

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

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: Irvin Com 1E	Facility Type: Natural gas well
Surface Owner: City of Farmington	Mineral Owner: Fee
API No. 3004525841	

**LOCATION OF RELEASE**

Unit Letter E	Section 11	Township 29	Range 13	Feet from the 1570	North/South Line North	Feet from the 1110	East/West Line West	County: San Juan
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Latitude 36.74378 Longitude 108.18035

**NATURE OF RELEASE**


Type of Release: condensate	Volume of Release: unknown	Volume Recovered: none
Source of Release; condensate tank	Date and Hour of Occurrence: unknown	Date and Hour of Discovery: October 10, 2012
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.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* During construction operations to remove below grade tanks contaminated soil was discovered. Likely cause is one of the condensate tanks overflowed into the soil. Two groundwater monitor wells were installed at the site, with one immediately south of the impacted area showing benzene above groundwater standards (150 ppb). The other monitor well downgradient showed no impacts. BP will excavate and remove the impacted soil and pump from the one monitor well, remove the impacted water and send it to a disposal well. Pumping will continue until the water at the site is below standards.

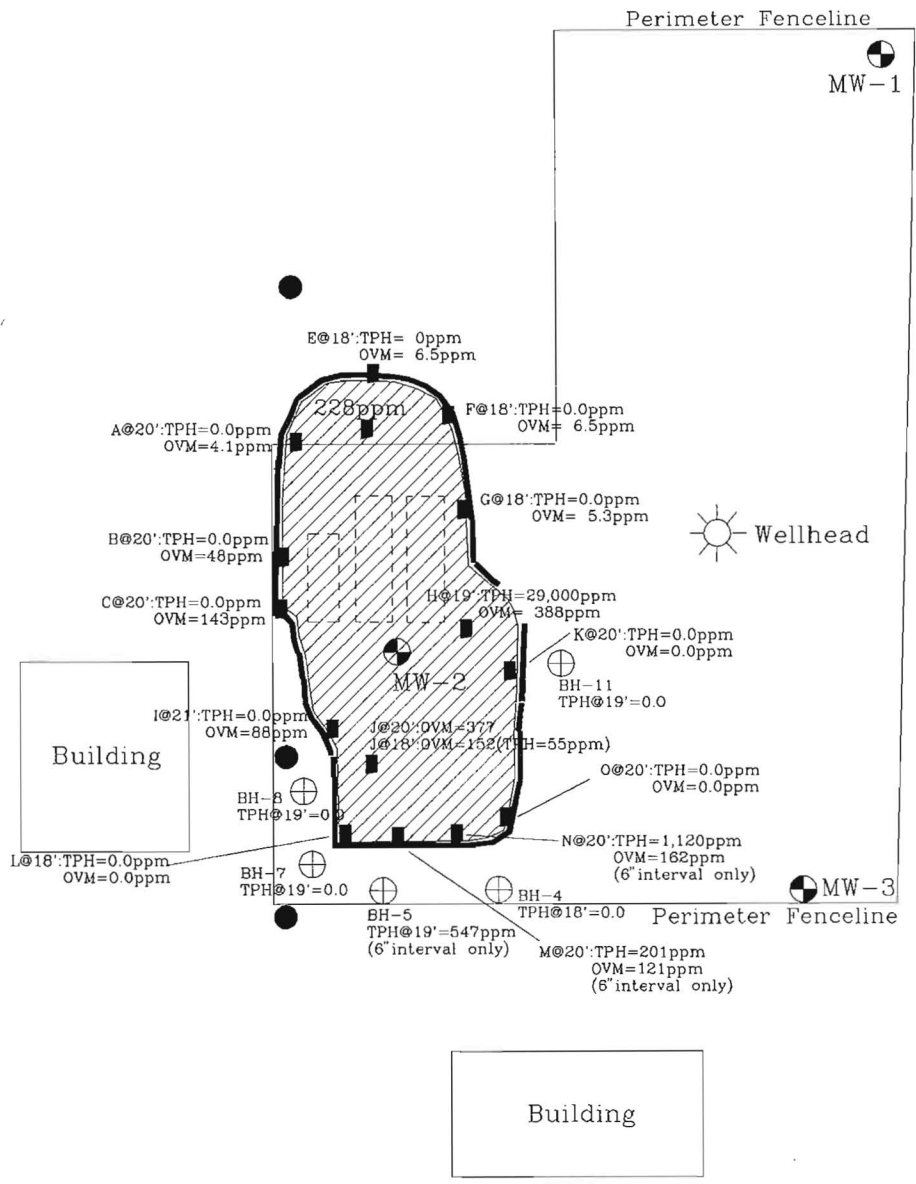
Describe Area Affected and Cleanup Action Taken.\*

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

Signature: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Jeff Peace	Approved by Environmental Specialist:	Historic C-141 Accepted For File completion CS
Title: Field Environmental Advisor	Approval Date: 9/19/17	Expiration Date:
E-mail Address: peace.jeffrey@bp.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: October 12, 2012	Phone: 505-326-9479	

\* Attach Additional Sheets If Necessary

NCS1725738890

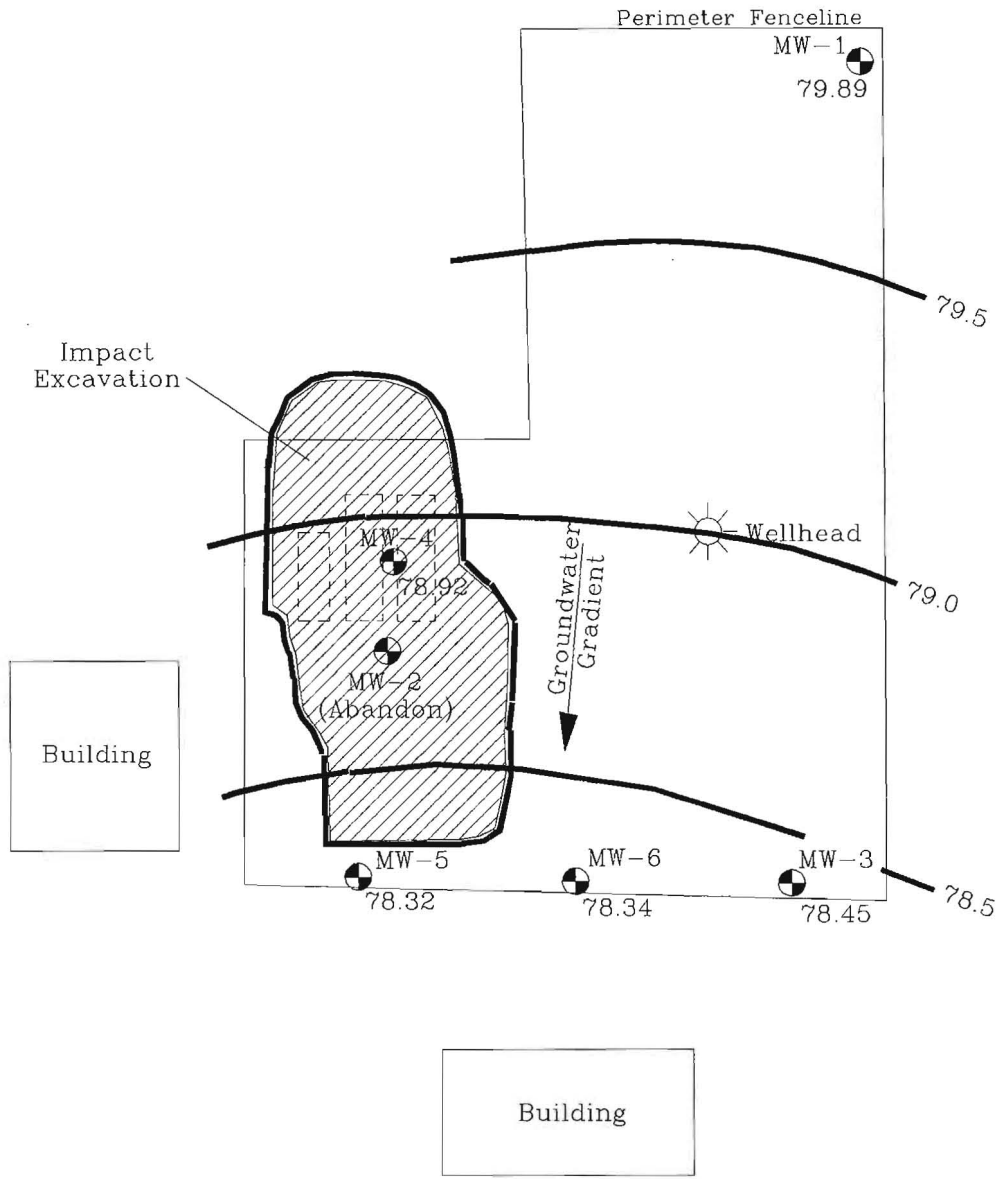


LEGEND


- Soil Sample Test Points with field OVM values
- ⊕ Test Boring Location
- Power Pole


0                      50                      100 Feet


<b>SITE FIGURE</b>			<b>BLAGG ENGINEERING, INC.</b>
BP ** Irvin Com 1E ** (E)11-T29N-R13W			
DATE: 6/4/2013	FIGURE 1	BY: JCB	P.O. BOX 87, BLOOMFIELD, NM PHONE: (505)632-1199



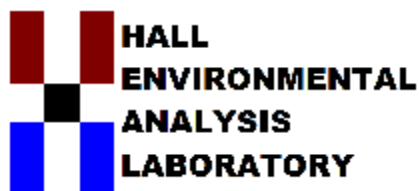
**LEGEND**

 Groundwater Monitor Well with Piezometric Surface on August 26, 2013

 N

 0 50 100 Feet

Groundwater Surface Gradient		<b>BLAGG ENGINEERING, INC.</b>	
BP ** Irvin Com 1E ** (E)11-T29N-R13W		P.O. BOX 87, BLOOMFIELD, NM	
DATE: 8/26/2013	FIGURE 1	BY: JCB	PHONE: (505)632-1199



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

May 02, 2013

Jeff Blagg

Blagg Engineering

P. O. Box 87

Bloomfield, NM 87413

TEL: (505) 320-1183

FAX (505) 632-3903

RE: Irvin Com 1E

OrderNo.: 1304A80

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 4 sample(s) on 4/26/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1304A80

Date Reported: 5/2/2013

CLIENT: Blagg Engineering

Client Sample ID: A@-20'

Project: Irvin Com 1E

Collection Date: 4/23/2013 2:05:00 PM

Lab ID: 1304A80-001

Matrix: SOIL

Received Date: 4/26/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>						Analyst: <b>GSA</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/29/2013 12:51:07 PM
Surr: DNOP	103	63-147		%REC	1	4/29/2013 12:51:07 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/29/2013 6:59:00 PM
Surr: BFB	95.3	80-120		%REC	1	4/29/2013 6:59:00 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.047		mg/Kg	1	4/29/2013 6:59:00 PM
Toluene	ND	0.047		mg/Kg	1	4/29/2013 6:59:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	4/29/2013 6:59:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	4/29/2013 6:59:00 PM
Surr: 4-Bromofluorobenzene	107	80-120		%REC	1	4/29/2013 6:59:00 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	4/29/2013 9:24:21 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1304A80

Date Reported: 5/2/2013

**CLIENT:** Blagg Engineering

**Client Sample ID:** B@-20'

**Project:** Irvin Com 1E

**Collection Date:** 4/23/2013 2:35:00 PM

**Lab ID:** 1304A80-002

**Matrix:** SOIL

**Received Date:** 4/26/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>						Analyst: <b>GSA</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/29/2013 1:12:51 PM
Surr: DNOP	95.0	63-147		%REC	1	4/29/2013 1:12:51 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/29/2013 7:27:42 PM
Surr: BFB	96.0	80-120		%REC	1	4/29/2013 7:27:42 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.049		mg/Kg	1	4/29/2013 7:27:42 PM
Toluene	ND	0.049		mg/Kg	1	4/29/2013 7:27:42 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/29/2013 7:27:42 PM
Xylenes, Total	ND	0.098		mg/Kg	1	4/29/2013 7:27:42 PM
Surr: 4-Bromofluorobenzene	107	80-120		%REC	1	4/29/2013 7:27:42 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	4/29/2013 10:01:35 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1304A80

