:59 AM	26272
Surr: DNOP	99.3	70-130		%Rec	1	7/7/2016 10:55:59 AM	26272
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	7/7/2016 11:50:32 AM	26258
Surr: BFB	99.5	80-120		%Rec	1	7/7/2016 11:50:32 AM	26258
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	7/7/2016 11:50:32 AM	26258
Toluene	ND	0.039		mg/Kg	1	7/7/2016 11:50:32 AM	26258
Ethylbenzene	ND	0.039		mg/Kg	1	7/7/2016 11:50:32 AM	26258
Xylenes, Total	ND	0.079		mg/Kg	1	7/7/2016 11:50:32 AM	26258
Surr: 4-Bromofluorobenzene	94.7	80-120		%Rec	1	7/7/2016 11:50:32 AM	26258

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: Blagg Engineering

Client Sample ID: West Sidewall 5-pt (8'-18')

Project: Schwerdtfeger A 2X

Collection Date: 7/6/2016 10:17:00 AM

Lab ID: 1607258-005

Matrix: MEOH (SOIL)

Received Date: 7/7/2016 6:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	140	30		mg/Kg	20	7/7/2016 11:24:20 AM	26281
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	160	9.9		mg/Kg	1	7/7/2016 12:00:53 PM	26272
Motor Oil Range Organics (MRO)	240	50		mg/Kg	1	7/7/2016 12:00:53 PM	26272
Surr: DNOP	81.8	70-130		%Rec	1	7/7/2016 12:00:53 PM	26272
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	7/7/2016 12:14:01 PM	26258
Surr: BFB	99.0	80-120		%Rec	1	7/7/2016 12:14:01 PM	26258
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.018		mg/Kg	1	7/7/2016 12:14:01 PM	26258
Toluene	ND	0.036		mg/Kg	1	7/7/2016 12:14:01 PM	26258
Ethylbenzene	ND	0.036		mg/Kg	1	7/7/2016 12:14:01 PM	26258
Xylenes, Total	ND	0.072		mg/Kg	1	7/7/2016 12:14:01 PM	26258
Surr: 4-Bromofluorobenzene	94.8	80-120		%Rec	1	7/7/2016 12:14:01 PM	26258

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#: 1607258

11-Jul-16

Client: Blagg Engineering
Project: Schwerdtfeger A 2X

Sample ID	MB-26281	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	26281	RunNo:	35519					
Prep Date:	7/7/2016	Analysis Date:	7/7/2016	SeqNo:	1099737	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-26281	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	26281	RunNo:	35519					
Prep Date:	7/7/2016	Analysis Date:	7/7/2016	SeqNo:	1099738	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.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- 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#: 1607258

11-Jul-16

Client: Blagg Engineering
Project: Schwerdtfeger A 2X

Sample ID	LCS-26272	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	26272	RunNo:	35475					
Prep Date:	7/7/2016	Analysis Date:	7/7/2016	SeqNo:	1098160	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	10	50.00	0	81.7	62.6	124			
Surr: DNOP	4.2		5.000		83.4	70	130			

Sample ID	MB-26272	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	26272	RunNo:	35475					
Prep Date:	7/7/2016	Analysis Date:	7/7/2016	SeqNo:	1098161	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	9.0		10.00		90.5	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#: 1607258

11-Jul-16

Client: Blagg Engineering

Project: Schwerdtfeger A 2X

Sample ID MB-26258	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 26258	RunNo: 35484								
Prep Date: 7/6/2016	Analysis Date: 7/7/2016	SeqNo: 1098917			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	1000		1000		100	80	120			

Sample ID LCS-26258	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 26258	RunNo: 35484								
Prep Date: 7/6/2016	Analysis Date: 7/7/2016	SeqNo: 1098918			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	101	80	120			
Surr: BFB	1100		1000		108	80	120			

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
- R RPD outside accepted recovery limits
- 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#: 1607258

11-Jul-16

Client: Blagg Engineering
Project: Schwerdtfeger A 2X

Sample ID	MB-26258	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	26258	RunNo:	35484					
Prep Date:	7/6/2016	Analysis Date:	7/7/2016	SeqNo:	1098935	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.96		1.000		96.3	80	120			

Sample ID	LCS-26258	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	26258	RunNo:	35484					
Prep Date:	7/6/2016	Analysis Date:	7/7/2016	SeqNo:	1098936	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.025	1.000	0	99.2	75.3	123			
Toluene	0.99	0.050	1.000	0	99.4	80	124			
Ethylbenzene	1.0	0.050	1.000	0	100	82.8	121			
Xylenes, Total	3.0	0.10	3.000	0	100	83.9	122			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

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
 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: **1607258**

RcptNo: **1**

Received by/date:

AG

07/07/16

Logged By: **Ashley Gallegos**

7/7/2016 6:00:00 AM

AG

Completed By: **Ashley Gallegos**

7/7/2016 6:32:49 AM

AG

Reviewed By:

AG

07/07/16

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? 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? 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? Yes No Checked by:
- (If no, notify customer for authorization.)

