

District I  
1525 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Form C-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: Jeff Peace
Address: 200 Energy Court, Farmington, NM 87401	Telephone No.: 505-326-9479
Facility Name: Lawson LS 1A	Facility Type: Natural gas well

Surface Owner: BLM	Mineral Owner: Federal	API No. 3004522513
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**LOCATION OF RELEASE**

Unit Letter J	Section 11	Township 31N	Range 11W	Feet from the 1700	North/South Line South	Feet from the 1450	East/West Line East	County: San Juan
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Latitude 36.91056 Longitude 107.95613

**NATURE OF RELEASE**

Type of Release: condensate/oil	Volume of Release: unknown	Volume Recovered: none
Source of Release: hydrocarbon impacts found during trenching for compressor replacement – source unknown	Date and Hour of Occurrence: unknown	Date and Hour of Discovery: July 11, 2013
Was Immediate Notice Given? <input type="checkbox"/> Yes <input 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.	

**OIL CONS. DIV DIST. 3**

If a Watercourse was Impacted, Describe Fully.\*

**AUG 29 2014**

Describe Cause of Problem and Remedial Action Taken.\* During compressor replacement operations impacted soil was discovered. Sandstone bedrock was found 15' to 20' below the surface.

Describe Area Affected and Cleanup Action Taken.\* Impacted soil was excavated and removed to the sandstone bedrock surface. Approximately 5,395 cubic yards of impacted soil was taken to IEI landfarm for treatment. Soil samples were taken and analyzed for TPH during excavation. All soil exceeding 100 ppm TPH was removed and the excavated area was backfilled with clean soil and compacted.

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: <i>Jeff Peace</i>		<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Jeff Peace		Approved by Environmental Specialist <i>Jonathan D. Kelly</i>	
Title: Field Environmental Advisor		Approval Date: <i>11/12/2014</i>	Expiration Date:
E-mail Address: peace.jeffrey@bp.com		Conditions of Approval:	Attached <input type="checkbox"/>
Date: November 15, 2013 Phone: 505-326-9479			

\* Attach Additional Sheets If Necessary

*nJK 1431652321*

CLIENT: <u>BP</u>	<b>BLAGG ENGINEERING, INC.</b> <b>P.O. BOX 87, BLOOMFIELD, NM 87413</b> <b>(505) 632-1199</b>	API #: <u>30-045-22513</u> TANK ID (if applicable): <u>      </u>
<b>FIELD REPORT:</b> (circle one): BGT CONFIRMATION / RELEASE INVESTIGATION / <u>OTHER:</u> <u>HISTORICAL RELEASE REMEDIATION</u>		PAGE #: <u>1</u> of <u>1</u>
SITE INFORMATION: SITE NAME: <u>LAWSON LS 1A</u> QUAD/UNIT: <u>J</u> SEC: <u>11</u> TWP: <u>31N</u> RNG: <u>11W</u> PM: <u>NM</u> CNTY: <u>SJ</u> ST: <u>NM</u> 1/4 - 1/4 FOOTAGE: LEASE TYPE: <u>FEDERAL</u> / STATE / FEE / INDIAN LEASE #: _____ PROD. FORMATION: _____ CONTRACTOR: <u>PARSONS (DECKER)</u>		DATE STARTED: <u>7/11/2013</u> DATE FINISHED: <u>8/23/2013</u> ENVIRONMENTAL SPECIALIST(S): <u>JCB</u>
REFERENCE POINT: WELL HEAD (W.H.) GPS COORD.: <u>36.91058 x 107.95603</u> GL ELEV.: <u>5890</u> 1) _____ GPS COORD.: _____ DISTANCE/BEARING FROM W.H.: _____ 2) _____ GPS COORD.: _____ DISTANCE/BEARING FROM W.H.: _____ 3) _____ GPS COORD.: _____ DISTANCE/BEARING FROM W.H.: _____ 4) _____ GPS COORD.: _____ DISTANCE/BEARING FROM W.H.: _____		
SAMPLING DATA: CHAIN OF CUSTODY RECORD(S) # OR LAB USED: <u>ALL HALL</u> 1) SAMPLE ID: <u>SEE ATTACHED</u> SAMPLE DATE: _____ SAMPLE TIME: _____ LAB ANALYSIS: _____ 2) SAMPLE ID: _____ SAMPLE DATE: _____ SAMPLE TIME: _____ LAB ANALYSIS: _____ 3) SAMPLE ID: _____ SAMPLE DATE: _____ SAMPLE TIME: _____ LAB ANALYSIS: _____ 4) SAMPLE ID: _____ SAMPLE DATE: _____ SAMPLE TIME: _____ LAB ANALYSIS: _____		OVM READING (ppm)
SOIL DESCRIPTION: SOIL TYPE: SAND / <u>SILTY SAND</u> / SILT / SILTY CLAY / CLAY / GRAVEL / OTHER <u>BEDROCK @ 10'-12"</u> SOIL COLOR: _____ COHESION (ALL OTHERS): NON COHESIVE / <u>SLIGHTLY COHESIVE</u> / COHESIVE / HIGHLY COHESIVE CONSISTENCY (NON COHESIVE SOILS): <u>LOOSE</u> / FIRM / DENSE / VERY DENSE MOISTURE <u>DRY</u> / SLIGHTLY MOIST / MOIST / WET / SATURATED / SUPER SATURATED SAMPLE TYPE: GRAB / COMPOSITE - # OF PTS. <u>VARIOUS</u> DISCOLORATION/STAINING OBSERVED: <u>YES</u> / NO EXPLANATION - <u>Impacts Gray/Black</u>		PLASTICITY (CLAYS): NON PLASTIC / SLIGHTLY PLASTIC / COHESIVE / MEDIUM PLASTIC / HIGHLY PLASTIC DENSITY (COHESIVE CLAYS & SILTS): SOFT / FIRM / STIFF / VERY STIFF / HARD HC ODOR DETECTED: <u>YES</u> / NO EXPLANATION - <u>STRONG</u>
ANY AREAS DISPLAYING WETNESS: YES / <u>NO</u> EXPLANATION: _____ APPARENT EVIDENCE OF A RELEASE OBSERVED AND/OR OCCURRED <u>YES</u> / NO EXPLANATION: _____ ADDITIONAL COMMENTS: <u>ON BEDROCK SANDSTONE - CLOSURE STANDARDS OF 1000 ppm TPH APPROVED BY NMDOCK</u>		
SOIL IMPACT DIMENSION ESTIMATION: <u>165'</u> R X <u>88'</u> R X <u>11'</u> R EXCAVATION ESTIMATION (Cubic Yards): <u>5935</u> DEPTH TO GROUNDWATER: <u>83'</u> NEAREST WATER SOURCE: <u>&gt;1000'</u> NEAREST SURFACE WATER: <u>&lt;1000'</u> NMDOCK TPH CLOSURE STD: <u>100</u> ppm		
SITE SKETCH: PLOT PLAN circle: <u>attached</u> <div style="text-align: center; font-size: 2em; margin-top: 20px;">SEE ATTACHED</div>		OVM CALIB. READ. = _____ ppm RF = 0.52 OVM CALIB. GAS = _____ ppm TIME: _____ am/pm DATE: _____ <div style="text-align: center; font-size: 2em; margin-top: 20px;">N ↑</div>
NOTES: BGT = BELOW-GRADE TANK; E.D. = EXCAVATION DEPRESSION; B.G. = BELOW GRADE; B = BELOW; T.H. = TEST HOLE; - = APPROX; W.H. = WELL HEAD; T.B. = TANK BOTTOM; PBGT = PREVIOUS BELOW-GRADE TANK LOCATION; SPD = SAMPLE POINT DESIGNATION; R.W. = RETAINING WALL; NA = NOT APPLICABLE OR NOT AVAILABLE; SW - SINGLE WALL; DW - DOUBLE WALL; SB - SINGLE BOTTOM; DB - DOUBLE BOTTOM.		<b>MISCELL. NOTES</b> WO: _____ PO #: _____ PK: _____ PJ #: _____ Permit date(s): _____ OCD Appr. date(s): _____ Tank ID: _____ OVM = Organic Vapor Meter ppm = parts per million BGT Sidewalls Visible: Y / N BGT Sidewalls Visible: Y / N BGT Sidewalls Visible: Y / N Magnetic declination: <u>10° E</u>
TRAVEL NOTES: CALLOUT: _____ ONSITE: <u>7/11/2013 - 8/23/2013</u>		

Lawson LS 1A

SW-12

B-11

SW-8

SW-9

B-7

SW-11

B-10

B-8

SW-10

B-9

SW-6

B-6

SW-7

SW-5

B-5

SW-2

B-2

B-4

SW-4

B-1

B-3

SW-1

SW-3

BP America Prod Co

Lawson LS 1A: (J) Sec 11 - T31N - R11W San Juan County, New Mexico

## Summary Laboratory Test Data on Historical Release Remediation by Excavation

	Google									
Chain-of-Custody	Earth Map	Sample	Sample	Type	Depth	TPH (ppm)	Benzene	BTEX	Chloride	Comments
ID	ID	Date	Time			(GRO+DRO)	(ppm)	(ppm)	(ppm)	
West Base 5-pt at 12'	B-1	07/11/2013	1020	composite	12'	ND	ND	ND	36	On Dense Sandstone Bedrock
SW Sidewall 5-pt at 5'-10'	SW-1	07/11/2013	1030	composite	5'-10'	ND	ND	ND	31	
West Sidewall 5-pt at 5'-10'	SW-2	07/11/2013	1040	composite	5'-10'	ND	ND	ND	39	
East Center Base 5-pt at 12'	B-2	07/17/2013	1255	composite	12'	ND	ND	ND	33	On Dense Sandstone Bedrock
South Base 5-pt at 10'	B-3	07/23/2013	1109	composite	10'	ND	ND	ND	18	On Dense Sandstone Bedrock
South Sidewall 5-pt at 4'-8'	SW-3	07/23/2013	1115	composite	4'-8'	ND	ND	ND	60	
SE Sidewall 5-pt at 4'-8'	SW-4	07/24/2013	1345	composite	4'-8'	15	ND	ND	86	
SE Base 5-pt at 10'	B-4	07/24/2013	1355	composite	10'	40.4	ND	0.17	39	On Dense Sandstone Bedrock
East Sidewall 5-pt at 4'-8'	SW-5	07/26/2013	1500	composite	4'-8'	ND	ND	ND	67	
East Base 5-pt at 10'	B-5	07/26/2013	1510	composite	10'	12	ND	ND	ND	On Dense Sandstone Bedrock
Wellhead West Sidewall 5-pt at 4'-9'	SW-6	08/09/2013	1055	composite	4'-9'	ND	ND	ND	ND	
Wellhead West Base 5-pt at 12'	B-6	08/08/2013	1330	composite	12'	ND	0.061	0.25	ND	On Dense Sandstone Bedrock
Wellhead NE Base 3-pt at 12'	B-7	08/12/2013	1430	composite	12'	ND	0.14	0.44	ND	On Dense Sandstone Bedrock
Wellhead NE Sidewall 3-pt at 4'-9'	SW-7	08/12/2013	1440	composite	4'-9'	ND	ND	ND	ND	
Wellhead N Sidewall 3-pt at 4'-9'	SW-8	08/13/2013	1208	composite	4'-9'	10	ND	0.13	ND	
NW Base 5-pt at 12'	B-8	08/15/2013	1120	composite	12'	41.5	ND	0.57	ND	On Dense Sandstone Bedrock
NW Sidewall 5-pt at 4'-10'	SW-9	08/15/2013	1502	composite	4'-10'	16	ND	ND	ND	
Meter Base 3-pt	B-9	08/16/2013	1215	composite	11'	21.2	ND	0.57	ND	On Dense Sandstone Bedrock
Meter Sidewall 3-pt at 4'-9'	SW-10	08/16/2013	1220	composite	4'-9'	ND	ND	ND	ND	
Meter North Base 5-pt at 10'	B-10	08/19/2013	1125	composite	10'	242	ND	4.54	ND	On Dense Sandstone Bedrock
Meter North Sidewall 5-pt at 4'-9'	SW-11	08/19/2013	1130	composite	4'-9'	ND	ND	ND	53	
NW Corner Base 5-pt at 12'	B-11	08/23/2013	1130	composite	12'	443	0.27	29.7	ND	On Dense Sandstone Bedrock
NW Corner Sidewall 5-pt at 4'-9'	SW-12	08/23/2013	1145	composite	4'-9'	ND	ND	ND	32	

# Analytical Report

Lab Order 1307546

Date Reported: 7/16/2013

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: West Base 5-pt@12'

Project: Lawson LS 1A

Collection Date: 7/11/2013 10:20:00 AM

Lab ID: 1307546-001

Matrix: MEOH (SOIL)