Date Reported: 5/2/2013

CLIENT: Blagg Engineering

Client Sample ID: C@-20'

Project: Irvin Com 1E

Collection Date: 4/25/2013 11:11:00 AM

Lab ID: 1304A80-003

Matrix: SOIL

Received Date: 4/26/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>						Analyst: <b>GSA</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/29/2013 1:34:58 PM
Surr: DNOP	94.8	63-147		%REC	1	4/29/2013 1:34:58 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/29/2013 7:56:19 PM
Surr: BFB	95.8	80-120		%REC	1	4/29/2013 7:56:19 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	0.19	0.046		mg/Kg	1	4/29/2013 7:56:19 PM
Toluene	0.45	0.046		mg/Kg	1	4/29/2013 7:56:19 PM
Ethylbenzene	ND	0.046		mg/Kg	1	4/29/2013 7:56:19 PM
Xylenes, Total	0.40	0.092		mg/Kg	1	4/29/2013 7:56:19 PM
Surr: 4-Bromofluorobenzene	108	80-120		%REC	1	4/29/2013 7:56:19 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	4/29/2013 10:14:00 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1304A80

Date Reported: 5/2/2013

**CLIENT:** Blagg Engineering

**Client Sample ID:** D@-14'

**Project:** Irvin Com 1E

**Collection Date:** 4/25/2013 11:16:00 AM

**Lab ID:** 1304A80-004

**Matrix:** SOIL

**Received Date:** 4/26/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>						Analyst: <b>GSA</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/29/2013 1:56:49 PM
Surr: DNOP	92.6	63-147		%REC	1	4/29/2013 1:56:49 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/29/2013 11:16:42 PM
Surr: BFB	94.2	80-120		%REC	1	4/29/2013 11:16:42 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.048		mg/Kg	1	4/29/2013 11:16:42 PM
Toluene	ND	0.048		mg/Kg	1	4/29/2013 11:16:42 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/29/2013 11:16:42 PM
Xylenes, Total	ND	0.096		mg/Kg	1	4/29/2013 11:16:42 PM
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	4/29/2013 11:16:42 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	4/29/2013 10:26:24 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1304A80

02-May-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID	<b>MB-7192</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>7192</b>	RunNo:	<b>10201</b>					
Prep Date:	<b>4/29/2013</b>	Analysis Date:	<b>4/29/2013</b>	SeqNo:	<b>290961</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	<b>LCS-7192</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>7192</b>	RunNo:	<b>10201</b>					
Prep Date:	<b>4/29/2013</b>	Analysis Date:	<b>4/29/2013</b>	SeqNo:	<b>290962</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.7	90	110			

Sample ID	<b>1304A80-001BMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>A@-20'</b>	Batch ID:	<b>7192</b>	RunNo:	<b>10201</b>					
Prep Date:	<b>4/29/2013</b>	Analysis Date:	<b>4/29/2013</b>	SeqNo:	<b>290964</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	30	15.00	12.40	91.3	64.4	117			

Sample ID	<b>1304A80-001BMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>A@-20'</b>	Batch ID:	<b>7192</b>	RunNo:	<b>10201</b>					
Prep Date:	<b>4/29/2013</b>	Analysis Date:	<b>4/29/2013</b>	SeqNo:	<b>290965</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	30	15.00	12.40	72.4	64.4	117	0	20	

Sample ID	<b>1304982-002AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>7192</b>	RunNo:	<b>10201</b>					
Prep Date:	<b>4/29/2013</b>	Analysis Date:	<b>4/29/2013</b>	SeqNo:	<b>290975</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	30	7.5	15.00	13.73	108	64.4	117			

Sample ID	<b>1304982-002AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>7192</b>	RunNo:	<b>10201</b>					
Prep Date:	<b>4/29/2013</b>	Analysis Date:	<b>4/29/2013</b>	SeqNo:	<b>290976</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	30	7.5	15.00	13.73	110	64.4	117	0.995	20	

**Qualifiers:**

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- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1304A80

02-May-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID <b>MB-7181</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7181</b>		RunNo: <b>10141</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/26/2013</b>		SeqNo: <b>289038</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	12		10.00		121	63	147			

Sample ID <b>LCS-7181</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7181</b>		RunNo: <b>10141</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/26/2013</b>		SeqNo: <b>289039</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	10	50.00	0	113	47.4	122			
Surr: DNOP	6.2		5.000		124	63	147			

Sample ID <b>MB-7211</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7211</b>		RunNo: <b>10208</b>							
Prep Date: <b>4/29/2013</b>	Analysis Date: <b>4/30/2013</b>		SeqNo: <b>291165</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.6		10.00		95.8	63	147			

Sample ID <b>LCS-7211</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7211</b>		RunNo: <b>10208</b>							
Prep Date: <b>4/29/2013</b>	Analysis Date: <b>4/30/2013</b>		SeqNo: <b>291166</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.8		5.000		96.1	63	147			

Sample ID <b>1304A59-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7181</b>		RunNo: <b>10208</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/30/2013</b>		SeqNo: <b>291811</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	33	10	50.00	11.40	42.9	12.6	148			
Surr: DNOP	3.3		5.000		65.9	63	147			

Sample ID <b>1304A59-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7181</b>		RunNo: <b>10208</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/30/2013</b>		SeqNo: <b>291812</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	33	10	50.00	11.40	42.9	12.6	148	0.0122	22.5	
Surr: DNOP	3.3		5.000		65.3	63	147	0	0	

**Qualifiers:**

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- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1304A80

02-May-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID <b>MB-7188</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7188</b>		RunNo: <b>10180</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/29/2013</b>		SeqNo: <b>290224</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	920		1000		92.5	80	120			

Sample ID <b>LCS-7188</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7188</b>		RunNo: <b>10180</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/29/2013</b>		SeqNo: <b>290225</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	102	62.6	136			
Surr: BFB	1000		1000		100	80	120			

Sample ID <b>1304A59-002AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7188</b>		RunNo: <b>10180</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/29/2013</b>		SeqNo: <b>290252</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.7	23.41	6.395	84.8	70	130			
Surr: BFB	1100		936.3		115	80	120			

Sample ID <b>1304A59-002AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7188</b>		RunNo: <b>10180</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/29/2013</b>		SeqNo: <b>290253</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	4.7	23.47	6.395	97.7	70	130	11.1	22.1	
Surr: BFB	1100		939.0		122	80	120	0	0	S

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1304A80

02-May-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID <b>MB-7188</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7188</b>		RunNo: <b>10180</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/29/2013</b>		SeqNo: <b>290299</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		104	80	120			

Sample ID <b>LCS-7188</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7188</b>		RunNo: <b>10180</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/29/2013</b>		SeqNo: <b>290301</b>		Units: <b>mg/Kg</b>					
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	99.8	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.4	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		110	80	120			

Sample ID <b>1304A59-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7188</b>		RunNo: <b>10180</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/29/2013</b>		SeqNo: <b>290303</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.047	0.9346	0	98.6	67.2	113			
Toluene	0.94	0.047	0.9346	0.004040	100	62.1	116			
Ethylbenzene	0.95	0.047	0.9346	0	102	67.9	127			
Xylenes, Total	2.9	0.093	2.804	0	102	60.6	134			
Surr: 4-Bromofluorobenzene	1.5		0.9346		159	80	120			S

Sample ID <b>1304A59-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7188</b>		RunNo: <b>10180</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/29/2013</b>		SeqNo: <b>290304</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.047	0.9346	0	96.5	67.2	113	2.16	14.3	
Toluene	0.92	0.047	0.9346	0.004040	98.1	62.1	116	2.17	15.9	
Ethylbenzene	0.93	0.047	0.9346	0	99.0	67.9	127	2.87	14.4	
Xylenes, Total	2.8	0.093	2.804	0	98.5	60.6	134	3.38	12.6	
Surr: 4-Bromofluorobenzene	1.0		0.9346		112	80	120	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

**Sample Log-In Check List**

Client Name: **BLAGG**

Work Order Number: **1304A80**

RcptNo: **1**

Received by/date:  **04/26/13**

Logged By: **Ashley Gallegos** **4/25/2013 10:00:00 AM** 

Completed By: **Ashley Gallegos** **4/26/2013 10:23:12 AM** 

Reviewed By:  **04/26/2013**

**Chain of Custody**

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

**Log In**

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

**Special Handling (if applicable)**

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

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

17. Additional remarks:

**18. Cooler Information**

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

# Chain-of-Custody Record

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)

Turn-Around Time: By Monday 4/29/2013

Standard  Rush

Project Name:

IRVIN COM 1E

Project #:

Project Manager:

J. Blagg

Sampler: J. Blagg

On Ice:  Yes  No

Sample Temperature: 70

Date Time Matrix Sample Request ID

4/23/13 1405 501L A @ -20'  
 " 1435 " " B @ -20'  
 4/25/13 1111 " " C @ -20'  
 " 1116 " " D @ -14'

Container Type and #

4 oz x 1  
 " "  
 " "  
 " "

Preservative Type

COOL  
 "  
 "  
 "

HEAL No

130478SD  
 -001  
 -002  
 -003  
 -004

Date: 4/25/13 Time: 1345

Relinquished by: J-H Blagg

Date: 4/25/13 Time: 1750

Relinquished by: Matthew Watters

Received by:

Matthew Watters

Date: 4/25/13 Time: 1345

Received by: J. Blagg

Remarks:

BILL BLAGG

BP CONTACT: JEFF PEACE



www.hallenvironmental.com

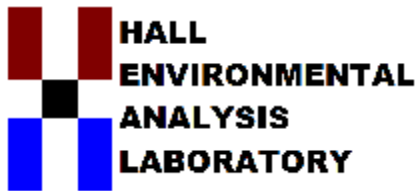
4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

BTEX + MTBE + TMS (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MFO)	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 PCBs	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
X	X	X	X							X	
X	X	X	X							X	
X	X	X	X							X	
X	X	X	X							X	

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



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

May 02, 2013

Jeff Blagg

Blagg Engineering

P. O. Box 87

Bloomfield, NM 87413

TEL: (505) 320-1183

FAX (505) 632-3903

RE: Irvin COM 1E

OrderNo.: 1304B11

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 1 sample(s) on 4/27/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1304B11

Date Reported: 5/2/2013

CLIENT: Blagg Engineering

Client Sample ID: E @ 18'

Project: Irvin COM 1E

Collection Date: 4/26/2013 2:41:00 PM

Lab ID: 1304B11-001

Matrix: SOIL

Received Date: 4/27/2013 11:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>						Analyst: <b>GSA</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/29/2013 2:18:59 PM
Surr: DNOP	96.8	63-147		%REC	1	4/29/2013 2:18:59 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/29/2013 11:49:07 AM
Surr: BFB	92.0	80-120		%REC	1	4/29/2013 11:49:07 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.050		mg/Kg	1	4/29/2013 11:49:07 AM
Toluene	ND	0.050		mg/Kg	1	4/29/2013 11:49:07 AM
Ethylbenzene	ND	0.050		mg/Kg	1	4/29/2013 11:49:07 AM
Xylenes, Total	ND	0.10		mg/Kg	1	4/29/2013 11:49:07 AM
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	4/29/2013 11:49:07 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	4/29/2013 10:38:48 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1304B11