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:

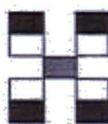
18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: **BP AMERICA**
BLAGG ENGINEERING INC.
 Billing Address:
 Phone #: **(505) 320-1183**
 Email or Fax#:
 VQC Package:
 Standard Level 4 (Full Validation)
 Accreditation:
 NELAP Other _____
 EDD (Type):

Turn-Around Time: **ASAP SAME DAY**
 Standard Rush
 Project Name: **SCHWERTFEGER A 2X**
 Project #:
 Project Manager: **J. Blagg**
 Sampler: **J. Blagg**
 On Ice: Yes No
 Sample Temperature: **1-0**



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.	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	Air Bubbles (Y or N)
2016	0946	SOIL	South Sidewall S-pe (8'-18')	4 oz x 1	cool	1007258-001	X	X										X	
"	1002	"	EAST Sidewall S-pe (8'-18')	"	"	-002	X	X										X	
"	1010	"	NORTH Sidewall S-pe (8'-18')	"	"	-003	X	X										X	
"	1013	"	BASE S-pe @ 20'	"	"	-004	X	X										X	
"	1017	"	WEST Sidewall S-pe (8'-18')	"	"	-005	X	X										X	

Relinquished by: **J. Blagg** Date: **7/16/16** Time: **1540**
 Received by: **Steve Mascal**
 Relinquished by: **Steve Mascal** Date: **07/16/16** Time: **0600**
 Received by: **[Signature]**
 Remarks: **BILL BP**
CONTACT: STEVE MASCAL
VD: VBEEBSOSPA
REF: GL# 245277

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

July 13, 2016

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

RE: SCHWERDTFEGER A 2X

OrderNo.: 1607486

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/12/2016 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 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 light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1607486
 Date Reported: 7/13/2016

CLIENT: Blagg Engineering
 Project: SCHWERDTFEGER A 2X
 Lab ID: 1607486-001

Matrix: SOIL

Client Sample ID: Extended W Wall 5-pt (8'-18')
 Collection Date: 7/11/2016 1:15:00 PM
 Received Date: 7/12/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	93	30		mg/Kg	20	7/12/2016 11:15:19 AM	26348
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/12/2016 10:04:05 AM	26339
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	7/12/2016 10:04:05 AM	26339
Surr: DNOP	84.5	70-130		%Rec	1	7/12/2016 10:04:05 AM	26339
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	7/12/2016 9:59:47 AM	26325
Surr: BFB	96.1	80-120		%Rec	1	7/12/2016 9:59:47 AM	26325
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.017		mg/Kg	1	7/12/2016 9:59:47 AM	26325
Toluene	ND	0.034		mg/Kg	1	7/12/2016 9:59:47 AM	26325
Ethylbenzene	ND	0.034		mg/Kg	1	7/12/2016 9:59:47 AM	26325
Xylenes, Total	ND	0.068		mg/Kg	1	7/12/2016 9:59:47 AM	26325
Surr: 4-Bromofluorobenzene	91.3	80-120		%Rec	1	7/12/2016 9:59:47 AM	26325

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#: 1607486

13-Jul-16

Client: Blagg Engineering
Project: SCHWERTFEGER A 2X

Sample ID	MB-26348	SampType:	mbk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	26348	RunNo:	35639					
Prep Date:	7/12/2016	Analysis Date:	7/12/2016	SeqNo:	1102701	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-26348	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	26348	RunNo:	35639					
Prep Date:	7/12/2016	Analysis Date:	7/12/2016	SeqNo:	1102702	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.5	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#: 1607486
13-Jul-16

Client: Blagg Engineering
Project: SCHWERDTFEGER A 2X

Sample ID	LCS-26339	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	26339	RunNo:	35609					
Prep Date:	7/12/2016	Analysis Date:	7/12/2016	SeqNo:	1102200	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.00	0	83.6	62.6	124			
Surr: DNOP	4.0		5.000		79.6	70	130			

Sample ID	MB-26339	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	26339	RunNo:	35609					
Prep Date:	7/12/2016	Analysis Date:	7/12/2016	SeqNo:	1102201	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.8		10.00		88.1	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#: 1607486

13-Jul-16

Client: Blagg Engineering
Project: SCHWERDTFEGER A 2X

Sample ID MB-26325	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 26325	RunNo: 35619								
Prep Date: 7/11/2016	Analysis Date: 7/12/2016	SeqNo: 1102390	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	950		1000		94.7	80	120			

Sample ID LCS-26325	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 26325	RunNo: 35619								
Prep Date: 7/11/2016	Analysis Date: 7/12/2016	SeqNo: 1102391	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	80	120			
Surr: BFB	1000		1000		105	80	120			

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#: 1607486

13-Jul-16

Client: Blagg Engineering
Project: SCHWERDTFEGER A 2X

Sample ID MB-26325	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 26325	RunNo: 35619								
Prep Date: 7/11/2016	Analysis Date: 7/12/2016	SeqNo: 1102416 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.91		1.000		91.2	80	120			

Sample ID LCS-26325	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 26325	RunNo: 35619								
Prep Date: 7/11/2016	Analysis Date: 7/12/2016	SeqNo: 1102417 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	96.6	75.3	123			
Toluene	0.95	0.050	1.000	0	95.5	80	124			
Ethylbenzene	0.99	0.050	1.000	0	99.3	82.8	121			
Xylenes, Total	3.0	0.10	3.000	0	99.1	83.9	122			
Surr: 4-Bromofluorobenzene	0.97		1.000		97.0	80	120			

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
- R RPD outside accepted recovery limits
- 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



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 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **BLAGG**

Work Order Number: **1607486**

RcptNo: **1**

Received by/date: AG 07/12/16

Logged By: **Anne Thorne** 7/12/2016 7:50:00 AM *Anne Thorne*

Completed By: **Anne Thorne** 7/12/2016 *Anne Thorne*

Reviewed By: *AG* 07/12/16

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 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:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> 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	2.1	Good	Yes			