Received Date: 7/12/2013 10:03:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/12/2013 1:06:24 PM	8339
Surr: DNOP	93.2	63-147		%REC	1	7/12/2013 1:06:24 PM	8339
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/12/2013 11:53:13 AM	R11895
Surr: BFB	96.1	80-120		%REC	1	7/12/2013 11:53:13 AM	R11895
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	7/12/2013 11:53:13 AM	R11895
Toluene	ND	0.050		mg/Kg	1	7/12/2013 11:53:13 AM	R11895
Ethylbenzene	ND	0.050		mg/Kg	1	7/12/2013 11:53:13 AM	R11895
Xylenes, Total	ND	0.10		mg/Kg	1	7/12/2013 11:53:13 AM	R11895
Surr: 4-Bromofluorobenzene	99.0	80-120		%REC	1	7/12/2013 11:53:13 AM	R11895
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JRR
Chloride	36	30		mg/Kg	20	7/12/2013 12:45:00 PM	8346

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

**Analytical Report**

Lab Order 1307546

Date Reported: 7/16/2013

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Blagg Engineering**Client Sample ID:** SW Sidewall 5-pt @ 5'-10'**Project:** Lawson LS 1A**Collection Date:** 7/11/2013 10:30:00 AM**Lab ID:** 1307546-002**Matrix:** MEOH (SOIL)**Received Date:** 7/12/2013 10:03:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/12/2013 1:28:12 PM	8339
Surr: DNOP	85.0	63-147		%REC	1	7/12/2013 1:28:12 PM	8339
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/12/2013 12:21:51 PM	R11895
Surr: BFB	96.3	80-120		%REC	1	7/12/2013 12:21:51 PM	R11895
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.050		mg/Kg	1	7/12/2013 12:21:51 PM	R11895
Toluene	ND	0.050		mg/Kg	1	7/12/2013 12:21:51 PM	R11895
Ethylbenzene	ND	0.050		mg/Kg	1	7/12/2013 12:21:51 PM	R11895
Xylenes, Total	ND	0.10		mg/Kg	1	7/12/2013 12:21:51 PM	R11895
Surr: 4-Bromofluorobenzene	99.2	80-120		%REC	1	7/12/2013 12:21:51 PM	R11895
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	31	30		mg/Kg	20	7/12/2013 12:57:25 PM	8346

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

**Analytical Report**

Lab Order 1307546

Date Reported: 7/16/2013

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Blagg Engineering**Client Sample ID:** West Sidewall 5-pt@ 5'-10'**Project:** Lawson LS 1A**Collection Date:** 7/11/2013 10:40:00 AM**Lab ID:** 1307546-003**Matrix:** MEOH (SOIL)**Received Date:** 7/12/2013 10:03:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/12/2013 1:49:57 PM	8339
Surr: DNOP	85.8	63-147		%REC	1	7/12/2013 1:49:57 PM	8339
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/12/2013 12:50:31 PM	R11895
Surr: BFB	96.6	80-120		%REC	1	7/12/2013 12:50:31 PM	R11895
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.050		mg/Kg	1	7/12/2013 12:50:31 PM	R11895
Toluene	ND	0.050		mg/Kg	1	7/12/2013 12:50:31 PM	R11895
Ethylbenzene	ND	0.050		mg/Kg	1	7/12/2013 12:50:31 PM	R11895
Xylenes, Total	ND	0.10		mg/Kg	1	7/12/2013 12:50:31 PM	R11895
Surr: 4-Bromofluorobenzene	99.3	80-120		%REC	1	7/12/2013 12:50:31 PM	R11895
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	39	30		mg/Kg	20	7/12/2013 1:09:50 PM	8346

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1307546

16-Jul-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-8346	SampType	MBLK	TestCode	EPA Method 300.0: Anions					
Client ID	PBS	Batch ID	8346	RunNo	11931					
Prep Date	7/12/2013	Analysis Date	7/12/2013	SeqNo	339252	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-8346	SampType	LCS	TestCode	EPA Method 300.0: Anions					
Client ID	LCSS	Batch ID	8346	RunNo	11931					
Prep Date	7/12/2013	Analysis Date	7/12/2013	SeqNo	339253	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	99.3	90	110			

Sample ID	1307497-001AMS	SampType	MS	TestCode	EPA Method 300.0: Anions					
Client ID	BatchQC	Batch ID	8346	RunNo	11931					
Prep Date	7/12/2013	Analysis Date	7/12/2013	SeqNo	339256	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	38	1.5	15.00	28.09	68.8	58.8	109			

Sample ID	1307497-001AMSD	SampType	MSD	TestCode	EPA Method 300.0: Anions					
Client ID	BatchQC	Batch ID	8346	RunNo	11931					
Prep Date	7/12/2013	Analysis Date	7/12/2013	SeqNo	339257	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	38	1.5	15.00	28.09	65.2	58.8	109	1.41	20	

## Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1307546

16-Jul-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-8339	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	8339	RunNo:	11878					
Prep Date:	7/12/2013	Analysis Date:	7/12/2013	SeqNo:	337805	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		79.3	63	147			

Sample ID	LCS-8339	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	8339	RunNo:	11878					
Prep Date:	7/12/2013	Analysis Date:	7/12/2013	SeqNo:	337806	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	46	10	50.00	0	92.1	77.1	128			
Surr: DNOP	4.6		5.000		92.4	63	147			

Sample ID	1307373-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	8310	RunNo:	11878					
Prep Date:	7/10/2013	Analysis Date:	7/12/2013	SeqNo:	337949	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: DNOP	4.2		4.990		83.2	63	147			
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Sample ID	1307373-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	8310	RunNo:	11878					
Prep Date:	7/10/2013	Analysis Date:	7/12/2013	SeqNo:	337950	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: DNOP	4.1		5.010		82.4	63	147	0	0	
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Sample ID	MB-8360	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	8360	RunNo:	11922					
Prep Date:	7/12/2013	Analysis Date:	7/15/2013	SeqNo:	339236	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: DNOP	7.9		10.00		79.5	63	147			
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Sample ID	LCS-8360	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	8360	RunNo:	11922					
Prep Date:	7/12/2013	Analysis Date:	7/15/2013	SeqNo:	339237	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: DNOP	3.9		5.000		77.7	63	147			
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### Qualifiers:

- |  |  |
|--|--|
| * Value exceeds Maximum Contaminant Level.   | B Analyte detected in the associated Method Blank    |
| 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               |
| O RSD is greater than RSDlimit               | P Sample pH greater than 2 for VOA and TOC only.     |
| R RPD outside accepted recovery limits       | RL Reporting Detection Limit                         |

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1307546

16-Jul-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	1307375-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	8339	RunNo:	11922					
Prep Date:	7/12/2013	Analysis Date:	7/15/2013	SeqNo:	339248	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.05	12.78	63.6	61.3	138			
Surr: DNOP	3.8		5.005		75.5	63	147			

Sample ID	1307375-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	8339	RunNo:	11922					
Prep Date:	7/12/2013	Analysis Date:	7/15/2013	SeqNo:	339249	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.10	12.78	73.6	61.3	138	10.8	20	
Surr: DNOP	4.5		5.010		89.3	63	147	0	0	

Sample ID	MB-8347	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	8347	RunNo:	11922					
Prep Date:	7/12/2013	Analysis Date:	7/15/2013	SeqNo:	339456	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.6		10.00		85.7	63	147			

Sample ID	LCS-8347	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	8347	RunNo:	11922					
Prep Date:	7/12/2013	Analysis Date:	7/15/2013	SeqNo:	339457	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.1		5.000		81.9	63	147			

## Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1307546

16-Jul-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-8329	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R11895	RunNo:	11895					
Prep Date:	7/11/2013	Analysis Date:	7/12/2013	SeqNo:	338438	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	930		1000		93.3	80	120			

Sample ID	LCS-8329		SampType:	LCS		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	LCSS		Batch ID:	R11895		RunNo:	11895				
Prep Date:	7/11/2013		Analysis Date:	7/12/2013		SeqNo:	338439		Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.9	62.6	136				
Surr: BFB	1000		1000		105	80	120				

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1307546

16-Jul-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	<b>MB-8329</b>		SampType:	<b>MBLK</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>PBS</b>		Batch ID:	<b>R11895</b>		RunNo:	<b>11895</b>			
Prep Date:	<b>7/11/2013</b>		Analysis Date:	<b>7/12/2013</b>		SeqNo:	<b>338457</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.97		1.000		96.7	80	120			

Sample ID	<b>LCS-8329</b>		SampType:	<b>LCS</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>LCSS</b>		Batch ID:	<b>R11895</b>		RunNo:	<b>11895</b>			
Prep Date:	<b>7/11/2013</b>		Analysis Date:	<b>7/12/2013</b>		SeqNo:	<b>338458</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.050	1.000	0	92.7	80	120			
Toluene	0.92	0.050	1.000	0	92.1	80	120			
Ethylbenzene	0.91	0.050	1.000	0	90.8	80	120			
Xylenes, Total	2.7	0.10	3.000	0	91.3	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Sample ID	<b>1307545-001AMS</b>		SampType:	<b>MS</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>BatchQC</b>		Batch ID:	<b>R11895</b>		RunNo:	<b>11895</b>			
Prep Date:			Analysis Date:	<b>7/12/2013</b>		SeqNo:	<b>338460</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.42	0.050	1.000	0	42.2	67.3	145			S
Toluene	0.41	0.050	1.000	0	41.4	66.8	144			S
Ethylbenzene	0.41	0.050	1.000	0	41.2	61.9	153			S
Xylenes, Total	1.2	0.10	3.000	0	41.2	65.8	149			S
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120			

Sample ID	<b>1307545-001AMSD</b>		SampType:	<b>MSD</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>BatchQC</b>		Batch ID:	<b>R11895</b>		RunNo:	<b>11895</b>			
Prep Date:			Analysis Date:	<b>7/12/2013</b>		SeqNo:	<b>338461</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.67	0.050	1.000	0	66.9	67.3	145	45.1	20	SR
Toluene	0.65	0.050	1.000	0	64.9	66.8	144	44.2	20	SR
Ethylbenzene	0.65	0.050	1.000	0	64.7	61.9	153	44.4	20	R
Xylenes, Total	2.0	0.10	3.000	0	65.0	65.8	149	44.9	20	SR
Surr: 4-Bromofluorobenzene	1.1		1.000		105	80	120	0	0	

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87105  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: BLAGG

Work Order Number: 1307546

RcptNo: 1

Received by/date:

*[Signature]* 07/12/13

Logged By: Lindsay Mangin

7/12/2013 10:03:00 AM

*[Signature]*

Completed By: Lindsay Mangin

7/12/2013 10:16:42 AM

*[Signature]*

Reviewed By:

IO

07/12/13

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

<b>Chain-of-Custody Record</b>		Turn-Around Time: <u>By Monday 7-15-2013</u>
Client: <u>BLAG ENGINEERING INC.</u>	<input type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush	Project Name: <u>LAWSON LS 1A</u>
<u>BP AMERICA</u>	Project #:	
Mailing Address: <u>P.O. Box 87</u>		Project Manager:  <u>JEFF BLAGG</u>
<u>BLOOMFIELD NM 87413</u>	Project #:	
Phone #: <u>505-632-1199</u>		Sampler: <u>JEFF BLAGG</u>
email or Fax#:		
QA/QC Package:		On Ice <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)		
Accreditation		Sample Temperature: <u>17.0</u>
<input type="checkbox"/> NELAP <input type="checkbox"/> Other _____		
<input type="checkbox"/> EDD (Type) _____		

[illegible]

Date: 7/1/2013	Time: 1342	Relinquished by: JH Bloor
Date: 7/1/13	Time: 1800	Relinquished by: Pht Walt

Turn-Around Time:		By <u>Monday</u> <u>7-15-2013</u>	
<input type="checkbox"/> Standard		<input checked="" type="checkbox"/> Rush	
Project Name: <u>LAWSON LS 1A</u>			
Project #:			
Project Manager: <u>JEFF BLAGG</u>			
Sampler: <u>JEFF BLAGG</u>			
<input checked="" type="checkbox"/> On Ice		<input type="checkbox"/> No	
Sample Temperature:		<input type="checkbox"/> °C	

[illegible]

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

			X	X	BTEX + <del>METALS</del> 'S (8021)
					BTEX + MTBE + TPH (Gas only)
			X	X	TPH 8015B (GRO / DRO ( <del>MTBE</del> ))
					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)
			X	X X	<u>CHLORIDE</u>
					Air Rubbles (Y or N)

Remarks: BILL BLAGG

BP CONTACT JEFF PEACE

## Analytical Report

Lab Order 1307837

Date Reported: 7/22/2013

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: East Center Base 5-pt @12 '

Project: Lawson LS 1A

Collection Date: 7/17/2013 12:55:00 PM

Lab ID: 1307837-001

Matrix: SOIL

Received Date: 7/18/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/19/2013 10:22:01 AM	8425
Surr: DNOP	93.1	63-147		%REC	1	7/19/2013 10:22:01 AM	8425
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: DAM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/19/2013 12:22:51 PM	8446
Surr: BFB	93.7	80-120		%REC	1	7/19/2013 12:22:51 PM	8446
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: DAM
Benzene	ND	0.047		mg/Kg	1	7/19/2013 12:22:51 PM	8446
Toluene	ND	0.047		mg/Kg	1	7/19/2013 12:22:51 PM	8446
Ethylbenzene	ND	0.047		mg/Kg	1	7/19/2013 12:22:51 PM	8446
Xylenes, Total	ND	0.093		mg/Kg	1	7/19/2013 12:22:51 PM	8446
Surr: 4-Bromofluorobenzene	97.1	80-120		%REC	1	7/19/2013 12:22:51 PM	8446
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JRR
Chloride	33	1.5		mg/Kg	1	7/18/2013 1:40:47 PM	8455