02-May-13

**Client:** Blagg Engineering

**Project:** Irvin COM 1E

Sample ID	<b>MB-7192</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>7192</b>	RunNo:	<b>10201</b>					
Prep Date:	<b>4/29/2013</b>	Analysis Date:	<b>4/29/2013</b>	SeqNo:	<b>290961</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	<b>LCS-7192</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>7192</b>	RunNo:	<b>10201</b>					
Prep Date:	<b>4/29/2013</b>	Analysis Date:	<b>4/29/2013</b>	SeqNo:	<b>290962</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.7	90	110			

Sample ID	<b>1304A80-001BMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>7192</b>	RunNo:	<b>10201</b>					
Prep Date:	<b>4/29/2013</b>	Analysis Date:	<b>4/29/2013</b>	SeqNo:	<b>290964</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	30	15.00	12.40	91.3	64.4	117			

Sample ID	<b>1304A80-001BMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>7192</b>	RunNo:	<b>10201</b>					
Prep Date:	<b>4/29/2013</b>	Analysis Date:	<b>4/29/2013</b>	SeqNo:	<b>290965</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	30	15.00	12.40	72.4	64.4	117	0	20	

Sample ID	<b>1304982-002AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>7192</b>	RunNo:	<b>10201</b>					
Prep Date:	<b>4/29/2013</b>	Analysis Date:	<b>4/29/2013</b>	SeqNo:	<b>290975</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	30	7.5	15.00	13.73	108	64.4	117			

Sample ID	<b>1304982-002AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>7192</b>	RunNo:	<b>10201</b>					
Prep Date:	<b>4/29/2013</b>	Analysis Date:	<b>4/29/2013</b>	SeqNo:	<b>290976</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	30	7.5	15.00	13.73	110	64.4	117	0.995	20	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1304B11

02-May-13

**Client:** Blagg Engineering

**Project:** Irvin COM 1E

Sample ID <b>MB-7181</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7181</b>		RunNo: <b>10141</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/26/2013</b>		SeqNo: <b>289038</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	12		10.00		121	63	147			

Sample ID <b>LCS-7181</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7181</b>		RunNo: <b>10141</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/26/2013</b>		SeqNo: <b>289039</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	10	50.00	0	113	47.4	122			
Surr: DNOP	6.2		5.000		124	63	147			

Sample ID <b>MB-7211</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7211</b>		RunNo: <b>10208</b>							
Prep Date: <b>4/29/2013</b>	Analysis Date: <b>4/30/2013</b>		SeqNo: <b>291165</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.6		10.00		95.8	63	147			

Sample ID <b>LCS-7211</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7211</b>		RunNo: <b>10208</b>							
Prep Date: <b>4/29/2013</b>	Analysis Date: <b>4/30/2013</b>		SeqNo: <b>291166</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.8		5.000		96.1	63	147			

Sample ID <b>1304A59-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7181</b>		RunNo: <b>10208</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/30/2013</b>		SeqNo: <b>291811</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	33	10	50.00	11.40	42.9	12.6	148			
Surr: DNOP	3.3		5.000		65.9	63	147			

Sample ID <b>1304A59-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7181</b>		RunNo: <b>10208</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/30/2013</b>		SeqNo: <b>291812</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	33	10	50.00	11.40	42.9	12.6	148	0.0122	22.5	
Surr: DNOP	3.3		5.000		65.3	63	147	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1304B11

02-May-13

**Client:** Blagg Engineering

**Project:** Irvin COM 1E

Sample ID <b>MB-7188</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7188</b>		RunNo: <b>10180</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/29/2013</b>		SeqNo: <b>290224</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	920		1000		92.5	80	120			

Sample ID <b>LCS-7188</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7188</b>		RunNo: <b>10180</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/29/2013</b>		SeqNo: <b>290225</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		100	80	120			

Sample ID <b>1304A59-002AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7188</b>		RunNo: <b>10180</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/29/2013</b>		SeqNo: <b>290252</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		936.3		115	80	120			

Sample ID <b>1304A59-002AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7188</b>		RunNo: <b>10180</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/29/2013</b>		SeqNo: <b>290253</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		939.0		122	80	120	0	0	S

Sample ID <b>MB-7188</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>R10180</b>		RunNo: <b>10180</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/29/2013</b>		SeqNo: <b>290348</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	920		1000		92.5	80	120			

Sample ID <b>LCS-7188</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>R10180</b>		RunNo: <b>10180</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/29/2013</b>		SeqNo: <b>290349</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	102	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
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1304B11

02-May-13

**Client:** Blagg Engineering

**Project:** Irvin COM 1E

Sample ID <b>MB-7188</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7188</b>		RunNo: <b>10180</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/29/2013</b>		SeqNo: <b>290299</b>	Units: <b>%REC</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID <b>LCS-7188</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7188</b>		RunNo: <b>10180</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/29/2013</b>		SeqNo: <b>290301</b>	Units: <b>%REC</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		110	80	120			

Sample ID <b>1304A59-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7188</b>		RunNo: <b>10180</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/29/2013</b>		SeqNo: <b>290303</b>	Units: <b>%REC</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.5		0.9346		159	80	120			S

Sample ID <b>1304A59-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7188</b>		RunNo: <b>10180</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/29/2013</b>		SeqNo: <b>290304</b>	Units: <b>%REC</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		0.9346		112	80	120	0	0	

Sample ID <b>MB-7188</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>R10180</b>		RunNo: <b>10180</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/29/2013</b>		SeqNo: <b>290342</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		104	80	120			

Sample ID <b>LCS-7188</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>R10180</b>		RunNo: <b>10180</b>							
Prep Date: <b>4/26/2013</b>	Analysis Date: <b>4/29/2013</b>		SeqNo: <b>290343</b>	Units: <b>mg/Kg</b>						
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			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1304B11

02-May-13

**Client:** Blagg Engineering

**Project:** Irvin COM 1E

Sample ID	<b>LCS-7188</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R10180</b>	RunNo:	<b>10180</b>					
Prep Date:	<b>4/26/2013</b>	Analysis Date:	<b>4/29/2013</b>	SeqNo:	<b>290343</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene	1.0	0.050	1.000	0	99.8	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.4	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		110	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               |
| P Sample pH greater than 2                   | R RPD outside accepted recovery limits               |
| RL Reporting Detection Limit                 | S Spike Recovery outside accepted recovery limits    |

Client Name: **BLAGG**

Work Order Number: **1304B11**

RcptNo: **1**

Received by/date: AT 04/27/13

Logged By: **Anne Thorne** 4/27/2013 11:15:00 AM *Anne Thorne*

Completed By: **Anne Thorne** 4/29/2013 *Anne Thorne*

Reviewed By: AT 04/29/13

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

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

Adjusted? \_\_\_\_\_

Checked by: \_\_\_\_\_

**Special Handling (if applicable)**

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

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_

By Whom: \_\_\_\_\_ Via:  eMail  Phone  Fax  In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

17. Additional remarks:

**18. Cooler Information**

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

# Chain-of-Custody Record

Client: BLAG ENGINEERING INC.  
BP AMERICA  
 Mailing Address: P.O. Box 87  
BLOOMFIELD, NM 87413  
 Phone #: 505-632-1199

Turn-Around Time: SAME DAY  
4/29/2013  
 Standard  Rush  
 Project Name:  
IRVIN COM 1E

Project #:  
 Project Manager:  
J. BLAGG

QA/QC Package:  
 Standard  Level 4 (Full Validation)  
 Accreditation  
 NELAP  Other  
 EDD (Type) \_\_\_\_\_

Sampler: J. Blagg  
 On Ice  Yes  No  
 Sample Temperature: 10  
 Container Type and #  
Mettler  
 Preservative Type  
COOL  
 HEAL No.  
BOHBI  
 4oz x 1 101

Date Time  
4/26/13 1441 SOIL E @ 18'  
 Relinquished by:  
JH Blagg  
 Date Time  
4/26/13 1548  
 Relinquished by:  
Christ Warden  
 Date Time  
4/26/13 1115

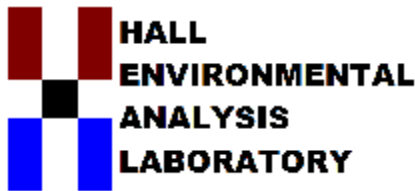


**HALL ENVIRONMENTAL ANALYSIS LABORATORY**  
 www.hallenvironmental.com  
 4901 Hawkins NE - Albuquerque, NM 87109  
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request	
BTEX + MTBE + TPH (Gas only)	X
BTEX + MTBE + TPH (8021)	X
TPH 8015B (GRO / DRO / MRO)	X
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	X
Air Bubbles (Y or N)	

Remarks: BILL BLAGG  
BP CONTACT: JEFF PEACE

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



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

May 31, 2013

Jeff Blagg

Blagg Engineering

P. O. Box 87

Bloomfield, NM 87413

TEL: (505) 320-1183

FAX

RE: Irvin Com 1E

OrderNo.: 1305B18

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 2 sample(s) on 5/30/2013 for the analyses presented in the following report.

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

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1305B18

Date Reported: 5/31/2013

**CLIENT:** Blagg Engineering

**Client Sample ID:** L@20'

**Project:** Irvin Com 1E

**Collection Date:** 5/28/2013 2:18:00 PM

**Lab ID:** 1305B18-001

**Matrix:** MEOH (SOIL)

**Received Date:** 5/30/2013 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	5/30/2013 4:03:06 PM	7650
Surr: DNOP	87.2	63-147		%REC	1	5/30/2013 4:03:06 PM	7650
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/30/2013 1:19:10 PM	R10986
Surr: BFB	93.9	80-120		%REC	1	5/30/2013 1:19:10 PM	R10986
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.050		mg/Kg	1	5/30/2013 1:19:10 PM	R10986
Toluene	ND	0.050		mg/Kg	1	5/30/2013 1:19:10 PM	R10986
Ethylbenzene	ND	0.050		mg/Kg	1	5/30/2013 1:19:10 PM	R10986
Xylenes, Total	ND	0.10		mg/Kg	1	5/30/2013 1:19:10 PM	R10986
Surr: 4-Bromofluorobenzene	99.4	80-120		%REC	1	5/30/2013 1:19:10 PM	R10986

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
	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 1305B18

Date Reported: 5/31/2013

**CLIENT:** Blagg Engineering

**Client Sample ID:** M@20'

**Project:** Irvin Com 1E

**Collection Date:** 5/28/2013 2:24:00 PM

**Lab ID:** 1305B18-002

**Matrix:** MEOH (SOIL)

**Received Date:** 5/30/2013 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)	21	10		mg/Kg	1	5/30/2013 4:25:12 PM	7650
Surr: DNOP	92.9	63-147		%REC	1	5/30/2013 4:25:12 PM	7650
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	180	25		mg/Kg	5	5/30/2013 4:39:36 PM	R10986
Surr: BFB	418	80-120	S	%REC	5	5/30/2013 4:39:36 PM	R10986
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.12		mg/Kg	5	5/30/2013 4:39:36 PM	R10986
Toluene	ND	0.25		mg/Kg	5	5/30/2013 4:39:36 PM	R10986
Ethylbenzene	ND	0.25		mg/Kg	5	5/30/2013 4:39:36 PM	R10986
Xylenes, Total	1.2	0.50		mg/Kg	5	5/30/2013 4:39:36 PM	R10986
Surr: 4-Bromofluorobenzene	118	80-120		%REC	5	5/30/2013 4:39:36 PM	R10986

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	Page 2 of 6
	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#: 1305B18

31-May-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID <b>MB-7650</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7650</b>		RunNo: <b>10943</b>							
Prep Date: <b>5/29/2013</b>	Analysis Date: <b>5/30/2013</b>		SeqNo: <b>310605</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.5		10.00		94.9	63	147			

Sample ID <b>LCS-7650</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7650</b>		RunNo: <b>10943</b>							
Prep Date: <b>5/29/2013</b>	Analysis Date: <b>5/30/2013</b>		SeqNo: <b>310615</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	98.3	77.1	128			
Surr: DNOP	4.9		5.000		99.0	63	147			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305B18

31-May-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID <b>MB-7654</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7654</b>		RunNo: <b>10986</b>							
Prep Date: <b>5/29/2013</b>	Analysis Date: <b>5/30/2013</b>		SeqNo: <b>310740</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	950		1000		95.2	80	120			

Sample ID <b>LCS-7654</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7654</b>		RunNo: <b>10986</b>							
Prep Date: <b>5/29/2013</b>	Analysis Date: <b>5/30/2013</b>		SeqNo: <b>310741</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		102	80	120			

Sample ID <b>MB-7654</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>R10986</b>		RunNo: <b>10986</b>							
Prep Date: <b>5/29/2013</b>	Analysis Date: <b>5/30/2013</b>		SeqNo: <b>310743</b>		Units: <b>mg/Kg</b>					
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		95.2	80	120			

Sample ID <b>LCS-7654</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>R10986</b>		RunNo: <b>10986</b>							
Prep Date: <b>5/29/2013</b>	Analysis Date: <b>5/30/2013</b>		SeqNo: <b>310744</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	111	62.6	136			
Surr: BFB	1000		1000		102	80	120			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305B18

31-May-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID <b>MB-7654</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7654</b>		RunNo: <b>10986</b>							
Prep Date: <b>5/29/2013</b>	Analysis Date: <b>5/30/2013</b>		SeqNo: <b>310750</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID <b>LCS-7654</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7654</b>		RunNo: <b>10986</b>							
Prep Date: <b>5/29/2013</b>	Analysis Date: <b>5/30/2013</b>		SeqNo: <b>310751</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Sample ID <b>1305A81-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7654</b>		RunNo: <b>10986</b>							
Prep Date: <b>5/29/2013</b>	Analysis Date: <b>5/30/2013</b>		SeqNo: <b>310756</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	5.2		4.735		110	80	120			

Sample ID <b>1305A81-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7654</b>		RunNo: <b>10986</b>							
Prep Date: <b>5/29/2013</b>	Analysis Date: <b>5/30/2013</b>		SeqNo: <b>310757</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	5.2		4.735		110	80	120	0	0	

Sample ID <b>MB-7654</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>R10986</b>		RunNo: <b>10986</b>							
Prep Date: <b>5/29/2013</b>	Analysis Date: <b>5/30/2013</b>		SeqNo: <b>310758</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		103	80	120			

Sample ID <b>LCS-7654</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>R10986</b>		RunNo: <b>10986</b>							
Prep Date: <b>5/29/2013</b>	Analysis Date: <b>5/30/2013</b>		SeqNo: <b>310759</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	114	80	120			
Toluene	1.1	0.050	1.000	0	111	80	120			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305B18

31-May-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID	<b>LCS-7654</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R10986</b>	RunNo:	<b>10986</b>					
Prep Date:	<b>5/29/2013</b>	Analysis Date:	<b>5/30/2013</b>	SeqNo:	<b>310759</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene	1.1	0.050	1.000	0	111	80	120			
Xylenes, Total	3.4	0.10	3.000	0	112	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	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               |
| 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: **1305B18**

RcptNo: **1**

Received by/date: *lm*

*05/30/2013*

Logged By: **Lindsay Mangin**

**5/30/2013 10:00:00 AM**

*Jessie H. Mangin*

Completed By: **Lindsay Mangin**

**5/30/2013 10:03:21 AM**

*Jessie H. Mangin*

Reviewed By: *mg*

*05/30/13*

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

**Special Handling (if applicable)**

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

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

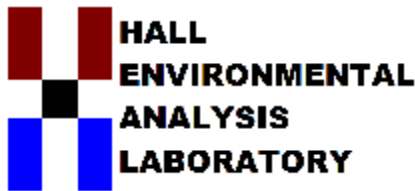
17. Additional remarks:

**18. Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.8	Good	Yes			







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

May 03, 2013

Jeff Blagg

Blagg Engineering

P. O. Box 87

Bloomfield, NM 87413

TEL: (505) 320-1183

FAX: (505) 632-3903

RE: Irvin COM 1E

OrderNo.: 1305003

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/1/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1305003

Date Reported: 5/3/2013

**CLIENT:** Blagg Engineering

**Client Sample ID:** F@-18'

**Project:** Irvin COM 1E

**Collection Date:** 4/30/2013 9:48:00 AM

**Lab ID:** 1305003-001

**Matrix:** MEOH (SOIL)

**Received Date:** 5/1/2013 9:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>						Analyst: <b>GSA</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/2/2013 10:03:32 AM
Surr: DNOP	119	63-147		%REC	1	5/2/2013 10:03:32 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JRR</b>
Chloride	ND	7.5		mg/Kg	5	5/1/2013 11:06:49 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.050		mg/Kg	1	5/1/2013 1:20:12 PM
Toluene	ND	0.050		mg/Kg	1	5/1/2013 1:20:12 PM
Ethylbenzene	ND	0.050		mg/Kg	1	5/1/2013 1:20:12 PM
Xylenes, Total	ND	0.10		mg/Kg	1	5/1/2013 1:20:12 PM
Surr: 1,2-Dichloroethane-d4	84.2	70-130		%REC	1	5/1/2013 1:20:12 PM
Surr: 4-Bromofluorobenzene	90.3	70-130		%REC	1	5/1/2013 1:20:12 PM
Surr: Dibromofluoromethane	88.7	70-130		%REC	1	5/1/2013 1:20:12 PM
Surr: Toluene-d8	94.6	70-130		%REC	1	5/1/2013 1:20:12 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/1/2013 1:20:12 PM
Surr: BFB	90.3	70-130		%REC	1	5/1/2013 1:20:12 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305003

03-May-13

**Client:** Blagg Engineering

**Project:** Irvin COM 1E

Sample ID: <b>MB-7239</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7239</b>		RunNo: <b>10232</b>							
Prep Date: <b>5/1/2013</b>	Analysis Date: <b>5/1/2013</b>		SeqNo: <b>291832</b>	Units: <b>mg/Kg</b>						
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: <b>LCS-7239</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7239</b>		RunNo: <b>10232</b>							
Prep Date: <b>5/1/2013</b>	Analysis Date: <b>5/1/2013</b>		SeqNo: <b>291833</b>	Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	101	47.4	122			
Surr: DNOP	5.0		5.000		101	63	147			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305003

03-May-13

**Client:** Blagg Engineering  
**Project:** Irvin COM 1E

Sample ID: <b>5ml-rb</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8260B: Volatiles Short List</b>							
Client ID: <b>PBS</b>	Batch ID: <b>R10233</b>		RunNo: <b>10233</b>							
Prep Date:	Analysis Date: <b>5/1/2013</b>		SeqNo: <b>292483</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: 1,2-Dichloroethane-d4	0.43		0.5000		86.2	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.7	70	130			
Surr: Dibromofluoromethane	0.46		0.5000		91.8	70	130			
Surr: Toluene-d8	0.45		0.5000		89.1	70	130			

Sample ID: <b>100ng lcs</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8260B: Volatiles Short List</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>R10233</b>		RunNo: <b>10233</b>							
Prep Date:	Analysis Date: <b>5/1/2013</b>		SeqNo: <b>292514</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.050	1.000	0	91.3	70	130			
Toluene	0.97	0.050	1.000	0	96.9	80	120			
Surr: 1,2-Dichloroethane-d4	0.44		0.5000		88.6	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.6	70	130			
Surr: Dibromofluoromethane	0.45		0.5000		90.1	70	130			
Surr: Toluene-d8	0.47		0.5000		93.6	70	130			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305003

03-May-13

Client: Blagg Engineering

Project: Irvin COM 1E

Sample ID: <b>5ml-rb</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>R10233</b>	RunNo: <b>10233</b>								
Prep Date:	Analysis Date: <b>5/1/2013</b>	SeqNo: <b>292407</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	480		500.0		96.7	70	130			

Sample ID: <b>2.5ug gro lcs</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>R10233</b>	RunNo: <b>10233</b>								
Prep Date:	Analysis Date: <b>5/1/2013</b>	SeqNo: <b>292427</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.6	74.6	137			
Surr: BFB	460		500.0		92.2	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               |
| P Sample pH greater than 2                   | 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: **1305003**

RcptNo: **1**

Received by/date: [Signature] 05/01/13

Logged By: **Lindsay Margin** 5/1/2013 9:50:00 AM [Signature]

Completed By: **Lindsay Margin** 5/1/2013 10:11:18 AM [Signature]

Reviewed By: [Signature] 05/01/13

**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° C to 6.0°C Yes  No  NA
- 6. Sample(s) in proper container(s)? Yes  No
- 7. Sufficient sample volume for indicated test(s)? Yes  No
- 8. Are samples (except VOA and ONG) properly preserved? Yes  No
- 9. Was preservative added to bottles? Yes  No  NA
- 10. VOA vials have zero headspace? Yes  No  No VOA Vials
- 11. Were any sample containers received broken? Yes  No
- 12. Does paperwork match bottle labels? Yes  No   
(Note discrepancies on chain of custody)
- 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? Yes  No   
(If no, notify customer for authorization.)

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

**Special Handling (if applicable)**

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

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

17. Additional remarks:

**18. Cooler Information**

Cooler No	Temp. °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	2.6	Good	Yes			





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

May 06, 2013

Jeff Blagg

Blagg Engineering

P. O. Box 87

Bloomfield, NM 87413

TEL: (505) 320-1183

FAX (505) 632-3903

RE: Irvin COM 1E

OrderNo.: 1305074

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/2/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1305074

Date Reported: 5/6/2013

CLIENT: Blagg Engineering

Client Sample ID: G @ - 18'

Project: Irvin COM 1E

Collection Date: 5/1/2013 9:40:00 AM

Lab ID: 1305074-001

Matrix: SOIL

Received Date: 5/2/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>						Analyst: <b>GSA</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/3/2013 11:52:42 AM
Surr: DNOP	98.3	63-147		%REC	1	5/3/2013 11:52:42 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/2/2013 11:49:16 AM
Surr: BFB	92.3	80-120		%REC	1	5/2/2013 11:49:16 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.050		mg/Kg	1	5/2/2013 11:49:16 AM
Toluene	ND	0.050		mg/Kg	1	5/2/2013 11:49:16 AM
Ethylbenzene	ND	0.050		mg/Kg	1	5/2/2013 11:49:16 AM
Xylenes, Total	ND	0.10		mg/Kg	1	5/2/2013 11:49:16 AM
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	5/2/2013 11:49:16 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	5/2/2013 1:40:07 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305074

06-May-13

**Client:** Blagg Engineering

**Project:** Irvin COM 1E

Sample ID	<b>MB-7256</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>7256</b>	RunNo:	<b>10284</b>					
Prep Date:	<b>5/2/2013</b>	Analysis Date:	<b>5/2/2013</b>	SeqNo:	<b>293264</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	<b>LCS-7256</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>7256</b>	RunNo:	<b>10284</b>					
Prep Date:	<b>5/2/2013</b>	Analysis Date:	<b>5/2/2013</b>	SeqNo:	<b>293265</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.9	90	110			

Sample ID	<b>1305010-001AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>7256</b>	RunNo:	<b>10284</b>					
Prep Date:	<b>5/2/2013</b>	Analysis Date:	<b>5/2/2013</b>	SeqNo:	<b>293267</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	16	7.5	15.00	4.382	79.6	64.4	117			

Sample ID	<b>1305010-001AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>7256</b>	RunNo:	<b>10284</b>					
Prep Date:	<b>5/2/2013</b>	Analysis Date:	<b>5/2/2013</b>	SeqNo:	<b>293268</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	17	7.5	15.00	4.382	87.3	64.4	117	6.75	20	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305074