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1307837

22-Jul-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-8455	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	8455	RunNo:	12061					
Prep Date:	7/18/2013	Analysis Date:	7/18/2013	SeqNo:	342960	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-8455	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	8455	RunNo:	12061					
Prep Date:	7/18/2013	Analysis Date:	7/18/2013	SeqNo:	342961	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.2	90	110			

Sample ID	1307687-001AMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	8455	RunNo:	12061					
Prep Date:	7/18/2013	Analysis Date:	7/18/2013	SeqNo:	342964	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0.7227	89.8	58.8	109			

Sample ID	1307687-001AMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	8455	RunNo:	12061					
Prep Date:	7/18/2013	Analysis Date:	7/18/2013	SeqNo:	342965	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	12	1.5	15.00	0.7227	76.7	58.8	109	15.0	20	

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1307837

22-Jul-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-8425	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	8425	RunNo:	12041					
Prep Date:	7/17/2013	Analysis Date:	7/18/2013	SeqNo:	342321	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	9.6		10.00		96.2	63	147			

Sample ID	LCS-8425	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	8425	RunNo:	12041					
Prep Date:	7/17/2013	Analysis Date:	7/18/2013	SeqNo:	342322	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	90.9	77.1	128			
Surr: DNOP	5.5		5.000		110	63	147			

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1307837

22-Jul-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-8446	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	8446	RunNo:	12078					
Prep Date:	7/18/2013	Analysis Date:	7/19/2013	SeqNo:	343370	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	930		1000		93.4	80	120			

Sample ID	LCS-8446	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	8446	RunNo:	12078					
Prep Date:	7/18/2013	Analysis Date:	7/19/2013	SeqNo:	343371	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	108	62.6	136			
Surr: BFB	1000		1000		100	80	120			

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1307837

22-Jul-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-8446	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID: 8446			RunNo: 12078					
Prep Date:	7/18/2013	Analysis Date: 7/19/2013			SeqNo: 343544		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.98		1.000		97.7	80	120			

Sample ID	LCS-8446		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 8446		RunNo: 12078					
Prep Date:	7/18/2013		Analysis Date: 7/19/2013		SeqNo: 343552		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	101	80	120			
Toluene	1.0	0.050	1.000	0	100	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.0	0.10	3.000	0	101	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

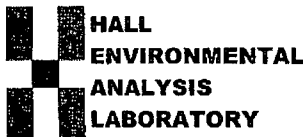
Sample ID	1307801-003AMS		SampType: MS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	BatchQC		Batch ID: 8446		RunNo: 12078					
Prep Date:	7/18/2013		Analysis Date: 7/19/2013		SeqNo: 343556		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.4	0.48	9.699	3.466	-0.238	67.3	145			S
Toluene	25	0.48	9.699	35.90	-108	66.8	144			S
Ethylbenzene	7.0	0.48	9.699	8.386	-14.7	61.9	153			S
Xylenes, Total	70	0.97	29.10	90.26	-70.9	65.8	149			S
Surr: 4-Bromofluorobenzene	12		9.699		121	80	120			S

Sample ID	1307801-003AMSD		SampType: MSD		TestCode: EPA Method 8021B: Volatiles						
Client ID:	BatchQC		Batch ID: 8446		RunNo: 12078						
Prep Date:	7/18/2013		Analysis Date: 7/19/2013		SeqNo: 343557		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	3.4	0.48	9.690	3.466	-1.12	67.3	145	2.51	20	S	
Toluene	26	0.48	9.690	35.90	-98.4	66.8	144	3.52	20	S	
Ethylbenzene	7.5	0.48	9.690	8.386	-9.42	61.9	153	7.13	20	S	
Xylenes, Total	74	0.97	29.07	90.26	-56.3	65.8	149	5.95	20	S	
Surr: 4-Bromofluorobenzene	12		9.690		126	80	120	0	0	S	

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit



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: **1307837**

RcptNo: **1**

Received by/date:

*[Signature]*

**07/18/13**

Logged By: **Ashley Gallegos**

**7/18/2013 10:00:00 AM**

*[Signature]*

Completed By: **Ashley Gallegos**

**7/18/2013 10:05:18 AM**

*[Signature]*

Reviewed By:

*[Signature]*

**06 07/18/13**

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			



## Analytical Report

Lab Order 1307A77

Date Reported: 7/26/2013

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: South Base 5-pt @ 10'

Project: Lawson LS 1A

Collection Date: 7/23/2013 11:09:00 AM

Lab ID: 1307A77-001

Matrix: MEOH (SOIL)

Received Date: 7/24/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/24/2013 10:24:29 PM	8492
Surr: DNOP	135	63-147		%REC	1	7/24/2013 10:24:29 PM	8492
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>DAM</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/24/2013 3:48:32 PM	R12152
Surr: BFB	92.2	80-120		%REC	1	7/24/2013 3:48:32 PM	R12152
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>DAM</b>
Benzene	ND	0.050		mg/Kg	1	7/24/2013 3:48:32 PM	R12152
Toluene	ND	0.050		mg/Kg	1	7/24/2013 3:48:32 PM	R12152
Ethylbenzene	ND	0.050		mg/Kg	1	7/24/2013 3:48:32 PM	R12152
Xylenes, Total	ND	0.10		mg/Kg	1	7/24/2013 3:48:32 PM	R12152
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	7/24/2013 3:48:32 PM	R12152
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	18	1.5		mg/Kg	1	7/24/2013 7:31:27 PM	8548

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

**Analytical Report**

Lab Order 1307A77

Date Reported: 7/26/2013

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Blagg Engineering**Client Sample ID:** South Sidewall 5-pt @ 4'-8'**Project:** Lawson LS 1A**Collection Date:** 7/23/2013 11:15:00 AM**Lab ID:** 1307A77-002**Matrix:** MEOH (SOIL)**Received Date:** 7/24/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/24/2013 10:54:39 PM	8492
Surr: DNOP	122	63-147		%REC	1	7/24/2013 10:54:39 PM	8492
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>DAM</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/24/2013 2:17:38 PM	R12152
Surr: BFB	87.1	80-120		%REC	1	7/24/2013 2:17:38 PM	R12152
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>DAM</b>
Benzene	ND	0.050		mg/Kg	1	7/24/2013 2:17:38 PM	R12152
Toluene	ND	0.050		mg/Kg	1	7/24/2013 2:17:38 PM	R12152
Ethylbenzene	ND	0.050		mg/Kg	1	7/24/2013 2:17:38 PM	R12152
Xylenes, Total	ND	0.10		mg/Kg	1	7/24/2013 2:17:38 PM	R12152
Surr: 4-Bromofluorobenzene	92.6	80-120		%REC	1	7/24/2013 2:17:38 PM	R12152
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	60	30		mg/Kg	20	7/24/2013 8:08:41 PM	8548

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1307A77

26-Jul-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-8548	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	8548	RunNo:	12182					
Prep Date:	7/24/2013	Analysis Date:	7/24/2013	SeqNo:	346530	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-8548	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	8548	RunNo:	12182					
Prep Date:	7/24/2013	Analysis Date:	7/24/2013	SeqNo:	346531	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.0	90	110			

Sample ID	1307919-001AMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	8548	RunNo:	12182					
Prep Date:	7/24/2013	Analysis Date:	7/24/2013	SeqNo:	346533	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	42	1.5	15.00	25.91	109	58.8	109			

Sample ID	1307919-001AMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	8548	RunNo:	12182					
Prep Date:	7/24/2013	Analysis Date:	7/24/2013	SeqNo:	346534	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	43	1.5	15.00	25.91	113	58.8	109	1.57	20	S

## Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1307A77

26-Jul-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-8492	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	8492	RunNo:	12141					
Prep Date:	7/22/2013	Analysis Date:	7/24/2013	SeqNo:	345745	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	13		10.00		127	63	147			

Sample ID	LCS-8492	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	8492	RunNo:	12141					
Prep Date:	7/22/2013	Analysis Date:	7/24/2013	SeqNo:	345791	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	10	50.00	0	104	77.1	128			
Surr: DNOP	5.6		5.000		112	63	147			

## Qualifiers:

- |  |  |
|--|--|
| * Value exceeds Maximum Contaminant Level.   | B Analyte detected in the associated Method Blank    |
| 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               |
| O RSD is greater than RSDlimit               | P Sample pH greater than 2 for VOA and TOC only.     |
| R RPD outside accepted recovery limits       | RL Reporting Detection Limit                         |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1307A77

26-Jul-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	B	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R12152	RunNo:	12152					
Prep Date:		Analysis Date:	7/24/2013	SeqNo:	346278	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	880		1000		88.1	80	120			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R12152	RunNo:	12152					
Prep Date:		Analysis Date:	7/24/2013	SeqNo:	346279	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	100	62.6	136			
Surr: BFB	990		1000		98.7	80	120			

Sample ID	LCS-8488	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	8488	RunNo:	12152					
Prep Date:	7/22/2013	Analysis Date:	7/24/2013	SeqNo:	346280	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	960		1000		96.4	80	120			

Sample ID	1307A76-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	BatchQC	Batch ID:	R12152	RunNo:	12152					
Prep Date:		Analysis Date:	7/24/2013	SeqNo:	346281	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.9	76	156			
Surr: BFB	970		1000		97.0	80	120			

Sample ID	1307A76-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	BatchQC	Batch ID:	R12152	RunNo:	12152					
Prep Date:		Analysis Date:	7/24/2013	SeqNo:	346282	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	83.4	76	156	5.18	17.7	
Surr: BFB	940		1000		93.8	80	120	0	0	

### Qualifiers:

- |  |  |
|--|--|
| * Value exceeds Maximum Contaminant Level.   | B Analyte detected in the associated Method Blank    |
| 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               |
| O RSD is greater than RSDlimit               | P Sample pH greater than 2 for VOA and TOC only.     |
| R RPD outside accepted recovery limits       | RL Reporting Detection Limit                         |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1307A77

26-Jul-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	B	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	R12152	RunNo:	12152					
Prep Date:		Analysis Date:	7/24/2013	SeqNo:	346288	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.8	80	120			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	R12152	RunNo:	12152					
Prep Date:		Analysis Date:	7/24/2013	SeqNo:	346289	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.050	1.000	0	98.5	80	120			
Toluene	1.0	0.050	1.000	0	100	80	120			
Ethylbenzene	0.99	0.050	1.000	0	98.9	80	120			
Xylenes, Total	3.0	0.10	3.000	0	100	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID	1307A77-001AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	South Base 5-pt @	Batch ID:	R12152	RunNo:	12152					
Prep Date:		Analysis Date:	7/24/2013	SeqNo:	346290	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.050	1.000	0.01739	91.6	67.3	145			
Toluene	0.93	0.050	1.000	0.01870	91.2	66.8	144			
Ethylbenzene	0.94	0.050	1.000	0.01739	92.3	61.9	153			
Xylenes, Total	2.9	0.10	3.000	0.09425	94.0	65.8	149			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID	1307A77-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	South Base 5-pt @	Batch ID:	R12152	RunNo:	12152					
Prep Date:		Analysis Date:	7/24/2013	SeqNo:	346291	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.050	1.000	0.01739	89.8	67.3	145	1.88	20	
Toluene	0.91	0.050	1.000	0.01870	89.2	66.8	144	2.17	20	
Ethylbenzene	0.93	0.050	1.000	0.01739	90.9	61.9	153	1.50	20	
Xylenes, Total	2.9	0.10	3.000	0.09425	93.6	65.8	149	0.433	20	
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120	0	0	

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87105  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: BLAGG

Work Order Number: 1307A77

RcptNo: 1

Received by/date:	LM	07/24/13
Logged By:	Michelle Garcia	7/24/2013 10:00:00 AM
Completed By:	Michelle Garcia	7/24/2013 10:25:53 AM
Reviewed By:	JO	07/24/13

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.2	Good	Yes			

<b>Chain-of-Custody Record</b>		Turn-Around Time: <u>By Thursday 7-25-2013</u>
Client: <u>BLAGG ENGINEERING INC.</u>	<input type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush	
<u>BP AMERICA</u>	Project Name:	
Mailing Address: <u>P.O. Box 87</u>	<u>LAWSON LS 1A</u>	
<u>BLOOMFIELD, NM 87413</u>	Project #:	
Phone #: <u>505-632-1199</u>	Project Manager:	
email or Fax#:	<u>J- BLAGG</u>	
QA/QC Package:		
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)		
Accreditation	Sampler: <u>J- BLAGG</u>	
<input type="checkbox"/> NELAP <input type="checkbox"/> Other _____	On Site: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<input type="checkbox"/> EDD (Type) _____	Sample Temperature: <u>22.7</u>	

By Thursday  
7-25-2013

☐ Standard ☒ **Rush**

Project Name:

LAWSON LS 1A

Project #:

**Project Manager:**

J. BLAGG

**Sampler:**

J. BALL

On Ice ☒ Yes ☐ No

Sample Temperature 22.2

[illegible]

Date:	Time:	Relinquished by:
-------	-------	------------------

7/23/13 | 1205

Relinquished by:

Jeff Bly

Received by:

Christian Jorda

Date	Time
------	------

27/12 1205

Remarks:	
----------	--

Bill Beagle

Date:	Time:
-------	-------

7/6312 1754

Relinquished by:

1205

Received by \_\_\_\_\_



Date Time

1-15-1962

BP Contact: JEFF PEACE

If necessary, samples submitted to Hal 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, Inc.

## Analytical Report

Lab Order 1307C12

Date Reported: 7/31/2013

CLIENT: Blagg Engineering

Client Sample ID: SE Sidewall 5-pt @ 4'-8'

Project: Lawson LS 1A

Collection Date: 7/24/2013 1:45:00 PM

Lab ID: 1307C12-001

Matrix: SOIL

Received Date: 7/26/2013 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	15	10		mg/Kg	1	7/26/2013 2:15:51 PM	8571
Surr: DNOP	102	63-147		%REC	1	7/26/2013 2:15:51 PM	8571
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JRR
Chloride	86	30		mg/Kg	20	7/26/2013 1:47:15 PM	8576
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: CWS
Benzene	ND	0.050		mg/Kg	1	7/26/2013 4:01:07 PM	R12236
Toluene	ND	0.050		mg/Kg	1	7/26/2013 4:01:07 PM	R12236
Ethylbenzene	ND	0.050		mg/Kg	1	7/26/2013 4:01:07 PM	R12236
Xylenes, Total	ND	0.10		mg/Kg	1	7/26/2013 4:01:07 PM	R12236
Surr: 1,2-Dichloroethane-d4	97.2	70-130		%REC	1	7/26/2013 4:01:07 PM	R12236
Surr: 4-Bromofluorobenzene	84.5	70-130		%REC	1	7/26/2013 4:01:07 PM	R12236
Surr: Dibromofluoromethane	102	70-130		%REC	1	7/26/2013 4:01:07 PM	R12236
Surr: Toluene-d8	88.8	70-130		%REC	1	7/26/2013 4:01:07 PM	R12236
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: CWS
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/26/2013 4:01:07 PM	R12236
Surr: BFB	84.5	70-130		%REC	1	7/26/2013 4:01:07 PM	R12236

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

## Analytical Report

Lab Order 1307C12

Date Reported: 7/31/2013

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: SE Base 5-pt @ 10'

Project: Lawson LS 1A

Collection Date: 7/24/2013 1:55:00 PM

Lab ID: 1307C12-002

Matrix: SOIL

Received Date: 7/26/2013 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	34	10		mg/Kg	1	7/26/2013 2:37:42 PM	8571
Surr: DNOP	99.8	63-147		%REC	1	7/26/2013 2:37:42 PM	8571
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	39	30		mg/Kg	20	7/26/2013 1:59:39 PM	8576
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>CWS</b>
Benzene	ND	0.050		mg/Kg	1	7/26/2013 5:27:44 PM	R12236
Toluene	ND	0.050		mg/Kg	1	7/26/2013 5:27:44 PM	R12236
Ethylbenzene	ND	0.050		mg/Kg	1	7/26/2013 5:27:44 PM	R12236
Xylenes, Total	0.17	0.10		mg/Kg	1	7/26/2013 5:27:44 PM	R12236
Surr: 1,2-Dichloroethane-d4	98.5	70-130		%REC	1	7/26/2013 5:27:44 PM	R12236
Surr: 4-Bromofluorobenzene	82.9	70-130		%REC	1	7/26/2013 5:27:44 PM	R12236
Surr: Dibromofluoromethane	103	70-130		%REC	1	7/26/2013 5:27:44 PM	R12236
Surr: Toluene-d8	90.7	70-130		%REC	1	7/26/2013 5:27:44 PM	R12236
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>CWS</b>
Gasoline Range Organics (GRO)	6.4	5.0		mg/Kg	1	7/26/2013 5:27:44 PM	R12236
Surr: BFB	82.9	70-130		%REC	1	7/26/2013 5:27:44 PM	R12236

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1307C12

31-Jul-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-8576	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	8576	RunNo:	12237					
Prep Date:	7/26/2013	Analysis Date:	7/26/2013	SeqNo:	348052	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-8576	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	8576	RunNo:	12237					
Prep Date:	7/26/2013	Analysis Date:	7/26/2013	SeqNo:	348053	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.6	90	110			

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1307C12

31-Jul-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-8571	SampType:	MBLK		TestCode:	EPA Method 8015D: Diesel Range Organics				
Client ID:	PBS	Batch ID:	8571		RunNo:	12209				
Prep Date:	7/25/2013	Analysis Date:	7/26/2013		SeqNo:	347324		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	10		10.00		99.9	63	147			

Sample ID	LCS-8571		SampType:	LCS		TestCode:	EPA Method 8015D: Diesel Range Organics				
Client ID:	LCSS		Batch ID:	8571		RunNo:	12209				
Prep Date:	7/25/2013		Analysis Date:	7/26/2013		SeqNo:	347332		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	44	10	50.00	0	87.9	77.1	128				
Surr: DNOP	4.0		5.000		79.2	63	147				

Sample ID	1307B56-001AMS		SampType: MS		TestCode: EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC		Batch ID: 8571		RunNo: 12239					
Prep Date:	7/25/2013		Analysis Date: 7/29/2013		SeqNo: 348203		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.40	0	93.2	61.3	138			
Surr: DNOP	4.0		5.040		78.6	63	147			

Sample ID	1307B56-001AMSD		SampType: MSD		TestCode: EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC		Batch ID: 8571		RunNo: 12239					
Prep Date:	7/25/2013		Analysis Date: 7/29/2013		SeqNo: 348230		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	9.9	49.50	0	109	61.3	138	13.7	20	
Surr: DNOP	4.0		4.950		80.4	63	147	0	0	

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1307C12

31-Jul-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-8541 MEOH	SampType:	MBLK	TestCode:	EPA Method 8260B: Volatiles Short List					
Client ID:	PBS	Batch ID:	R12236	RunNo:	12236					
Prep Date:	7/24/2013	Analysis Date:	7/26/2013	SeqNo:	348787	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.47		0.5000		94.3	70	130			
Surr: 4-Bromofluorobenzene	0.45		0.5000		90.0	70	130			
Surr: Dibromofluoromethane	0.52		0.5000		104	70	130			
Surr: Toluene-d8	0.45		0.5000		90.3	70	130			

Sample ID	LCS-8541 MEOH	SampType:	LCS	TestCode:	EPA Method 8260B: Volatiles Short List					
Client ID:	LCSS	Batch ID:	R12236	RunNo:	12236					
Prep Date:	7/24/2013	Analysis Date:	7/26/2013	SeqNo:	348788	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.050	1.000	0	94.4	70	130			
Toluene	0.83	0.050	1.000	0	82.5	80	120			
Surr: 1,2-Dichloroethane-d4	0.49		0.5000		97.6	70	130			
Surr: 4-Bromofluorobenzene	0.45		0.5000		90.9	70	130			
Surr: Dibromofluoromethane	0.53		0.5000		106	70	130			
Surr: Toluene-d8	0.45		0.5000		90.2	70	130			

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1307C12

31-Jul-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	1307c12-001ams	SampType:	MS	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	SE Sidewall 5-pt @	Batch ID:	R12236	RunNo:	12236					
Prep Date:		Analysis Date:	7/26/2013	SeqNo:	348206	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	26.20	2.117	100	58	134			
Surr: BFB	400		524.1		76.6	70	130			

Sample ID	1307c12-001amsd	SampType:	MSD	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	SE Sidewall 5-pt @	Batch ID:	R12236	RunNo:	12236					
Prep Date:		Analysis Date:	7/26/2013	SeqNo:	348207	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	26.20	2.117	91.4	58	134	8.73	20	
Surr: BFB	420		524.1		80.3	70	130	0	0	

Sample ID	2.5 gro lcs	SampType:	LCS	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	LCSS	Batch ID:	R12236	RunNo:	12236					
Prep Date:		Analysis Date:	7/26/2013	SeqNo:	348789	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	102	80	120			
Surr: BFB	450		500.0		89.9	70	130			

### Qualifiers:

- |  |  |
|--|--|
| * Value exceeds Maximum Contaminant Level.   | B Analyte detected in the associated Method Blank    |
| 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               |
| O RSD is greater than RSDlimit               | P Sample pH greater than 2 for VOA and TOC only.     |
| R RPD outside accepted recovery limits       | RL Reporting Detection Limit                         |

# Sample Log-In Check List

Client Name: **BLAGG**

Work Order Number: **1307C12**

RcptNo: 1

Received by/date:	<i>[Signature]</i>	<b>07/20/13</b>
Logged By:	<b>Anne Thorne</b>	<b>7/26/2013 10:10:00 AM</b>
Completed By:	<b>Anne Thorne</b>	<b>7/26/2013</b>
Reviewed By:	<i>[Signature]</i>	<b>07/20/13</b>

## Chain of Custody

- Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
- Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
- How was the sample delivered? Courier

## Log In

- Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
- Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐
- Sample(s) in proper container(s)? Yes ☒ No ☐
- Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
- Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
- Was preservative added to bottles? Yes ☐ No ☒ NA ☐
- VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
- Were any sample containers received broken? Yes ☐ No ☒
- Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
- Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
- Is it clear what analyses were requested? Yes ☒ No ☐
- 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)

- 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:	_____		

- Additional remarks:

## 18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	Good	Yes			



# Analytical Report

Lab Order 1307D19

Date Reported: 8/2/2013

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: East Sidewall 5-pt @ 4'-8'

Project: Lawson LS 1A

Collection Date: 7/26/2013 3:00:00 PM

Lab ID: 1307D19-001

Matrix: SOIL

Received Date: 7/30/2013 10:01:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/1/2013 1:14:38 PM	8620
Surr: DNOP	82.1	63-147		%REC	1	8/1/2013 1:14:38 PM	8620
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/31/2013 1:18:19 PM	8630
Surr: BFB	90.5	80-120		%REC	1	7/31/2013 1:18:19 PM	8630
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.048		mg/Kg	1	7/31/2013 1:18:19 PM	8630
Toluene	ND	0.048		mg/Kg	1	7/31/2013 1:18:19 PM	8630
Ethylbenzene	ND	0.048		mg/Kg	1	7/31/2013 1:18:19 PM	8630
Xylenes, Total	ND	0.095		mg/Kg	1	7/31/2013 1:18:19 PM	8630
Surr: 4-Bromofluorobenzene	98.2	80-120		%REC	1	7/31/2013 1:18:19 PM	8630
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	67	30		mg/Kg	20	7/31/2013 3:12:06 PM	8660

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1307D19

Date Reported: 8/2/2013

CLIENT: Blagg Engineering

Client Sample ID: East Base 5-pt @ 10'

Project: Lawson LS 1A

Collection Date: 7/26/2013 3:10:00 PM

Lab ID: 1307D19-002

Matrix: SOIL

Received Date: 7/30/2013 10:01:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	12	10		mg/Kg	1	8/1/2013 2:19:54 PM	8620
Surr: DNOP	88.4	63-147		%REC	1	8/1/2013 2:19:54 PM	8620
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/31/2013 1:48:32 PM	8630
Surr: BFB	86.0	80-120		%REC	1	7/31/2013 1:48:32 PM	8630
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.047		mg/Kg	1	7/31/2013 1:48:32 PM	8630
Toluene	ND	0.047		mg/Kg	1	7/31/2013 1:48:32 PM	8630
Ethylbenzene	ND	0.047		mg/Kg	1	7/31/2013 1:48:32 PM	8630
Xylenes, Total	ND	0.095		mg/Kg	1	7/31/2013 1:48:32 PM	8630
Surr: 4-Bromofluorobenzene	93.9	80-120		%REC	1	7/31/2013 1:48:32 PM	8630
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	7/31/2013 3:49:20 PM	8660

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1307D19

02-Aug-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-8660	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	8660	RunNo:	12330					
Prep Date:	7/31/2013	Analysis Date:	7/31/2013	SeqNo:	350867	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-8660	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	8660	RunNo:	12330					
Prep Date:	7/31/2013	Analysis Date:	7/31/2013	SeqNo:	350868	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.0	90	110			

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1307D19

02-Aug-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-8620	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	8620	RunNo:	12267					
Prep Date:	7/30/2013	Analysis Date:	7/30/2013	SeqNo:	349068	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	9.9		10.00		99.2	63	147			

Sample ID	LCS-8620	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	8620	RunNo:	12267					
Prep Date:	7/30/2013	Analysis Date:	7/30/2013	SeqNo:	349069	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	103	77.1	128			
Surr: DNOP	4.3		5.000		86.1	63	147			

Sample ID	1307D19-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	East Sidewall 5-pt	Batch ID:	8620	RunNo:	12312					
Prep Date:	7/30/2013	Analysis Date:	8/1/2013	SeqNo:	351208	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.05	0	88.8	61.3	138			
Surr: DNOP	3.8		5.005		75.4	63	147			

Sample ID	1307D19-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	East Sidewall 5-pt	Batch ID:	8620	RunNo:	12312					
Prep Date:	7/30/2013	Analysis Date:	8/1/2013	SeqNo:	351283	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.05	0	85.0	61.3	138	4.41	20	
Surr: DNOP	3.5		5.005		70.5	63	147	0	0	