06-May-13

**Client:** Blagg Engineering

**Project:** Irvin COM 1E

Sample ID <b>MB-7261</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7261</b>		RunNo: <b>10266</b>							
Prep Date: <b>5/2/2013</b>	Analysis Date: <b>5/2/2013</b>		SeqNo: <b>292778</b>		Units: <b>mg/Kg</b>					
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		103	63	147			

Sample ID <b>LCS-7261</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7261</b>		RunNo: <b>10266</b>							
Prep Date: <b>5/2/2013</b>	Analysis Date: <b>5/2/2013</b>		SeqNo: <b>292779</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.6	47.4	122			
Surr: DNOP	5.1		5.000		102	63	147			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305074

06-May-13

**Client:** Blagg Engineering

**Project:** Irvin COM 1E

Sample ID <b>MB-7228</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>R10265</b>		RunNo: <b>10265</b>							
Prep Date: <b>4/30/2013</b>	Analysis Date: <b>5/2/2013</b>		SeqNo: <b>293119</b>		Units: <b>mg/Kg</b>					
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		87.1	80	120			

Sample ID <b>LCS-7228</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>R10265</b>		RunNo: <b>10265</b>							
Prep Date: <b>4/30/2013</b>	Analysis Date: <b>5/2/2013</b>		SeqNo: <b>293120</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	105	62.6	136			
Surr: BFB	960		1000		95.7	80	120			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305074

06-May-13

**Client:** Blagg Engineering

**Project:** Irvin COM 1E

Sample ID <b>MB-7228</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>R10265</b>		RunNo: <b>10265</b>							
Prep Date: <b>4/30/2013</b>	Analysis Date: <b>5/2/2013</b>		SeqNo: <b>293147</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		96.9	80	120			

Sample ID <b>LCS-7228</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>R10265</b>		RunNo: <b>10265</b>							
Prep Date: <b>4/30/2013</b>	Analysis Date: <b>5/2/2013</b>		SeqNo: <b>293148</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	103	80	120			
Toluene	1.0	0.050	1.000	0	101	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	1.1		1.000		105	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               |
| P Sample pH greater than 2                   | 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: **1305074**

RcptNo: **1**

Received by/date: AT 05/02/13

Logged By: **Anne Thorne** 5/2/2013 10:00:00 AM *Anne Thorne*

Completed By: **Anne Thorne** 5/2/2013 *Anne Thorne*

Reviewed By: AT 05/02/13

**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° C to 6.0°C Yes  No  NA
- 6. Sample(s) in proper container(s)? Yes  No
- 7. Sufficient sample volume for indicated test(s)? Yes  No
- 8. Are samples (except VOA and ONG) properly preserved? Yes  No
- 9. Was preservative added to bottles? Yes  No  NA
- 10. VOA vials have zero headspace? Yes  No  No VOA Vials
- 11. Were any sample containers received broken? Yes  No
- 12. Does paperwork match bottle labels? Yes  No   
 (Note discrepancies on chain of custody)
- 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? Yes  No   
 (If no, notify customer for authorization.)

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

**Special Handling (if applicable)**

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

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

17. Additional remarks:

**18. Cooler Information**

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

# Chain-of-Custody Record

Client: **BLAGE 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 Manager:

**J. Blagg**

Sampler:

**J. Blagg**

On Ice:  Yes  No

Sample Temperature: **10**

Preservative Type

**None**

Container Type and #

**4oz x 1 Cool**

HEAL No

**1305074**

Date

**5/1/2013**

Time

**0940**

Matrix

**SOIL**

Sample Request ID

**GC-18'**

Date

**5/1/2013**

Time

**1724**

Relinquished by:

**Jeff Blagg**

Date:

**5/1/2013**

Time:

**1230**

Relinquished by:

**Christina Wheeler**

Date:

**5/1/13**

Time:

**1230**

Received by:

**Christina Wheeler**

Date:

**5/1/2013**

Time:

**1230**

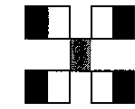
Turn-Around Time: **By Field MAY 3, 2013**

Standard  Rush

Project Name:

**IRVIN CAM 1E**

Project #:



# HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

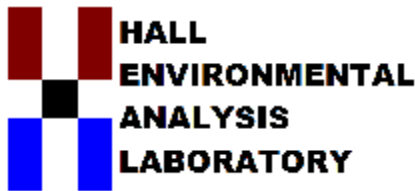
Analysis Request	Response
BTEX + MTBE + TMS (8021)	X
BTEX + MTBE + TPH (Gas only)	X
TPH 8015B (GRO / DRO / MRO)	X
TPH (Method 418.1)	
EDB (Method 504.1)	
PAH's (8310 or 8270 SIMS)	
RCRA 8 Metals	
Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	
8081 Pesticides / 8082 PCB's	
8260B (VOA)	
8270 (Semi-VOA)	X
Chloride	
Air Bubbles (Y or N)	

Remarks:

**Bill Blagg**

**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.



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

May 08, 2013

Jeff Blagg

Blagg Engineering

P. O. Box 87

Bloomfield, NM 87413

TEL: (505) 320-1183

FAX: (505) 632-3903

RE: Irvin Com 1E

OrderNo.: 1305150

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 2 sample(s) on 5/4/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1305150

Date Reported: 5/8/2013

CLIENT: Blagg Engineering

Client Sample ID: H @ 15'

Project: Irvin Com 1E

Collection Date: 5/3/2013 10:37:00 AM

Lab ID: 1305150-001

Matrix: SOIL

Received Date: 5/4/2013 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>						Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/7/2013 12:34:44 PM
Surr: DNOP	103	63-147		%REC	1	5/7/2013 12:34:44 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/6/2013 1:26:44 PM
Surr: BFB	93.4	80-120		%REC	1	5/6/2013 1:26:44 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	5/6/2013 1:26:44 PM
Toluene	ND	0.050		mg/Kg	1	5/6/2013 1:26:44 PM
Ethylbenzene	ND	0.050		mg/Kg	1	5/6/2013 1:26:44 PM
Xylenes, Total	ND	0.10		mg/Kg	1	5/6/2013 1:26:44 PM
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	5/6/2013 1:26:44 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: JRR
Chloride	ND	30		mg/Kg	20	5/7/2013 9:44:28 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1305150

Date Reported: 5/8/2013

CLIENT: Blagg Engineering

Client Sample ID: H @ 19'

Project: Irvin Com 1E

Collection Date: 5/3/2013 11:01:00 AM

Lab ID: 1305150-002

Matrix: SOIL

Received Date: 5/4/2013 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>						Analyst: <b>GSA</b>
Diesel Range Organics (DRO)	11000	500		mg/Kg	50	5/7/2013 2:24:07 PM
Surr: DNOP	0	63-147	S	%REC	50	5/7/2013 2:24:07 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	18000	500		mg/Kg	100	5/6/2013 1:56:57 PM
Surr: BFB	351	80-120	S	%REC	100	5/6/2013 1:56:57 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	130	5.0		mg/Kg	100	5/6/2013 1:56:57 PM
Toluene	710	25		mg/Kg	500	5/7/2013 4:04:50 AM
Ethylbenzene	130	5.0		mg/Kg	100	5/6/2013 1:56:57 PM
Xylenes, Total	1100	50		mg/Kg	500	5/7/2013 4:04:50 AM
Surr: 4-Bromofluorobenzene	112	80-120		%REC	500	5/7/2013 4:04:50 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	5/7/2013 9:56:52 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305150

08-May-13

**Client:** Blagg Engineering  
**Project:** Irvin Com 1E

Sample ID: <b>MB-7317</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 300.0: Anions</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7317</b>		RunNo: <b>10464</b>							
Prep Date: <b>5/7/2013</b>	Analysis Date: <b>5/7/2013</b>		SeqNo: <b>295832</b>	Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-7317</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 300.0: Anions</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7317</b>		RunNo: <b>10464</b>							
Prep Date: <b>5/7/2013</b>	Analysis Date: <b>5/7/2013</b>		SeqNo: <b>295833</b>	Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.9	90	110			

Sample ID: <b>1305091-001BMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 300.0: Anions</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7317</b>		RunNo: <b>10464</b>							
Prep Date: <b>5/7/2013</b>	Analysis Date: <b>5/7/2013</b>		SeqNo: <b>295837</b>	Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	7.5	15.00	2.496	80.7	64.4	117			

Sample ID: <b>1305091-001BMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 300.0: Anions</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7317</b>		RunNo: <b>10464</b>							
Prep Date: <b>5/7/2013</b>	Analysis Date: <b>5/7/2013</b>		SeqNo: <b>295838</b>	Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	7.5	15.00	2.496	81.6	64.4	117	0.910	20	

Sample ID: <b>1305209-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 300.0: Anions</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7317</b>		RunNo: <b>10464</b>							
Prep Date: <b>5/7/2013</b>	Analysis Date: <b>5/7/2013</b>		SeqNo: <b>295852</b>	Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	70	30	15.00	48.25	146	64.4	117			S

Sample ID: <b>1305209-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 300.0: Anions</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7317</b>		RunNo: <b>10464</b>							
Prep Date: <b>5/7/2013</b>	Analysis Date: <b>5/7/2013</b>		SeqNo: <b>295853</b>	Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	69	30	15.00	48.25	139	64.4	117	1.59	20	S

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305150

08-May-13

**Client:** Blagg Engineering  
**Project:** Irvin Com 1E

Sample ID: <b>MB-7280</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7280</b>		RunNo: <b>10338</b>							
Prep Date: <b>5/3/2013</b>	Analysis Date: <b>5/6/2013</b>		SeqNo: <b>294807</b>	Units: <b>%REC</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.8		10.00		98.3	63	147			

Sample ID: <b>LCS-7280</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7280</b>		RunNo: <b>10338</b>							
Prep Date: <b>5/3/2013</b>	Analysis Date: <b>5/6/2013</b>		SeqNo: <b>294809</b>	Units: <b>%REC</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.7		5.000		94.6	63	147			

Sample ID: <b>1305072-012AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7280</b>		RunNo: <b>10338</b>							
Prep Date: <b>5/3/2013</b>	Analysis Date: <b>5/7/2013</b>		SeqNo: <b>294869</b>	Units: <b>%REC</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.9		5.005		78.2	63	147			

Sample ID: <b>1305072-012AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7280</b>		RunNo: <b>10338</b>							
Prep Date: <b>5/3/2013</b>	Analysis Date: <b>5/7/2013</b>		SeqNo: <b>294871</b>	Units: <b>%REC</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.9		4.995		78.4	63	147	0	0	

Sample ID: <b>MB-7313</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7313</b>		RunNo: <b>10338</b>							
Prep Date: <b>5/6/2013</b>	Analysis Date: <b>5/7/2013</b>		SeqNo: <b>295279</b>	Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.5		10.00		94.6	63	147			

Sample ID: <b>LCS-7313</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7313</b>		RunNo: <b>10338</b>							
Prep Date: <b>5/6/2013</b>	Analysis Date: <b>5/7/2013</b>		SeqNo: <b>295357</b>	Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	102	47.4	122			
Surr: DNOP	4.9		5.000		97.9	63	147			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305150

08-May-13

**Client:** Blagg Engineering  
**Project:** Irvin Com 1E

Sample ID: <b>1304B69-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>								
Client ID: <b>BatchQC</b>	Batch ID: <b>7261</b>	RunNo: <b>10446</b>								
Prep Date: <b>5/2/2013</b>	Analysis Date: <b>5/8/2013</b>	SeqNo: <b>295997</b>	Units: <b>%REC</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	2.9		5.081		57.5	63	147			S

Sample ID: <b>1305125-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>								
Client ID: <b>BatchQC</b>	Batch ID: <b>7313</b>	RunNo: <b>10446</b>								
Prep Date: <b>5/6/2013</b>	Analysis Date: <b>5/7/2013</b>	SeqNo: <b>295998</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	59	10	49.95	0	117	12.6	148			
Surr: DNOP	6.3		4.995		127	63	147			

Sample ID: <b>1304B69-001AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>								
Client ID: <b>BatchQC</b>	Batch ID: <b>7261</b>	RunNo: <b>10446</b>								
Prep Date: <b>5/2/2013</b>	Analysis Date: <b>5/8/2013</b>	SeqNo: <b>295999</b>	Units: <b>%REC</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	2.8		5.020		54.8	63	147	0	0	S

Sample ID: <b>1305125-001AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>								
Client ID: <b>BatchQC</b>	Batch ID: <b>7313</b>	RunNo: <b>10446</b>								
Prep Date: <b>5/6/2013</b>	Analysis Date: <b>5/7/2013</b>	SeqNo: <b>296000</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	61	10	50.05	0	122	12.6	148	4.04	22.5	
Surr: DNOP	6.5		5.005		130	63	147	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305150

08-May-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID: <b>MB-7285</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>R10327</b>		RunNo: <b>10327</b>							
Prep Date: <b>5/3/2013</b>	Analysis Date: <b>5/6/2013</b>		SeqNo: <b>294730</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	910		1000		90.8	80	120			

Sample ID: <b>LCS-7285</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>R10327</b>		RunNo: <b>10327</b>							
Prep Date: <b>5/3/2013</b>	Analysis Date: <b>5/6/2013</b>		SeqNo: <b>294731</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	118	62.6	136			
Surr: BFB	1100		1000		113	80	120			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305150

08-May-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID: <b>MB-7285</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>R10327</b>	RunNo: <b>10327</b>								
Prep Date: <b>5/3/2013</b>	Analysis Date: <b>5/6/2013</b>	SeqNo: <b>294767</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	0.99		1.000		99.2	80	120			

Sample ID: <b>LCS-7285</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>R10327</b>	RunNo: <b>10327</b>								
Prep Date: <b>5/3/2013</b>	Analysis Date: <b>5/6/2013</b>	SeqNo: <b>294768</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.050	1.000	0	95.6	80	120			
Toluene	0.95	0.050	1.000	0	95.4	80	120			
Ethylbenzene	0.97	0.050	1.000	0	96.7	80	120			
Xylenes, Total	3.0	0.10	3.000	0	98.8	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	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               |
| P Sample pH greater than 2                   | R RPD outside accepted recovery limits               |
| RL Reporting Detection Limit                 | S Spike Recovery outside accepted recovery limits    |

Client Name: **BLAGG**

Work Order Number: **1305150**

RcptNo: **1**

Received by/date: AF 05/04/13

Logged By: **Anne Thorne** 5/4/2013 12:00:00 PM *Anne Thorne*

Completed By: **Anne Thorne** 5/6/2013 *Anne Thorne*

Reviewed By: *[Signature]* 05/06/13

**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° C to 6.0°C Yes  No  NA
- 6. Sample(s) in proper container(s)? Yes  No
- 7. Sufficient sample volume for indicated test(s)? Yes  No
- 8. Are samples (except VOA and ONG) properly preserved? Yes  No
- 9. Was preservative added to bottles? Yes  No  NA
- 10. VOA vials have zero headspace? Yes  No  No VOA Vials
- 11. Were any sample containers received broken? Yes  No
- 12. Does paperwork match bottle labels? Yes  No   
(Note discrepancies on chain of custody)
- 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? Yes  No   
(If no, notify customer for authorization.)

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

**Special Handling (if applicable)**

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

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

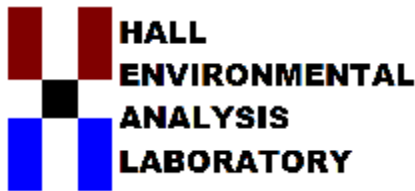
17. Additional remarks:

**18. Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.5	Good	Yes			







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

May 14, 2013

Jeff Blagg

Blagg Engineering

P. O. Box 87

Bloomfield, NM 87413

TEL: (505) 320-1183

FAX (505) 632-3903

RE: Irvin Com 1E

OrderNo.: 1305413

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 2 sample(s) on 5/10/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1305413

Date Reported: 5/14/2013

CLIENT: Blagg Engineering

Client Sample ID: I@21'

Project: Irvin Com 1E

Collection Date: 5/9/2013 1:50:00 PM

Lab ID: 1305413-001

Matrix: MEOH (SOIL)

Received Date: 5/10/2013 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	5/13/2013 10:42:00 AM	7387
Surr: DNOP	111	63-147		%REC	1	5/13/2013 10:42:00 AM	7387
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/11/2013 10:46:15 AM	R10548
Surr: BFB	92.7	80-120		%REC	1	5/11/2013 10:46:15 AM	R10548
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	0.18	0.050		mg/Kg	1	5/11/2013 10:46:15 AM	R10548
Toluene	ND	0.050		mg/Kg	1	5/11/2013 10:46:15 AM	R10548
Ethylbenzene	ND	0.050		mg/Kg	1	5/11/2013 10:46:15 AM	R10548
Xylenes, Total	ND	0.10		mg/Kg	1	5/11/2013 10:46:15 AM	R10548
Surr: 4-Bromofluorobenzene	98.6	80-120		%REC	1	5/11/2013 10:46:15 AM	R10548
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	34	30		mg/Kg	20	5/10/2013 2:52:14 PM	7384

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1305413

Date Reported: 5/14/2013

**CLIENT:** Blagg Engineering

**Client Sample ID:** J@18'

**Project:** Irvin Com 1E

**Collection Date:** 5/9/2013 2:00:00 PM

**Lab ID:** 1305413-002

**Matrix:** MEOH (SOIL)

**Received Date:** 5/10/2013 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)	27	9.9		mg/Kg	1	5/13/2013 11:09:15 AM	7387
Surr: DNOP	116	63-147		%REC	1	5/13/2013 11:09:15 AM	7387
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	28	25		mg/Kg	5	5/11/2013 11:16:30 AM	R10548
Surr: BFB	107	80-120		%REC	5	5/11/2013 11:16:30 AM	R10548
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	0.51	0.25		mg/Kg	5	5/11/2013 11:16:30 AM	R10548
Toluene	ND	0.25		mg/Kg	5	5/11/2013 11:16:30 AM	R10548
Ethylbenzene	ND	0.25		mg/Kg	5	5/11/2013 11:16:30 AM	R10548
Xylenes, Total	2.1	0.50		mg/Kg	5	5/11/2013 11:16:30 AM	R10548
Surr: 4-Bromofluorobenzene	101	80-120		%REC	5	5/11/2013 11:16:30 AM	R10548
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	30	30		mg/Kg	20	5/10/2013 3:29:27 PM	7384

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305413

14-May-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID	<b>1305367-001AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>7384</b>	RunNo:	<b>10562</b>					
Prep Date:	<b>5/10/2013</b>	Analysis Date:	<b>5/10/2013</b>	SeqNo:	<b>298384</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	7.5	15.00	0	91.9	64.4	117			

Sample ID	<b>1305367-001AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>7384</b>	RunNo:	<b>10562</b>					
Prep Date:	<b>5/10/2013</b>	Analysis Date:	<b>5/10/2013</b>	SeqNo:	<b>298385</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	13	7.5	15.00	0	90.0	64.4	117	2.14	20	

Sample ID	<b>1305413-001AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>I@21'</b>	Batch ID:	<b>7384</b>	RunNo:	<b>10562</b>					
Prep Date:	<b>5/10/2013</b>	Analysis Date:	<b>5/10/2013</b>	SeqNo:	<b>298401</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	44	30	15.00	34.12	65.0	64.4	117			

Sample ID	<b>1305413-001AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>I@21'</b>	Batch ID:	<b>7384</b>	RunNo:	<b>10562</b>					
Prep Date:	<b>5/10/2013</b>	Analysis Date:	<b>5/10/2013</b>	SeqNo:	<b>298402</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	45	30	15.00	34.12	75.8	64.4	117	3.65	20	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305413

14-May-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID <b>MB-7387</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7387</b>		RunNo: <b>10540</b>							
Prep Date: <b>5/10/2013</b>	Analysis Date: <b>5/10/2013</b>		SeqNo: <b>298020</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	11		10.00		108	63	147			

Sample ID <b>LCS-7387</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7387</b>		RunNo: <b>10540</b>							
Prep Date: <b>5/10/2013</b>	Analysis Date: <b>5/10/2013</b>		SeqNo: <b>298022</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.1	47.4	122			
Surr: DNOP	5.5		5.000		111	63	147			

Sample ID <b>1305367-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7387</b>		RunNo: <b>10572</b>							
Prep Date: <b>5/10/2013</b>	Analysis Date: <b>5/13/2013</b>		SeqNo: <b>299240</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.10	0	93.2	61.3	138			
Surr: DNOP	5.9		5.010		118	63	147			

Sample ID <b>1305367-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7387</b>		RunNo: <b>10572</b>							
Prep Date: <b>5/10/2013</b>	Analysis Date: <b>5/13/2013</b>		SeqNo: <b>299241</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	49.95	0	96.6	61.3	138	3.30	20	
Surr: DNOP	5.9		4.995		117	63	147	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305413

14-May-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID <b>5ML RB</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>R10548</b>		RunNo: <b>10548</b>							
Prep Date:	Analysis Date: <b>5/10/2013</b>		SeqNo: <b>298367</b>		Units: <b>mg/Kg</b>					
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		92.6	80	120			

Sample ID <b>2.5UG GRO LCS</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>R10548</b>		RunNo: <b>10548</b>							
Prep Date:	Analysis Date: <b>5/10/2013</b>		SeqNo: <b>298368</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	110	62.6	136			
Surr: BFB	1000		1000		99.9	80	120			

Sample ID <b>1305353-005AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>R10548</b>		RunNo: <b>10548</b>							
Prep Date:	Analysis Date: <b>5/10/2013</b>		SeqNo: <b>298376</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	16	5.0	16.35	0	98.1	70	130			
Surr: BFB	640		654.0		97.4	80	120			

Sample ID <b>1305353-005AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>R10548</b>		RunNo: <b>10548</b>							
Prep Date:	Analysis Date: <b>5/10/2013</b>		SeqNo: <b>298377</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	16	5.0	16.35	0	94.9	70	130	3.36	22.1	
Surr: BFB	640		654.0		97.2	80	120	0	0	

Sample ID <b>MB-7366</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7366</b>		RunNo: <b>10548</b>							
Prep Date: <b>5/9/2013</b>	Analysis Date: <b>5/10/2013</b>		SeqNo: <b>298421</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	890		1000		89.2	80	120			

Sample ID <b>LCS-7366</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7366</b>		RunNo: <b>10548</b>							
Prep Date: <b>5/9/2013</b>	Analysis Date: <b>5/10/2013</b>		SeqNo: <b>298422</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	960		1000		96.2	80	120			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305413

14-May-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID <b>5ML RB</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>R10548</b>		RunNo: <b>10548</b>							
Prep Date:	Analysis Date: <b>5/10/2013</b>		SeqNo: <b>298442</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		101	80	120			

Sample ID <b>100NG BTEX LCS</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>R10548</b>		RunNo: <b>10548</b>							
Prep Date:	Analysis Date: <b>5/10/2013</b>		SeqNo: <b>298443</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	104	80	120			
Toluene	1.0	0.050	1.000	0	102	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.1	0.10	3.000	0	103	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120			

Sample ID <b>1305353-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>R10548</b>		RunNo: <b>10548</b>							
Prep Date:	Analysis Date: <b>5/10/2013</b>		SeqNo: <b>298445</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.10	1.072	0.02219	96.3	67.2	113			
Toluene	3.3	0.10	1.072	2.269	98.4	62.1	116			
Ethylbenzene	1.3	0.10	1.072	0.2210	98.5	67.9	127			
Xylenes, Total	3.8	0.20	3.215	0.6672	99.0	60.6	134			
Surr: 4-Bromofluorobenzene	1.1		1.072		107	80	120			