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1307D19

02-Aug-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-8630	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	8630	RunNo:	12311					
Prep Date:	7/30/2013	Analysis Date:	7/31/2013	SeqNo:	350658	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	930		1000		93.2	80	120			

Sample ID	LCS-8630	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	8630	RunNo:	12311					
Prep Date:	7/30/2013	Analysis Date:	7/31/2013	SeqNo:	350659	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	91.9	62.6	136			
Surr: BFB	970		1000		96.8	80	120			

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1307D19

02-Aug-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	<b>MB-8630</b>		SampType:	<b>MBLK</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>PBS</b>		Batch ID:	<b>8630</b>		RunNo:	<b>12311</b>			
Prep Date:	<b>7/30/2013</b>		Analysis Date:	<b>7/31/2013</b>		SeqNo:	<b>350679</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.97		1.000		96.6	80	120			

Sample ID	<b>LCS-8630</b>		SampType:	<b>LCS</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>LCSS</b>		Batch ID:	<b>8630</b>		RunNo:	<b>12311</b>			
Prep Date:	<b>7/30/2013</b>		Analysis Date:	<b>7/31/2013</b>		SeqNo:	<b>350680</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.050	1.000	0	93.0	80	120			
Toluene	0.93	0.050	1.000	0	93.4	80	120			
Ethylbenzene	0.92	0.050	1.000	0	92.3	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.4	80	120			
Surr: 4-Bromofluorobenzene	0.97		1.000		97.3	80	120			

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit



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: 1307D19

RcptNo: 1

Received by/date:

AG 07/30/13

Logged By: Lindsay Mangin

7/30/2013 10:01:00 AM

*[Signature]*

Completed By: Lindsay Mangin

7/30/2013 10:24:45 AM

*[Signature]*

Reviewed By:

*[Signature]*

07/30/13

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

<b>Chain-of-Custody Record</b>		Turn-Around Time: <u>By THURSDAY 8/1/2013</u>
Client: <u>BLAGG ENGINEERING INC.</u>	<input type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush	
<u>BP AMERICA</u>	Project Name: <u>LAWSON LS 1A</u>	
Mailing Address: <u>P.O. Box 87</u>	Project #: _____	
<u>BLOOMFIELD, NM 87413</u>	Project Manager: <u>J. Blagg</u>	
Phone #: <u>505-632-1199</u>	Sampler: <u>J. Blagg</u>	
email or Fax#: _____	On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
QA/QC Package:	Sample Temperature: <u>10</u>	
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)		
Accreditation		
<input type="checkbox"/> NELAP <input type="checkbox"/> Other _____		
<input type="checkbox"/> EDD (Type) _____		

☐ Standard ☒ Rush

Project Name: LAWSON LS 1A

Project #:

**Project Manager:**

Sampler: J. BLAKE

On Ice ☒ Yes ☐ No

Sample Temperature: 100

[illegible]

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/29/13	1150	Jeff Blegg	Christine Waelder	2/29/13	1150
Date:	Time:	Relinquished by:	Received by:	Date	Time
1/29/13	1750	Christine Waelder	[Signature]	07/30/13	1001

Remarks: BILL BLABE  
BP CONTACT: JEFF PEACE



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

					X	BTEX + MTBE + IMB's (8021)
						BTEX + MTBE + TPH (Gas only)
					X	TPH 8015B (GRO / DRO ( <del>MBO</del> ))
						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)
					X	CHLORIDE
						Air Rubbles (Y or N)

## Analytical Report

Lab Order 1308421

Date Reported: 8/13/2013

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: Well head West Sidewall 5-pt @

Project: Lawson LS 1A

Collection Date: 8/9/2013 10:55:00 AM

Lab ID: 1308421-001

Matrix: MEOH (SOIL)

Received Date: 8/12/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/12/2013 5:21:16 PM	8810
Surr: DNOP	90.8	63-147		%REC	1	8/12/2013 5:21:16 PM	8810
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/12/2013 12:48:04 PM	R12570
Surr: BFB	91.3	80-120		%REC	1	8/12/2013 12:48:04 PM	R12570
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	8/12/2013 12:48:04 PM	R12570
Toluene	ND	0.050		mg/Kg	1	8/12/2013 12:48:04 PM	R12570
Ethylbenzene	ND	0.050		mg/Kg	1	8/12/2013 12:48:04 PM	R12570
Xylenes, Total	0.22	0.10		mg/Kg	1	8/12/2013 12:48:04 PM	R12570
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	8/12/2013 12:48:04 PM	R12570
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JRR
Chloride	ND	30		mg/Kg	20	8/13/2013 12:08:23 AM	8814

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

**Analytical Report**

Lab Order 1308421

Date Reported: 8/13/2013

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Blagg Engineering**Client Sample ID:** Well head West Base 5-pt @ 12'**Project:** Lawson LS 1A**Collection Date:** 8/8/2013 1:30:00 PM**Lab ID:** 1308421-002**Matrix:** MEOH (SOIL)**Received Date:** 8/12/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/12/2013 5:43:01 PM	8810
Surr: DNOP	93.4	63-147		%REC	1	8/12/2013 5:43:01 PM	8810
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/12/2013 1:45:23 PM	R12570
Surr: BFB	88.7	80-120		%REC	1	8/12/2013 1:45:23 PM	R12570
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	0.061	0.050		mg/Kg	1	8/12/2013 1:45:23 PM	R12570
Toluene	ND	0.050		mg/Kg	1	8/12/2013 1:45:23 PM	R12570
Ethylbenzene	ND	0.050		mg/Kg	1	8/12/2013 1:45:23 PM	R12570
Xylenes, Total	0.19	0.10		mg/Kg	1	8/12/2013 1:45:23 PM	R12570
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	8/12/2013 1:45:23 PM	R12570
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JRR
Chloride	ND	30		mg/Kg	20	8/13/2013 12:20:48 AM	8814

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1308421

13-Aug-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-8814	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	8814	RunNo:	12577					
Prep Date:	8/12/2013	Analysis Date:	8/12/2013	SeqNo:	358283	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-8814	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	8814	RunNo:	12577					
Prep Date:	8/12/2013	Analysis Date:	8/12/2013	SeqNo:	358284	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.0	90	110			

Sample ID	1308309-002AMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	8814	RunNo:	12577					
Prep Date:	8/12/2013	Analysis Date:	8/12/2013	SeqNo:	358288	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	16	1.5	15.00	1.612	94.9	58.8	109			

Sample ID	1308309-002AMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	8814	RunNo:	12577					
Prep Date:	8/12/2013	Analysis Date:	8/12/2013	SeqNo:	358289	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	16	1.5	15.00	1.612	94.1	58.8	109	0.778	20	

## Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1308421

13-Aug-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-8796	SampType:	MBLK		TestCode:	EPA Method 8015D: Diesel Range Organics				
Client ID:	PBS	Batch ID:	8796		RunNo:	12540				
Prep Date:	8/9/2013	Analysis Date:	8/12/2013		SeqNo:	357283		Units: %REC		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.7		10.00		97.2	63	147			

Sample ID	LCS-8796		SampType: LCS		TestCode: EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 8796		RunNo: 12540					
Prep Date:	8/9/2013		Analysis Date: 8/12/2013		SeqNo: 357284		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.8		5.000		76.5	63	147			

Sample ID	MB-8810	SampType:	MBLK		TestCode:	EPA Method 8015D: Diesel Range Organics				
Client ID:	PBS	Batch ID:	8810		RunNo:	12540				
Prep Date:	8/12/2013	Analysis Date:	8/12/2013		SeqNo:	357705	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	9.9		10.00		99.3	63	147			

Sample ID	LCS-8810		SampType: LCS		TestCode: EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 8810		RunNo: 12540					
Prep Date:	8/12/2013		Analysis Date: 8/12/2013		SeqNo: 357950		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.1	77.1	128			
Surr: DNOP	4.1		5.000		81.3	63	147			

Sample ID	1308352-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	8796	RunNo:	12540					
Prep Date:	8/9/2013	Analysis Date:	8/12/2013	SeqNo:	357951	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.030		87.0	63	147			

Sample ID	1308352-001AMSD		SampType: MSD		TestCode: EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC		Batch ID: 8796		RunNo: 12540					
Prep Date:	8/9/2013		Analysis Date: 8/12/2013		SeqNo: 357952		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.2		4.970		83.8	63	147	0	0	

### Qualifiers:

- |  |  |
|--|--|
| * Value exceeds Maximum Contaminant Level.   | B Analyte detected in the associated Method Blank    |
| 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               |
| O RSD is greater than RSDlimit               | P Sample pH greater than 2 for VOA and TOC only.     |
| R RPD outside accepted recovery limits       | RL Reporting Detection Limit                         |

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1308421

13-Aug-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	1308420-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	8810	RunNo:	12540					
Prep Date:	8/12/2013	Analysis Date:	8/12/2013	SeqNo:	357965	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	49.95	0	96.5	61.3	138			
Surr: DNOP	4.0		4.995		81.0	63	147			

Sample ID	1308420-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	8810	RunNo:	12540					
Prep Date:	8/12/2013	Analysis Date:	8/12/2013	SeqNo:	357966	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	9.9	49.31	0	98.9	61.3	138	1.17	20	
Surr: DNOP	4.4		4.931		88.9	63	147	0	0	

## Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1308421

13-Aug-13

Client: Blagg Engineering

Project: Lawson LS IA

Sample ID	MB-8800	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R12570	RunNo:	12570					
Prep Date:	8/9/2013	Analysis Date:	8/12/2013	SeqNo:	358060	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	870		1000		86.9	80	120			

Sample ID	LCS-8800	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R12570	RunNo:	12570					
Prep Date:	8/9/2013	Analysis Date:	8/12/2013	SeqNo:	358068	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	100	62.6	136			
Surr: BFB	940		1000		93.7	80	120			

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1308421

13-Aug-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-8800	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	R12570	RunNo:	12570					
Prep Date:	8/9/2013	Analysis Date:	8/12/2013	SeqNo:	358141	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
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-8800	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	R12570	RunNo:	12570					
Prep Date:	8/9/2013	Analysis Date:	8/12/2013	SeqNo:	358142	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	102	80	120			
Toluene	1.0	0.050	1.000	0	101	80	120			
Ethylbenzene	1.0	0.050	1.000	0	103	80	120			
Xylenes, Total	3.1	0.10	3.000	0	104	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120			

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit



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: 1308421

RcptNo: 1

Received by/date:

LM

08/12/13

Logged By: Michelle Garcia

8/12/2013 10:00:00 AM

Michelle Garcia

Completed By: Michelle Garcia

8/12/2013 10:30:44 AM

Michelle Garcia

Reviewed By:

AA

08/12/13

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	5.8	Good	Yes			

<b>Chain-of-Custody Record</b>		Turn-Around Time: <u>B+ TUESDAY</u> <u>8/13/2013</u>	
Client: <u>BLAGG ENGINEERING INC.</u>		<input type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush	
<u>BP AMERICA</u>		Project Name:	
Mailing Address: <u>P.O. Box 87</u>		<u>LAWSOON LS 1A</u>	
<u>BLOOMFIELD, NM 87413</u>		Project #:	
Phone #: <u>505-632-1199</u>		Project Manager:	
email or Fax#:		<u>JEFF BLAGG</u>	
QA/QC Package:		Sampler: <u>JEFF BLAGG</u>	
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)		On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Accreditation		Sample Temperature: <u>58</u>	
<input type="checkbox"/> NELAP <input type="checkbox"/> Other _____			
<input type="checkbox"/> EDD (Type) _____			

[illegible]

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/9/13	1457	JFF Blegg	Christy Waaler	8/9/13	1457
Date:	Time:	Relinquished by:	Received by:	Date	Time
8/12/13	1645	Christie Waaler		08/12/13	13000

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

	X	BTEX + MTBE + TMB's (8021)
		BTEX + MTBE + TPH (Gas only)
	X	TPH 8015B (GRO / DRO / <del>MBO</del> )
		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)
	X	<i>CHLORIDE</i>
		Air Bubbles (Y or N)

Remarks: BILL BLAKE

BP CONTACT: JEFF PACE

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1308531

Date Reported: 8/14/2013

CLIENT: Blagg Engineering

Client Sample ID: Wellhead NE Base 3-pt @ 12'

Project: Lawson LS 1A

Collection Date: 8/12/2013 2:30:00 PM

Lab ID: 1308531-001

Matrix: MEOH (SOIL)

Received Date: 8/13/2013 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/13/2013 4:11:43 PM	8831
Surr: DNOP	98.7	63-147		%REC	1	8/13/2013 4:11:43 PM	8831
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/13/2013 2:06:08 PM	R12603
Surr: BFB	93.0	80-120		%REC	1	8/13/2013 2:06:08 PM	R12603
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	0.14	0.050		mg/Kg	1	8/13/2013 2:06:08 PM	R12603
Toluene	ND	0.050		mg/Kg	1	8/13/2013 2:06:08 PM	R12603
Ethylbenzene	ND	0.050		mg/Kg	1	8/13/2013 2:06:08 PM	R12603
Xylenes, Total	0.30	0.10		mg/Kg	1	8/13/2013 2:06:08 PM	R12603
Surr: 4-Bromofluorobenzene	100	80-120		%REC	1	8/13/2013 2:06:08 PM	R12603
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JRR
Chloride	ND	30		mg/Kg	20	8/13/2013 1:17:55 PM	8834