Sample ID <b>1305353-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>R10548</b>		RunNo: <b>10548</b>							
Prep Date:	Analysis Date: <b>5/10/2013</b>		SeqNo: <b>298446</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.10	1.072	0.02219	91.2	67.2	113	5.27	14.3	
Toluene	3.3	0.10	1.072	2.269	92.6	62.1	116	1.89	15.9	
Ethylbenzene	1.2	0.10	1.072	0.2210	93.6	67.9	127	4.18	14.4	
Xylenes, Total	3.7	0.20	3.215	0.6672	94.4	60.6	134	3.91	12.6	
Surr: 4-Bromofluorobenzene	1.1		1.072		105	80	120	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305413

14-May-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID <b>MB-7366</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7366</b>		RunNo: <b>10548</b>							
Prep Date: <b>5/9/2013</b>	Analysis Date: <b>5/10/2013</b>		SeqNo: <b>298461</b>				Units: <b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.97		1.000		97.2	80	120			

Sample ID <b>LCS-7366</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7366</b>		RunNo: <b>10548</b>							
Prep Date: <b>5/9/2013</b>	Analysis Date: <b>5/10/2013</b>		SeqNo: <b>298462</b>				Units: <b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Sample ID <b>1305307-004AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7366</b>		RunNo: <b>10548</b>							
Prep Date: <b>5/9/2013</b>	Analysis Date: <b>5/11/2013</b>		SeqNo: <b>298467</b>				Units: <b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		0.9843		104	80	120			

Sample ID <b>1305307-004AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7366</b>		RunNo: <b>10548</b>							
Prep Date: <b>5/9/2013</b>	Analysis Date: <b>5/11/2013</b>		SeqNo: <b>298468</b>				Units: <b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits



# Sample Log-In Check List

Client Name: **BLAGG**

Work Order Number: 1305413

RcptNo: 1

Received by/date: [Signature] 05/10/13

Logged By: **Michelle Garcia** 5/10/2013 10:00:00 AM *Michelle Garcia*

Completed By: **Michelle Garcia** 5/10/2013 10:27:20 AM *Michelle Garcia*

Reviewed By: JD 05/10/2013

**Chain of Custody**

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

**Log In**

- 4. Was an attempt made to cool the samples? Yes  No  NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
- 6. Sample(s) in proper container(s)? Yes  No
- 7. Sufficient sample volume for indicated test(s)? Yes  No
- 8. Are samples (except VOA and ONG) properly preserved? Yes  No
- 9. Was preservative added to bottles? Yes  No  NA
- 10. VOA vials have zero headspace? Yes  No  No VOA Vials
- 11. Were any sample containers received broken? Yes  No
- 12. Does paperwork match bottle labels? Yes  No   
(Note discrepancies on chain of custody)
- 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? Yes  No   
(If no, notify customer for authorization.)

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

**Special Handling (if applicable)**

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

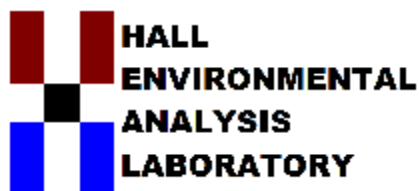
Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
 By Whom: \_\_\_\_\_ Via:  eMail  Phone  Fax  In Person  
 Regarding: \_\_\_\_\_  
 Client Instructions: \_\_\_\_\_

17. Additional remarks:

**18. Cooler Information**

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





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

May 16, 2013

Jeff Blagg

Blagg Engineering

P. O. Box 87

Bloomfield, NM 87413

TEL: (505) 320-1183

FAX (505) 632-3903

RE: Irvin Com 1E

OrderNo.: 1305548

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 6 sample(s) on 5/15/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1305548

Date Reported: 5/16/2013

**CLIENT:** Blagg Engineering

**Client Sample ID:** BH4 @ 17'-18'

**Project:** Irvin Com 1E

**Collection Date:** 5/14/2013 11:12:00 AM

**Lab ID:** 1305548-001

**Matrix:** MEOH (SOIL)

**Received Date:** 5/15/2013 9:58:00 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	5/16/2013 11:20:15 AM	7456
Surr: DNOP	103	63-147		%REC	1	5/16/2013 11:20:15 AM	7456
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/15/2013 11:47:56 AM	R10656
Surr: BFB	91.1	80-120		%REC	1	5/15/2013 11:47:56 AM	R10656
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.050		mg/Kg	1	5/15/2013 11:47:56 AM	R10656
Toluene	ND	0.050		mg/Kg	1	5/15/2013 11:47:56 AM	R10656
Ethylbenzene	ND	0.050		mg/Kg	1	5/15/2013 11:47:56 AM	R10656
Xylenes, Total	ND	0.10		mg/Kg	1	5/15/2013 11:47:56 AM	R10656
Surr: 4-Bromofluorobenzene	96.8	80-120		%REC	1	5/15/2013 11:47:56 AM	R10656

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
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 1305548

Date Reported: 5/16/2013

CLIENT: Blagg Engineering

Client Sample ID: BH5 @18'-19'

Project: Irvin Com 1E

Collection Date: 5/14/2013 11:20:00 AM

Lab ID: 1305548-002

Matrix: MEOH (SOIL)

Received Date: 5/15/2013 9:58:00 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	5/16/2013 11:48:04 AM	7456
Surr: DNOP	108	63-147		%REC	1	5/16/2013 11:48:04 AM	7456
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	6.2	5.0		mg/Kg	1	5/15/2013 12:16:37 PM	R10656
Surr: BFB	117	80-120		%REC	1	5/15/2013 12:16:37 PM	R10656
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.050		mg/Kg	1	5/15/2013 12:16:37 PM	R10656
Toluene	ND	0.050		mg/Kg	1	5/15/2013 12:16:37 PM	R10656
Ethylbenzene	ND	0.050		mg/Kg	1	5/15/2013 12:16:37 PM	R10656
Xylenes, Total	ND	0.10		mg/Kg	1	5/15/2013 12:16:37 PM	R10656
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	5/15/2013 12:16:37 PM	R10656

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
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 1305548

Date Reported: 5/16/2013

CLIENT: Blagg Engineering

Client Sample ID: BH5 @19'-20'

Project: Irvin Com 1E

Collection Date: 5/14/2013 12:21:00 PM

Lab ID: 1305548-003

Matrix: MEOH (SOIL)

Received Date: 5/15/2013 9:58:00 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)	27	10		mg/Kg	1	5/16/2013 12:15:49 PM	7456
Surr: DNOP	113	63-147		%REC	1	5/16/2013 12:15:49 PM	7456
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	520	50		mg/Kg	10	5/15/2013 12:45:15 PM	R10656
Surr: BFB	343	80-120	S	%REC	10	5/15/2013 12:45:15 PM	R10656
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	0.22	0.20		mg/Kg	10	5/15/2013 12:45:15 PM	R10656
Toluene	1.4	0.50		mg/Kg	10	5/15/2013 12:45:15 PM	R10656
Ethylbenzene	2.7	0.50		mg/Kg	10	5/15/2013 12:45:15 PM	R10656
Xylenes, Total	22	1.0		mg/Kg	10	5/15/2013 12:45:15 PM	R10656
Surr: 4-Bromofluorobenzene	123	80-120	S	%REC	10	5/15/2013 12:45:15 PM	R10656

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
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 1305548

Date Reported: 5/16/2013

CLIENT: Blagg Engineering

Client Sample ID: BH6 @18'-19'

Project: Irvin Com 1E

Collection Date: 5/14/2013 1:39:00 PM

Lab ID: 1305548-004

Matrix: MEOH (SOIL)

Received Date: 5/15/2013 9:58:00 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	5/16/2013 1:39:43 PM	7456
Surr: DNOP	113	63-147		%REC	1	5/16/2013 1:39:43 PM	7456
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	8.2	5.0		mg/Kg	1	5/15/2013 1:13:55 PM	R10656
Surr: BFB	193	80-120	S	%REC	1	5/15/2013 1:13:55 PM	R10656
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.050		mg/Kg	1	5/15/2013 1:13:55 PM	R10656
Toluene	ND	0.050		mg/Kg	1	5/15/2013 1:13:55 PM	R10656
Ethylbenzene	ND	0.050		mg/Kg	1	5/15/2013 1:13:55 PM	R10656
Xylenes, Total	ND	0.10		mg/Kg	1	5/15/2013 1:13:55 PM	R10656
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	5/15/2013 1:13:55 PM	R10656

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
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 1305548

Date Reported: 5/16/2013

CLIENT: Blagg Engineering

Client Sample ID: BH6 @19'-20'

Project: Irvin Com 1E

Collection Date: 5/14/2013 1:40:00 PM

Lab ID: 1305548-005

Matrix: MEOH (SOIL)

Received Date: 5/15/2013 9:58:00 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)	770	10		mg/Kg	1	5/16/2013 2:07:48 PM	7456
Surr: DNOP	148	63-147	S	%REC	1	5/16/2013 2:07:48 PM	7456
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	660	50		mg/Kg	10	5/15/2013 1:42:42 PM	R10656
Surr: BFB	355	80-120	S	%REC	10	5/15/2013 1:42:42 PM	R10656
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	2.4	0.20		mg/Kg	10	5/15/2013 1:42:42 PM	R10656
Toluene	17	0.50		mg/Kg	10	5/15/2013 1:42:42 PM	R10656
Ethylbenzene	4.8	0.50		mg/Kg	10	5/15/2013 1:42:42 PM	R10656
Xylenes, Total	43	1.0		mg/Kg	10	5/15/2013 1:42:42 PM	R10656
Surr: 4-Bromofluorobenzene	126	80-120	S	%REC	10	5/15/2013 1:42:42 PM	R10656

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
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 1305548

Date Reported: 5/16/2013

CLIENT: Blagg Engineering

Client Sample ID: BH7 @19'-20'

Project: Irvin Com 1E

Collection Date: 5/14/2013 2:53:00 PM

Lab ID: 1305548-006

Matrix: MEOH (SOIL)

Received Date: 5/15/2013 9:58:00 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	5/16/2013 2:35:53 PM	7456
Surr: DNOP	111	63-147		%REC	1	5/16/2013 2:35:53 PM	7456
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/15/2013 2:11:26 PM	R10656
Surr: BFB	119	80-120		%REC	1	5/15/2013 2:11:26 PM	R10656
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.050		mg/Kg	1	5/15/2013 2:11:26 PM	R10656
Toluene	ND	0.050		mg/Kg	1	5/15/2013 2:11:26 PM	R10656
Ethylbenzene	ND	0.050		mg/Kg	1	5/15/2013 2:11:26 PM	R10656
Xylenes, Total	ND	0.10		mg/Kg	1	5/15/2013 2:11:26 PM	R10656
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	5/15/2013 2:11:26 PM	R10656

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
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#: 1305548

16-May-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID <b>MB-7456</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7456</b>		RunNo: <b>10647</b>							
Prep Date: <b>5/15/2013</b>	Analysis Date: <b>5/16/2013</b>		SeqNo: <b>301566</b>	Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	11		10.00		108	63	147			

Sample ID <b>LCS-7456</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7456</b>		RunNo: <b>10647</b>							
Prep Date: <b>5/15/2013</b>	Analysis Date: <b>5/16/2013</b>		SeqNo: <b>301567</b>	Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	94.4	77.1	128			
Surr: DNOP	5.5		5.000		109	63	147			

Sample ID <b>1305548-003AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>BH5 @19'-20'</b>	Batch ID: <b>7456</b>		RunNo: <b>10647</b>							
Prep Date: <b>5/15/2013</b>	Analysis Date: <b>5/16/2013</b>		SeqNo: <b>301598</b>	Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	98	10	49.85	27.40	142	61.3	138	6.49	20	S
Surr: DNOP	6.2		4.985		125	63	147	0	0	