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

**Analytical Report**

Lab Order 1308531

Date Reported: 8/14/2013

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Blagg Engineering**Client Sample ID:** Wellhead NE Sidewall 3-pt @ 4'-**Project:** Lawson LS 1A**Collection Date:** 8/12/2013 2:40:00 PM**Lab ID:** 1308531-002**Matrix:** MEOH (SOIL)**Received Date:** 8/13/2013 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/13/2013 4:42:06 PM	8831
Surr: DNOP	99.7	63-147		%REC	1	8/13/2013 4:42:06 PM	8831
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/13/2013 2:36:20 PM	R12603
Surr: BFB	91.2	80-120		%REC	1	8/13/2013 2:36:20 PM	R12603
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.050		mg/Kg	1	8/13/2013 2:36:20 PM	R12603
Toluene	ND	0.050		mg/Kg	1	8/13/2013 2:36:20 PM	R12603
Ethylbenzene	ND	0.050		mg/Kg	1	8/13/2013 2:36:20 PM	R12603
Xylenes, Total	ND	0.10		mg/Kg	1	8/13/2013 2:36:20 PM	R12603
Surr: 4-Bromofluorobenzene	96.4	80-120		%REC	1	8/13/2013 2:36:20 PM	R12603
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	8/13/2013 1:30:19 PM	8834

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1308531

14-Aug-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-8834	SampType:	MBLK		TestCode:	EPA Method 300.0: Anions				
Client ID:	PBS	Batch ID:	8834		RunNo:	12612				
Prep Date:	8/13/2013	Analysis Date:	8/13/2013		SeqNo:	359095	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-8834	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	8834	RunNo:	12612					
Prep Date:	8/13/2013	Analysis Date:	8/13/2013	SeqNo:	359096	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.1	90	110			

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1308531

14-Aug-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-8831	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	8831	RunNo:	12591					
Prep Date:	8/13/2013	Analysis Date:	8/13/2013	SeqNo:	358763	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	8.8		10.00		88.5	63	147			

Sample ID	LCS-8831	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	8831	RunNo:	12591					
Prep Date:	8/13/2013	Analysis Date:	8/13/2013	SeqNo:	358764	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	89.0	77.1	128			
Surr: DNOP	4.6		5.000		92.1	63	147			

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1308531

14-Aug-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R12603	RunNo:	12603					
Prep Date:		Analysis Date:	8/13/2013	SeqNo:	359002	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		95.0	80	120			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R12603	RunNo:	12603					
Prep Date:		Analysis Date:	8/13/2013	SeqNo:	359003	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	62.6	136			
Surr: BFB	990		1000		98.9	80	120			

Sample ID	1308531-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	Wellhead NE Base 3	Batch ID:	R12603	RunNo:	12603					
Prep Date:		Analysis Date:	8/13/2013	SeqNo:	359005	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	5.0	25.00	0	77.2	76	156			
Surr: BFB	990		1000		99.1	80	120			

Sample ID	1308531-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	Wellhead NE Base 3	Batch ID:	R12603	RunNo:	12603					
Prep Date:		Analysis Date:	8/13/2013	SeqNo:	359006	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	31	5.0	25.00	0	124	76	156	46.7	17.7	R
Surr: BFB	1000		1000		101	80	120	0	0	

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1308531

14-Aug-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	5ML RB	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID: R12603			RunNo: 12603					
Prep Date:		Analysis Date: 8/13/2013			SeqNo: 359014		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID	100NG BTEX LCS	SampType: LCS			TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID: R12603			RunNo: 12603					
Prep Date:		Analysis Date: 8/13/2013			SeqNo: 359015		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.050	1.000	0	98.5	80	120			
Toluene	0.99	0.050	1.000	0	98.8	80	120			
Ethylbenzene	0.99	0.050	1.000	0	99.2	80	120			
Xylenes, Total	3.0	0.10	3.000	0	101	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID	1308531-002AMS		SampType: MS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	Wellhead NE Sidew		Batch ID: R12603		RunNo: 12603					
Prep Date:			Analysis Date: 8/13/2013		SeqNo: 359018		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0.02307	105	67.3	145			
Toluene	1.1	0.050	1.000	0.01320	104	66.8	144			
Ethylbenzene	1.1	0.050	1.000	0.02465	104	61.9	153			
Xylenes, Total	3.2	0.10	3.000	0.02847	107	65.8	149			
Surr: 4-Bromofluorobenzene	1.0		1.000		99.6	80	120			

Sample ID	1308531-002AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	Wellhead NE Sidew	Batch ID:	R12603	RunNo:	12603					
Prep Date:	Analysis Date:			8/13/2013	SeqNo:	359019	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0.02307	111	67.3	145	5.47	20	
Toluene	1.1	0.050	1.000	0.01320	110	66.8	144	5.80	20	
Ethylbenzene	1.1	0.050	1.000	0.02465	111	61.9	153	6.75	20	
Xylenes, Total	3.5	0.10	3.000	0.02847	114	65.8	149	6.52	20	
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120	0	0	

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit



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: **1308531**

RcptNo: **1**

Received by/date:

Logged By: **Michelle Garcia**

**08/13/13**  
8/13/2013 10:10:00 AM

*Michelle Garcia*

Completed By: **Michelle Garcia**

8/13/2013 10:29:44 AM

*Michelle Garcia*

Reviewed By: **IO**

**08/13/13**

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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	1.9	Good	Yes			

Chain-of-Custody Record		Turn-Around Time:
Client: <u>BLAGG ENGINEERING INC.</u>	<input type="checkbox"/> Standard	<u>By WED.</u> <u>AUG 14, 2013</u>
<u>BP AMERICA</u>	<input checked="" type="checkbox"/> Rush	
Mailing Address: <u>P.O. Box 87</u>	Project Name: <u>LAWSON LS 1A</u>	
<u>BLOOMFIELD, NM 87413</u>	Project #: _____	
Phone #: <u>505-632-1199</u>	Project Manager: <u>JEFF BLAGG</u>	
email or Fax#: _____	Sampler: <u>JEFF BLAGG</u>	
QA/QC Package:	On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)	Sample Temperature: <u>15</u>	
Accreditation		
<input type="checkbox"/> NELAP <input type="checkbox"/> Other _____		
<input type="checkbox"/> EDD (Type) _____		

☐ Standard ☒ Rush

Project Name:

LAWSON LS 1A

Project #:

**Project Manager:**

JEFF BRAGE

Sampler: JEFF BLAKE

On Ice: ☒ Yes ☐ No

Sample Temperature: 19

[illegible]

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/12/13	1343	Jill Begg	Christine Wale	3/12/13	1343
Date:	Time:	Relinquished by:	Received by:	Date	Time
3/12/13	1757	Christine Wale	[Signature]	08/13/13	10:10

Remarks: Bill Blagg

BP Contact: Jeff Peace



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

	X	BTEX + <del>MTBE</del> + <del>TMB's</del> 's (802'1)
		BTEX + MTBE + TPH (Gas only)
	X	TPH 8015B (GRO / DRO / <del>MRE</del> )
		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)
	X	<del>Chloride</del>
		Air Bubbles (Y or N)

**Analytical Report**Lab Order **1308644**Date Reported: **8/16/2013****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Blagg Engineering**Client Sample ID:** Wellhead North Sidewall 3-Point**Project:** Lawson LS 1A**Collection Date:** 8/13/2013 12:08:00 PM**Lab ID:** 1308644-001**Matrix:** MEOH (SOIL)**Received Date:** 8/15/2013 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/15/2013 1:45:56 PM	8877
Surr: DNOP	80.9	63-147		%REC	1	8/15/2013 1:45:56 PM	8877
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	10	5.0		mg/Kg	1	8/15/2013 12:38:10 PM	R12646
Surr: BFB	139	80-120	S	%REC	1	8/15/2013 12:38:10 PM	R12646
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.050		mg/Kg	1	8/15/2013 12:38:10 PM	R12646
Toluene	ND	0.050		mg/Kg	1	8/15/2013 12:38:10 PM	R12646
Ethylbenzene	ND	0.050		mg/Kg	1	8/15/2013 12:38:10 PM	R12646
Xylenes, Total	0.13	0.10		mg/Kg	1	8/15/2013 12:38:10 PM	R12646
Surr: 4-Bromofluorobenzene	111	80-120		%REC	1	8/15/2013 12:38:10 PM	R12646
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	8/15/2013 12:42:24 PM	8881

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1308644

16-Aug-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-8881	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	8881	RunNo:	12669					
Prep Date:	8/15/2013	Analysis Date:	8/15/2013	SeqNo:	360956	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-8881	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	8881	RunNo:	12669					
Prep Date:	8/15/2013	Analysis Date:	8/15/2013	SeqNo:	360957	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	99.7	90	110			

## Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1308644

16-Aug-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	LCS-8877	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	8877	RunNo:	12645					
Prep Date:	8/15/2013	Analysis Date:	8/15/2013	SeqNo:	360387	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.5	77.1	128			
Surr: DNOP	3.4		5.000		68.3	63	147			

Sample ID	MB-8877	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	8877	RunNo:	12645					
Prep Date:	8/15/2013	Analysis Date:	8/15/2013	SeqNo:	360388	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	7.7		10.00		77.4	63	147			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1308644

16-Aug-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R12646	RunNo:	12646					
Prep Date:		Analysis Date:	8/15/2013	SeqNo:	360865	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		89.7	80	120			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R12646	RunNo:	12646					
Prep Date:		Analysis Date:	8/15/2013	SeqNo:	360866	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.2	74.5	126			
Surr: BFB	960		1000		95.5	80	120			

Sample ID	1308645-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	BatchQC	Batch ID:	R12646	RunNo:	12646					
Prep Date:		Analysis Date:	8/15/2013	SeqNo:	360868	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	11	5.0	11.66	0	97.6	76	156			
Surr: BFB	450		466.2		96.9	80	120			

Sample ID	1308645-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	BatchQC	Batch ID:	R12646	RunNo:	12646					
Prep Date:		Analysis Date:	8/15/2013	SeqNo:	360876	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	11	5.0	11.66	0	90.7	76	156	7.35	17.7	
Surr: BFB	460		466.2		97.7	80	120	0	0	

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1308644

16-Aug-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	5ML RB	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID: R12646			RunNo: 12646					
Prep Date:		Analysis Date: 8/15/2013			SeqNo: 360894		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	R12646	RunNo:	12646					
Prep Date:		Analysis Date:	8/15/2013	SeqNo:	360895	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	106	80	120			
Toluene	1.0	0.050	1.000	0	103	80	120			
Ethylbenzene	1.0	0.050	1.000	0	105	80	120			
Xylenes, Total	3.2	0.10	3.000	0	105	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Sample ID	1308644-001AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	Wellhead North Sid	Batch ID:	R12646	RunNo:	12646					
Prep Date:		Analysis Date:	8/15/2013	SeqNo:	360898	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.050	0.8052	0.004050	102	67.3	145			
Toluene	0.81	0.050	0.8052	0.009751	99.3	66.8	144			
Ethylbenzene	0.85	0.050	0.8052	0.02231	103	61.9	153			
Xylenes, Total	2.7	0.10	2.416	0.1589	104	65.8	149			
Surr: 4-Bromofluorobenzene	0.92		0.8052		114	80	120			

Sample ID	1308644-001AMSD	SampType:	MSD		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	Wellhead North Sid	Batch ID:	R12646		RunNo:	12646				
Prep Date:		Analysis Date:	8/15/2013		SeqNo:	360899	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.74	0.050	0.8052	0.004050	91.9	67.3	145	10.7	20	
Toluene	0.73	0.050	0.8052	0.009751	89.9	66.8	144	9.85	20	
Ethylbenzene	0.78	0.050	0.8052	0.02231	94.7	61.9	153	8.06	20	
Xylenes, Total	2.4	0.10	2.416	0.1589	94.6	65.8	149	8.94	20	
Surr: 4-Bromofluorobenzene	0.95		0.8052		119	80	120	0	0	

## Qualifiers:

- |   |  |
|---|--|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| 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               |
| O RSD is greater than RSDlimit                    | P Sample pH greater than 2 for VOA and TOC only.     |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |  |



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87105  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: BLAGG

Work Order Number: 1308644

RcptNo: 1

Received by/date:

*[Signature]*

08/15/13

Logged By: Ashley Gallegos

8/15/2013 10:10:00 AM

*[Signature]*

Completed By: Ashley Gallegos

8/15/2013 10:20:28 AM

*[Signature]*

Reviewed By:

IO

08/15/13

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1.	1.6	Good	Yes			

Client: BLAGG ENGINEERING INC.

BP AMERICA

Mailing Address: P.O. Box 87

BLOOMFIELD, NM 87413

Phone #: 505-632-1199

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other \_\_\_\_\_

☐ EDD (Type) \_\_\_\_\_

Project Name:  
LAWSON LS IA

Project #:	
------------	--

Project Manager:

J. Blagg

Sampler: J. Balala

Sample Temperature = 150 °C

Container Type and #	Preservative Type	HEAL No 13081044
-------------------------	----------------------	---------------------

4 oz x1	CSOL	-001



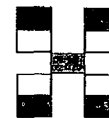


Received by:	Date	Time

Character Walks 8/14/2013 1149

Received by:	Date	Time

08/15/13 10:00  
Contracted to other accredited laboratories. This serves as notice of this



[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

	X	BTEX + MTBE + <del>THB's</del> (8021)
		BTEX + MTBE + TPH (Gas only)
	X	TPH 8015B (GRO / DRO / <del>MRO</del> )
		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)
	X	CHLORIDE
		Air: Bubbles (V or N)

Date: 8/14/2013	Time: 1149	Relinquished by: Jeff Brey
--------------------	---------------	-------------------------------

Received by:	Date	Time
Christopher Waller	8/14/2013	1149

[illegible]

Date:	Time:	Relinquished by:
7/14/13	1743	Christopher W. Allen

Received by: [Signature] Date 08/15/13 Time 10

BP CONTACT: JEFF PACE

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.

**Analytical Report**

Lab Order 1308811

Date Reported: 8/23/2013

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Blagg Engineering**Client Sample ID:** NW Base 5-point @ 12'**Project:** LAWSON LS 1A**Collection Date:** 8/15/2013 11:20:00 AM**Lab ID:** 1308811-001**Matrix:** SOIL**Received Date:** 8/20/2013 9:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	34	10		mg/Kg	1	8/22/2013 1:04:50 PM	8945
Surr: DNOP	95.8	63-147		%REC	1	8/22/2013 1:04:50 PM	8945
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	7.5	4.7		mg/Kg	1	8/21/2013 8:12:49 PM	8934
Surr: BFB	113	80-120		%REC	1	8/21/2013 8:12:49 PM	8934
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.047		mg/Kg	1	8/21/2013 8:12:49 PM	8934
Toluene	ND	0.047		mg/Kg	1	8/21/2013 8:12:49 PM	8934
Ethylbenzene	ND	0.047		mg/Kg	1	8/21/2013 8:12:49 PM	8934
Xylenes, Total	0.57	0.094		mg/Kg	1	8/21/2013 8:12:49 PM	8934
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	8/21/2013 8:12:49 PM	8934
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	8/20/2013 2:39:46 PM	8940

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Page 1 of 10

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**Analytical Report**

Lab Order 1308811

Date Reported: 8/23/2013

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Blagg Engineering**Client Sample ID:** NW Sidewall 5-pt Comp @ 4'-10**Project:** LAWSON LS 1A**Collection Date:** 8/15/2013 3:02:00 PM**Lab ID:** 1308811-002**Matrix:** SOIL**Received Date:** 8/20/2013 9:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	16	9.9		mg/Kg	1	8/22/2013 2:10:18 PM	8945
Surr: DNOP	65.3	63-147		%REC	1	8/22/2013 2:10:18 PM	8945
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/21/2013 4:23:45 PM	8934
Surr: BFB	97.0	80-120		%REC	1	8/21/2013 4:23:45 PM	8934
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.048		mg/Kg	1	8/21/2013 4:23:45 PM	8934
Toluene	ND	0.048		mg/Kg	1	8/21/2013 4:23:45 PM	8934
Ethylbenzene	ND	0.048		mg/Kg	1	8/21/2013 4:23:45 PM	8934
Xylenes, Total	ND	0.097		mg/Kg	1	8/21/2013 4:23:45 PM	8934
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	8/21/2013 4:23:45 PM	8934
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	8/20/2013 3:17:00 PM	8940

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

# Analytical Report

Lab Order 1308811

Date Reported: 8/23/2013

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: Meter Base 3-pt

Project: LAWSON LS 1A

Collection Date: 8/16/2013 12:15:00 PM

Lab ID: 1308811-003

Matrix: SOIL

Received Date: 8/20/2013 9:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	12	10		mg/Kg	1	8/22/2013 2:32:02 PM	8945
Surr: DNOP	74.1	63-147		%REC	1	8/22/2013 2:32:02 PM	8945
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	9.2	4.6		mg/Kg	1	8/21/2013 4:52:23 PM	8934
Surr: BFB	125	80-120	S	%REC	1	8/21/2013 4:52:23 PM	8934
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.046		mg/Kg	1	8/21/2013 4:52:23 PM	8934
Toluene	ND	0.046		mg/Kg	1	8/21/2013 4:52:23 PM	8934
Ethylbenzene	ND	0.046		mg/Kg	1	8/21/2013 4:52:23 PM	8934
Xylenes, Total	0.57	0.093		mg/Kg	1	8/21/2013 4:52:23 PM	8934
Surr: 4-Bromofluorobenzene	108	80-120		%REC	1	8/21/2013 4:52:23 PM	8934
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JRR
Chloride	ND	30		mg/Kg	20	8/20/2013 3:29:24 PM	8940

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1308811

Date Reported: 8/23/2013

CLIENT: Blagg Engineering

Client Sample ID: Meter Sidewall 3-pt @ 4'-9'

Project: LAWSON LS 1A

Collection Date: 8/16/2013 12:20:00 PM

Lab ID: 1308811-004

Matrix: SOIL

Received Date: 8/20/2013 9:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/22/2013 2:53:52 PM	8945
Surr: DNOP	68.7	63-147		%REC	1	8/22/2013 2:53:52 PM	8945
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/21/2013 5:21:04 PM	8934
Surr: BFB	97.3	80-120		%REC	1	8/21/2013 5:21:04 PM	8934
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	8/21/2013 5:21:04 PM	8934
Toluene	ND	0.047		mg/Kg	1	8/21/2013 5:21:04 PM	8934
Ethylbenzene	ND	0.047		mg/Kg	1	8/21/2013 5:21:04 PM	8934
Xylenes, Total	ND	0.095		mg/Kg	1	8/21/2013 5:21:04 PM	8934
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	8/21/2013 5:21:04 PM	8934
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JRR
Chloride	ND	30		mg/Kg	20	8/20/2013 3:41:48 PM	8940

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
	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
	O RSD is greater than RSDlimit	P Sample pH greater than 2 for VOA and TOC only.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

**Analytical Report**

Lab Order 1308811

Date Reported: 8/23/2013

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Blagg Engineering**Project:** LAWSON LS 1A**Lab ID:** 1308811-005**Matrix:** SOIL**Client Sample ID:** Meter North Base 5-pt @ 10'**Collection Date:** 8/19/2013 11:25:00 AM**Received Date:** 8/20/2013 9:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	170	9.9		mg/Kg	1	8/22/2013 3:15:38 PM	8945
Surr: DNOP	77.0	63-147		%REC	1	8/22/2013 3:15:38 PM	8945
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	72	4.7		mg/Kg	1	8/21/2013 5:49:45 PM	8934
Surr: BFB	375	80-120	S	%REC	1	8/21/2013 5:49:45 PM	8934
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.047		mg/Kg	1	8/21/2013 5:49:45 PM	8934
Toluene	0.12	0.047		mg/Kg	1	8/21/2013 5:49:45 PM	8934
Ethylbenzene	0.32	0.047		mg/Kg	1	8/21/2013 5:49:45 PM	8934
Xylenes, Total	4.1	0.093		mg/Kg	1	8/21/2013 5:49:45 PM	8934
Surr: 4-Bromofluorobenzene	125	80-120	S	%REC	1	8/21/2013 5:49:45 PM	8934
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	8/20/2013 3:54:14 PM	8940

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

**Analytical Report**

Lab Order 1308811

Date Reported: 8/23/2013

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Blagg Engineering**Project:** LAWSON LS 1A**Lab ID:** 1308811-006**Matrix:** SOIL**Client Sample ID:** Meter North Sidewall 5-pt @ 4'-**Collection Date:** 8/19/2013 11:30:00 AM**Received Date:** 8/20/2013 9:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/22/2013 3:37:27 PM	8945
Surr: DNOP	66.0	63-147		%REC	1	8/22/2013 3:37:27 PM	8945
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/21/2013 6:47:03 PM	8934
Surr: BFB	99.2	80-120		%REC	1	8/21/2013 6:47:03 PM	8934
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.048		mg/Kg	1	8/21/2013 6:47:03 PM	8934
Toluene	ND	0.048		mg/Kg	1	8/21/2013 6:47:03 PM	8934
Ethylbenzene	ND	0.048		mg/Kg	1	8/21/2013 6:47:03 PM	8934
Xylenes, Total	ND	0.096		mg/Kg	1	8/21/2013 6:47:03 PM	8934
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	8/21/2013 6:47:03 PM	8934
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	53	30		mg/Kg	20	8/20/2013 4:06:38 PM	8940

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1308811

23-Aug-13

Client: Blagg Engineering

Project: LAWSON LS 1A

Sample ID	MB-8940	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	8940	RunNo:	12772					
Prep Date:	8/20/2013	Analysis Date:	8/20/2013	SeqNo:	364061	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-8940	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	8940	RunNo:	12772					
Prep Date:	8/20/2013	Analysis Date:	8/20/2013	SeqNo:	364062	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	99.3	90	110			

Sample ID	1308727-001AMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	8940	RunNo:	12772					
Prep Date:	8/20/2013	Analysis Date:	8/20/2013	SeqNo:	364066	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0.7989	91.7	58.8	109			

Sample ID	1308727-001AMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	8940	RunNo:	12772					
Prep Date:	8/20/2013	Analysis Date:	8/20/2013	SeqNo:	364067	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0.7989	90.0	58.8	109	1.72	20	

### Qualifiers:

- |   |  |
|---|--|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| 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               |
| O RSD is greater than RSDlimit                    | P Sample pH greater than 2 for VOA and TOC only.     |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |  |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1308811

23-Aug-13

Client: Blagg Engineering

Project: LAWSON LS 1A

Sample ID	1308743-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	8936	RunNo:	12782					
Prep Date:	8/20/2013	Analysis Date:	8/21/2013	SeqNo:	364416	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.6		5.030		111	63	147			

Sample ID	1308743-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	8936	RunNo:	12782					
Prep Date:	8/20/2013	Analysis Date:	8/21/2013	SeqNo:	364417	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.6		4.936		93.6	63	147	0	0	

Sample ID	LCS-8945	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	8945	RunNo:	12782					
Prep Date:	8/20/2013	Analysis Date:	8/21/2013	SeqNo:	364645	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.8	77.1	128			
Surr: DNOP	4.8		5.000		96.5	63	147			

Sample ID	MB-8945	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	8945	RunNo:	12815					
Prep Date:	8/20/2013	Analysis Date:	8/22/2013	SeqNo:	365284	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	7.2		10.00		71.9	63	147			

Sample ID	1308811-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	NW Base 5-point @	Batch ID:	8945	RunNo:	12815					
Prep Date:	8/20/2013	Analysis Date:	8/22/2013	SeqNo:	365339	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	81	10	49.90	32.75	95.9	61.3	138			
Surr: DNOP	3.8		4.990		75.4	63	147			

Sample ID	1308811-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	NW Base 5-point @	Batch ID:	8945	RunNo:	12815					
Prep Date:	8/20/2013	Analysis Date:	8/22/2013	SeqNo:	365340	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	84	10	50.51	32.75	101	61.3	138	3.51	20	
Surr: DNOP	3.5		5.051		69.7	63	147	0	0	

### Qualifiers:

- |   |  |
|---|--|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| 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               |
| O RSD is greater than RSDlimit                    | P Sample pH greater than 2 for VOA and TOC only.     |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |  |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1308811

23-Aug-13

Client: Blagg Engineering

Project: LAWSON LS 1A

Sample ID	MB-8934		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 8934		RunNo: 12795					
Prep Date:	8/20/2013		Analysis Date: 8/21/2013		SeqNo: 364687		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	890		1000		89.5	80	120			

Sample ID	LCS-8934		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 8934		RunNo: 12795					
Prep Date:	8/20/2013		Analysis Date: 8/21/2013		SeqNo: 364688		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	110	74.5	126			
Surr: BFB	950		1000		95.5	80	120			

Sample ID	1308743-013AMS			SampType:	MS		TestCode:	EPA Method 8015D: Gasoline Range			
Client ID:	BatchQC			Batch ID:	8934		RunNo:	12795			
Prep Date:	8/20/2013			Analysis Date:	8/21/2013		SeqNo:	364691		Units:	mg/Kg
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	28	4.8	24.25	0	116	76	156				
Surr: BFB	950		969.9		97.8	80	120				

Sample ID	1308743-013AMSD			SampType:	MSD		TestCode:	EPA Method 8015D: Gasoline Range			
Client ID:	BatchQC		Batch ID:		8934		RunNo:	12795			
Prep Date:	8/20/2013		Analysis Date:		8/21/2013		SeqNo:	364692		Units:	mg/Kg
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	29	4.8	24.25	0	118	76	156	1.81	17.7		
Surr: BFB	950		969.9		98.4	80	120	0	0		

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1308811

23-Aug-13

Client: Blagg Engineering

Project: LAWSON LS 1A

Sample ID	<b>MB-8934</b>		SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID:	<b>PBS</b>		Batch ID: <b>8934</b>	RunNo: <b>12795</b>						
Prep Date:	<b>8/20/2013</b>		Analysis Date: <b>8/21/2013</b>	SeqNo: <b>364706</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID	<b>LCS-8934</b>		SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID:	<b>LCSS</b>		Batch ID: <b>8934</b>	RunNo: <b>12795</b>						
Prep Date:	<b>8/20/2013</b>		Analysis Date: <b>8/21/2013</b>	SeqNo: <b>364707</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	106	80	120			
Toluene	1.0	0.050	1.000	0	101	80	120			
Ethylbenzene	1.0	0.050	1.000	0	103	80	120			
Xylenes, Total	3.2	0.10	3.000	0	105	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID	<b>1308811-001AMS</b>		SampType: <b>MS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID:	<b>NW Base 5-point @</b>		Batch ID: <b>8934</b>	RunNo: <b>12795</b>						
Prep Date:	<b>8/20/2013</b>		Analysis Date: <b>8/21/2013</b>	SeqNo: <b>364711</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.048	0.9515	0.01610	117	67.3	145			
Toluene	1.1	0.048	0.9515	0.01478	115	66.8	144			
Ethylbenzene	1.2	0.048	0.9515	0.03728	118	61.9	153			
Xylenes, Total	4.0	0.095	2.854	0.5669	119	65.8	149			
Surr: 4-Bromofluorobenzene	1.1		0.9515		110	80	120			

Sample ID	<b>1308811-001AMSD</b>		SampType: <b>MSD</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID:	<b>NW Base 5-point @</b>		Batch ID: <b>8934</b>	RunNo: <b>12795</b>						
Prep Date:	<b>8/20/2013</b>		Analysis Date: <b>8/21/2013</b>	SeqNo: <b>364712</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.048	0.9515	0.01610	119	67.3	145	1.68	20	
Toluene	1.1	0.048	0.9515	0.01478	115	66.8	144	0.219	20	
Ethylbenzene	1.2	0.048	0.9515	0.03728	120	61.9	153	1.18	20	
Xylenes, Total	3.9	0.095	2.854	0.5669	118	65.8	149	0.774	20	
Surr: 4-Bromofluorobenzene	1.1		0.9515		111	80	120	0	0	

## Qualifiers:

- |   |  |
|---|--|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| 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               |
| O RSD is greater than RSDlimit                    | P Sample pH greater than 2 for VOA and TOC only.     |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |  |

# Sample Log-In Check List

Client Name: **BLAGG**

Work Order Number: **1308811**

RcptNo: **1**

Received by/date:	<u>LM 08/20/13</u>		
Logged By:	Anne Thorne	8/20/2013 9:50:00 AM	<i>Anne Thorne</i>
Completed By:	Anne Thorne	8/20/2013	<i>Anne Thorne</i>
Reviewed By:	<u>JO</u>	<u>08/20/13</u>	

## Chain of Custody

- Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
- Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
- How was the sample delivered? Courier

## Log In

- Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
- Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐
- Sample(s) in proper container(s)? Yes ☒ No ☐
- Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
- Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
- Was preservative added to bottles? Yes ☐ No ☒ NA ☐
- VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
- Were any sample containers received broken? Yes ☐ No ☒
- Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
- Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
- Is it clear what analyses were requested? Yes ☒ No ☐
- 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)

- 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:	_____		

- Additional remarks:

## 18. Cooler Information

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

Client: BLAGG ENGINEERING INC.

Client: BLAGG ENGINEERING INC.

BP AMERICA

Mailing Address: P.O. Box 97

Bloomfield, NM 87413

Phone #: 505-632-1199

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

## Accreditation

☐ NELAP      ☐ Other \_\_\_\_\_

☐ EDD (Type)

**|Turn-Around Time:**

By THURSDAY  
8-22-2013

☐ Standard      ☒ Rush

Project Name:
---------------

LAWSON LS 1A

Project #:

**Project Manager:**

J. BLAGG

Sampler: J. Blagg

On Ice ☒ Yes ☐ No

Sample Temperature 77°K

[illegible]

Date:	Time:	Relinquished by:
-------	-------	------------------

8/19/2013	1529	JH Byn
-----------	------	--------

Received by:

Christenlibke

Date \_\_\_\_\_

Time

8/19/2013 1529

Remarks:

Bill Blagg

Date:	Time:	Relinquished by:
-------	-------	------------------

8/19/13 Koor Wister Wells

Received by:

\_\_\_\_\_

Date \_\_\_\_\_

Time

08/20/15 0950

BP CONTACT: JEFF PEARCE

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.

**Analytical Report**

Lab Order 1308A99

Date Reported: 8/29/2013

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Blagg Engineering**Project:** Lawson LS 1A**Lab ID:** 1308A99-001**Matrix:** SOIL**Client Sample ID:** NW Corner Base 5-pt @ 12'**Collection Date:** 8/23/2013 11:30:00 AM**Received Date:** 8/24/2013 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	73	10		mg/Kg	1	8/27/2013 11:48:17 PM	9040
Surr: DNOP	85.7	63-147		%REC	1	8/27/2013 11:48:17 PM	9040
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	370	4.8		mg/Kg	1	8/27/2013 12:27:23 PM	9032
Surr: BFB	799	80-120	S	%REC	1	8/27/2013 12:27:23 PM	9032
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	0.27	0.048		mg/Kg	1	8/27/2013 12:27:23 PM	9032
Toluene	5.1	0.97		mg/Kg	20	8/27/2013 1:58:06 PM	9032
Ethylbenzene	2.3	0.048		mg/Kg	1	8/27/2013 12:27:23 PM	9032
Xylenes, Total	22	1.9		mg/Kg	20	8/27/2013 1:58:06 PM	9032
Surr: 4-Bromofluorobenzene	157	80-120	S	%REC	1	8/27/2013 12:27:23 PM	9032
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	8/27/2013 12:56:20 PM	9066

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

**Analytical Report**

Lab Order 1308A99

Date Reported: 8/29/2013

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Blagg Engineering**Client Sample ID:** NW Corner Sidewall 5-pt @ 4'-9'**Project:** Lawson LS 1A**Collection Date:** 8/23/2013 11:45:00 AM**Lab ID:** 1308A99-002**Matrix:** SOIL**Received Date:** 8/24/2013 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/28/2013 12:10:00 AM	9040
Surr: DNOP	86.0	63-147		%REC	1	8/28/2013 12:10:00 AM	9040
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/27/2013 2:28:20 PM	9032
Surr: BFB	97.8	80-120		%REC	1	8/27/2013 2:28:20 PM	9032
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.048		mg/Kg	1	8/27/2013 2:28:20 PM	9032
Toluene	ND	0.048		mg/Kg	1	8/27/2013 2:28:20 PM	9032
Ethylbenzene	ND	0.048		mg/Kg	1	8/27/2013 2:28:20 PM	9032
Xylenes, Total	ND	0.096		mg/Kg	1	8/27/2013 2:28:20 PM	9032
Surr: 4-Bromofluorobenzene	95.2	80-120		%REC	1	8/27/2013 2:28:20 PM	9032
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	32	30		mg/Kg	20	8/27/2013 1:08:44 PM	9066

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1308A99

29-Aug-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-9066	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	9066	RunNo:	12938					
Prep Date:	8/27/2013	Analysis Date:	8/27/2013	SeqNo:	369119	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-9066	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	9066	RunNo:	12938					
Prep Date:	8/27/2013	Analysis Date:	8/27/2013	SeqNo:	369120	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.6	90	110			

Sample ID	1308A82-001AMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	9066	RunNo:	12938					
Prep Date:	8/27/2013	Analysis Date:	8/27/2013	SeqNo:	369124	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	36	1.5	15.00	21.79	93.4	58.8	109			

Sample ID	1308A82-001AMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	9066	RunNo:	12938					
Prep Date:	8/27/2013	Analysis Date:	8/27/2013	SeqNo:	369125	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	38	1.5	15.00	21.79	109	58.8	109	6.44	20	S

## Qualifiers:

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- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1308A99

29-Aug-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-9041	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	9041	RunNo:	12910					
Prep Date:	8/26/2013	Analysis Date:	8/28/2013	SeqNo:	368925	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.5		10.00		85.4	63	147			

Sample ID	LCS-9041	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	9041	RunNo:	12910					
Prep Date:	8/26/2013	Analysis Date:	8/28/2013	SeqNo:	368926	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.5		5.000		90.1	63	147			

Sample ID	MB-9040	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	9040	RunNo:	12939					
Prep Date:	8/26/2013	Analysis Date:	8/27/2013	SeqNo:	369142	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	10		10.00		102	63	147			

Sample ID	LCS-9040	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	9040	RunNo:	12939					
Prep Date:	8/26/2013	Analysis Date:	8/27/2013	SeqNo:	369144	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.7	77.1	128			
Surr: DNOP	4.9		5.000		98.3	63	147			

### Qualifiers:

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- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1308A99

29-Aug-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-9032	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	9032	RunNo:	12935					
Prep Date:	8/26/2013	Analysis Date:	8/27/2013	SeqNo:	368982	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-9032	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	9032	RunNo:	12935					
Prep Date:	8/26/2013	Analysis Date:	8/27/2013	SeqNo:	368983	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.3	74.5	126			
Surr: BFB	1000		1000		103	80	120			

Sample ID	1308A99-002AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	NW Corner Sidewall	Batch ID:	9032	RunNo:	12935					
Prep Date:	8/26/2013	Analysis Date:	8/27/2013	SeqNo:	368987	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.8	23.95	0	94.9	76	156			
Surr: BFB	1000		957.9		109	80	120			

Sample ID	1308A99-002AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	NW Corner Sidewall	Batch ID:	9032	RunNo:	12935					
Prep Date:	8/26/2013	Analysis Date:	8/27/2013	SeqNo:	368988	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.8	23.95	0	95.5	76	156	0.630	17.7	
Surr: BFB	1000		957.9		105	80	120	0	0	

### Qualifiers:

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- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1308A99

29-Aug-13

Client: Blagg Engineering

Project: Lawson LS 1A

Sample ID	MB-9032	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	9032	RunNo:	12935					
Prep Date:	8/26/2013	Analysis Date:	8/27/2013	SeqNo:	369029	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Sample ID	LCS-9032	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	9032	RunNo:	12935					
Prep Date:	8/26/2013	Analysis Date:	8/27/2013	SeqNo:	369030	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.050	1.000	0	87.1	80	120			
Toluene	0.87	0.050	1.000	0	87.5	80	120			
Ethylbenzene	0.86	0.050	1.000	0	86.1	80	120			
Xylenes, Total	2.7	0.10	3.000	0	89.3	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

### Qualifiers:

- |   |  |
|---|--|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| 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               |
| O RSD is greater than RSDlimit                    | P Sample pH greater than 2 for VOA and TOC only.     |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |  |



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: 1308A99

RcptNo: 1

Received by/date:

AF

08/24/13

Logged By: Michelle Garcia

8/24/2013 10:20:00 AM

Michelle Garcia

Completed By: Michelle Garcia

8/24/2013 11:34:53 AM

Michelle Garcia

Reviewed By:

[Signature]

08/27/13

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.8	Good	Yes			

<b>Chain-of-Custody Record</b>		Turn-Around Time: <u>BY WED. 8/28/2013</u>
Client: <u>BLAGG ENGINEERING INC.</u>	<input type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush	
<u>BP AMERICA</u>	Project Name: <u>LAWSON LS 1A</u>	
Mailing Address: <u>P.O. Box 97</u>	Project #: _____	
<u>BLOOMFIELD, NM 87413</u>	Project Manager: <u>J. BLAGG</u>	
Phone #: <u>505-632-1199</u>	Sampler: <u>J. BLAGG</u>	
email or Fax#: _____	On Site: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
QA/QC Package:	Sample Temperature: <u>38°C</u>	
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)		
Accreditation		
<input type="checkbox"/> NELAP <input type="checkbox"/> Other _____		
<input type="checkbox"/> EDD (Type) _____		

Project Name: LAWSON LS 1A

Project #:	
Project Manager:	J. BLAKE

Sampler: J. BLAGG

On Ice ☒ Yes ☐ No

Sample Temperature: 3.30

[illegible]

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/23/13	1323	JH Begg	Christopher Walt	8/23/13	1323
Date:	Time:	Relinquished by:	Received by:	Date	Time
8/23/13	1756	Christa Walt	[Signature]	8/24/13	10:20



[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

	X	X	BTEX + MTBE + TMB's (8021)
			BTEX + MTBE + TPH (Gas only)
	X	X	TPH 8015B (GRO / DRO / MBO)
			TPH (Method 418.1)
			EDB (Method 504.1)
			PAH's (8310 or 8270 SIMS)
			RCRA 8 Metals
			Anions ( $F^-$ , $Cl^-$ , $NO_3^-$ , $NO_2^-$ , $PO_4^{3-}$ , $SO_4^{2-}$ )
			8081 Pesticides / 8082 PCB's
			8260B (VOA)
			8270 (Semi-VOA)
	X	X	CHLORIDE
			Air Bubbles (Y or N)

Remarks: Bill BLABO

BP CONTACT: JEFF PEACE