Sample ID <b>1305548-003AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>BH5 @19'-20'</b>	Batch ID: <b>7456</b>		RunNo: <b>10647</b>							
Prep Date: <b>5/15/2013</b>	Analysis Date: <b>5/16/2013</b>		SeqNo: <b>301599</b>	Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	92	10	49.85	27.40	130	61.3	138			
Surr: DNOP	6.2		4.985		124	63	147			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305548

16-May-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID <b>MB-7440</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>R10656</b>		RunNo: <b>10656</b>							
Prep Date: <b>5/14/2013</b>	Analysis Date: <b>5/15/2013</b>		SeqNo: <b>301099</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	920		1000		91.7	80	120			

Sample ID <b>LCS-7440</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>R10656</b>		RunNo: <b>10656</b>							
Prep Date: <b>5/14/2013</b>	Analysis Date: <b>5/15/2013</b>		SeqNo: <b>301100</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	110	62.6	136			
Surr: BFB	1000		1000		99.7	80	120			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305548

16-May-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID <b>MB-7440</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>R10656</b>		RunNo: <b>10656</b>							
Prep Date: <b>5/14/2013</b>	Analysis Date: <b>5/15/2013</b>		SeqNo: <b>301131</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	0.99		1.000		98.9	80	120			

Sample ID <b>LCS-7440</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>R10656</b>		RunNo: <b>10656</b>							
Prep Date: <b>5/14/2013</b>	Analysis Date: <b>5/15/2013</b>		SeqNo: <b>301132</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	108	80	120			
Toluene	1.1	0.050	1.000	0	108	80	120			
Ethylbenzene	1.1	0.050	1.000	0	108	80	120			
Xylenes, Total	3.2	0.10	3.000	0	108	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

**Sample Log-In Check List**

Client Name: **BLAGG**

Work Order Number: 1305548

RcptNo: 1

Received by/date: AG 05/15/13

Logged By: **Michelle Garcia** 5/15/2013 9:58:00 AM *Michelle Garcia*

Completed By: **Michelle Garcia** 5/15/2013 10:13:04 AM *Michelle Garcia*

Reviewed By: JO 05/15/2013

**Chain of Custody**

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

**Log In**

- 4. Was an attempt made to cool the samples? Yes  No  NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
- 6. Sample(s) in proper container(s)? Yes  No
- 7. Sufficient sample volume for indicated test(s)? Yes  No
- 8. Are samples (except VOA and ONG) properly preserved? Yes  No
- 9. Was preservative added to bottles? Yes  No  NA
- 10. VOA vials have zero headspace? Yes  No  No VOA Vials
- 11. Were any sample containers received broken? Yes  No
- 12. Does paperwork match bottle labels? Yes  No   
(Note discrepancies on chain of custody)
- 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? Yes  No   
(If no, notify customer for authorization.)

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

**Special Handling (if applicable)**

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

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

17. Additional remarks:

**18. Cooler Information**

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

# Chain-of-Custody Record

Client: BAGG ENGINEERING INC.  
BP AMERICA  
 Mailing Address: P.O. Box 87  
BLANFIED NM 87413  
 Phone #: SOS-632-1199  
 email or Fax#: \_\_\_\_\_  
 QA/QC Package:  Level 4 (Full Validation)  
 Standard  Other \_\_\_\_\_  
 Accreditation  
 NELAP  Other \_\_\_\_\_  
 EDD (Type) \_\_\_\_\_

Turn-Around Time: By THURSDAY 5/16/2013  
 Standard  Rush  
 Project Name: IRUN COM 1E  
 Project #: \_\_\_\_\_  
 Project Manager: J. Bagg  
 Sampler: J. Bagg  
 Office  Yes  No  
 Sample Temperature: 10

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No
5/14/13	1112	SOIL	BH4 @ 17'-18'	4 oz x1	COOL	1305548
"	1220	"	BH5 @ 18'-19'	"	"	-002
"	1221	"	BH5 @ 19'-20'	"	"	-003
"	1339	"	BH6 @ 18'-19'	"	"	-004
"	1340	"	BH6 @ 19'-20'	"	"	-005
"	1453	"	BH7 @ 19'-20'	"	"	-006

Date: 5/14/2013 Time: 1552 Relinquished by: JH Bagg  
 Date: 5/14/2013 Time: \_\_\_\_\_ Relinquished by: \_\_\_\_\_  
 Date: 5/14/2013 Time: \_\_\_\_\_ Relinquished by: Christina Walden

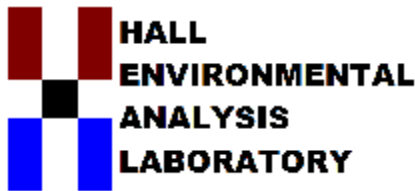
Analysis Request	BTEX + MTBE + TPH (Gas only)	BTEX + MTBE + TPH (8021)	TPH 8015B (GRO / DRO / MO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
	X	X	X									
	X	X	X									
	X	X	X									
	X	X	X									
	X	X	X									

Received by: Christina Walden Date: 5/14/2013 Time: 1552  
 Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Remarks: BILL BAGG  
BP CONTACT: JEFF PEREE



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

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



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

May 20, 2013

Jeff Blagg

Blagg Engineering

P. O. Box 87

Bloomfield, NM 87413

TEL: (505) 320-1183

FAX

RE: Irvin Com 1E

OrderNo.: 1305646

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 4 sample(s) on 5/16/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1305646

Date Reported: 5/20/2013

CLIENT: Blagg Engineering

Client Sample ID: BH8@19'-20'

Project: Irvin Com 1E

Collection Date: 5/15/2013 10:59:00 AM

Lab ID: 1305646-001

Matrix: MEOH (SOIL)

Received Date: 5/16/2013 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	5/16/2013 4:34:28 PM	7479
Surr: DNOP	101	63-147		%REC	1	5/16/2013 4:34:28 PM	7479
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/16/2013 3:03:17 PM	R10679
Surr: BFB	108	80-120		%REC	1	5/16/2013 3:03:17 PM	R10679
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.050		mg/Kg	1	5/16/2013 3:03:17 PM	R10679
Toluene	ND	0.050		mg/Kg	1	5/16/2013 3:03:17 PM	R10679
Ethylbenzene	ND	0.050		mg/Kg	1	5/16/2013 3:03:17 PM	R10679
Xylenes, Total	ND	0.10		mg/Kg	1	5/16/2013 3:03:17 PM	R10679
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	5/16/2013 3:03:17 PM	R10679

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
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 1305646

Date Reported: 5/20/2013

CLIENT: Blagg Engineering

Client Sample ID: BH9@20'-21'

Project: Irvin Com 1E

Collection Date: 5/15/2013 11:45:00 AM

Lab ID: 1305646-002

Matrix: MEOH (SOIL)

Received Date: 5/16/2013 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	5/16/2013 4:56:38 PM	7479
Surr: DNOP	106	63-147		%REC	1	5/16/2013 4:56:38 PM	7479
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/16/2013 3:31:53 PM	R10679
Surr: BFB	97.8	80-120		%REC	1	5/16/2013 3:31:53 PM	R10679
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.050		mg/Kg	1	5/16/2013 3:31:53 PM	R10679
Toluene	ND	0.050		mg/Kg	1	5/16/2013 3:31:53 PM	R10679
Ethylbenzene	ND	0.050		mg/Kg	1	5/16/2013 3:31:53 PM	R10679
Xylenes, Total	ND	0.10		mg/Kg	1	5/16/2013 3:31:53 PM	R10679
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	5/16/2013 3:31:53 PM	R10679

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
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 1305646

Date Reported: 5/20/2013

CLIENT: Blagg Engineering

Client Sample ID: BH10@18'-19'

Project: Irvin Com 1E

Collection Date: 5/15/2013 1:07:00 PM

Lab ID: 1305646-003

Matrix: MEOH (SOIL)

Received Date: 5/16/2013 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)	77	10		mg/Kg	1	5/16/2013 5:18:37 PM	7479
Surr: DNOP	121	63-147		%REC	1	5/16/2013 5:18:37 PM	7479
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	420	50		mg/Kg	10	5/16/2013 2:34:35 PM	R10679
Surr: BFB	215	80-120	S	%REC	10	5/16/2013 2:34:35 PM	R10679
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	3.1	0.50		mg/Kg	10	5/16/2013 2:34:35 PM	R10679
Toluene	17	0.50		mg/Kg	10	5/16/2013 2:34:35 PM	R10679
Ethylbenzene	3.0	0.50		mg/Kg	10	5/16/2013 2:34:35 PM	R10679
Xylenes, Total	26	1.0		mg/Kg	10	5/16/2013 2:34:35 PM	R10679
Surr: 4-Bromofluorobenzene	118	80-120		%REC	10	5/16/2013 2:34:35 PM	R10679

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
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 1305646

Date Reported: 5/20/2013

CLIENT: Blagg Engineering

Client Sample ID: BH11@19'-20'

Project: Irvin Com 1E

Collection Date: 5/15/2013 2:05:00 PM

Lab ID: 1305646-004

Matrix: MEOH (SOIL)

Received Date: 5/16/2013 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	5/16/2013 5:40:40 PM	7479
Surr: DNOP	95.2	63-147		%REC	1	5/16/2013 5:40:40 PM	7479
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/16/2013 4:00:33 PM	R10679
Surr: BFB	98.0	80-120		%REC	1	5/16/2013 4:00:33 PM	R10679
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	0.17	0.050		mg/Kg	1	5/16/2013 4:00:33 PM	R10679
Toluene	0.42	0.050		mg/Kg	1	5/16/2013 4:00:33 PM	R10679
Ethylbenzene	0.069	0.050		mg/Kg	1	5/16/2013 4:00:33 PM	R10679
Xylenes, Total	0.58	0.10		mg/Kg	1	5/16/2013 4:00:33 PM	R10679
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	5/16/2013 4:00:33 PM	R10679

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
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#: 1305646

20-May-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID <b>MB-7479</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7479</b>		RunNo: <b>10678</b>							
Prep Date: <b>5/16/2013</b>	Analysis Date: <b>5/16/2013</b>		SeqNo: <b>301678</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	8.5		10.00		85.3	63	147			

Sample ID <b>LCS-7479</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7479</b>		RunNo: <b>10678</b>							
Prep Date: <b>5/16/2013</b>	Analysis Date: <b>5/16/2013</b>		SeqNo: <b>301679</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.2	77.1	128			
Surr: DNOP	4.2		5.000		83.9	63	147			

Sample ID <b>1305643-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7479</b>		RunNo: <b>10678</b>							
Prep Date: <b>5/16/2013</b>	Analysis Date: <b>5/16/2013</b>		SeqNo: <b>302182</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	160	10	49.95	123.7	70.9	61.3	138			
Surr: DNOP	5.1		4.995		103	63	147			

Sample ID <b>1305643-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7479</b>		RunNo: <b>10678</b>							
Prep Date: <b>5/16/2013</b>	Analysis Date: <b>5/16/2013</b>		SeqNo: <b>302183</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	240	10	49.90	123.7	230	61.3	138	40.0	20	SR
Surr: DNOP	5.5		4.990		111	63	147	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305646

20-May-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID <b>5ML RB</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>R10679</b>		RunNo: <b>10679</b>							
Prep Date:	Analysis Date: <b>5/16/2013</b>		SeqNo: <b>302153</b>		Units: <b>mg/Kg</b>					
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 <b>2.5UG GRO LCS</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>R10679</b>		RunNo: <b>10679</b>							
Prep Date:	Analysis Date: <b>5/16/2013</b>		SeqNo: <b>302154</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	9.5	5.0	25.00	0	37.9	62.6	136			S
Surr: BFB	960		1000		96.5	80	120			

Sample ID <b>1305643-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>R10679</b>		RunNo: <b>10679</b>							
Prep Date:	Analysis Date: <b>5/16/2013</b>		SeqNo: <b>302156</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	19.28	0	122	70	130			
Surr: BFB	810		771.0		105	80	120			

Sample ID <b>1305643-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>R10679</b>		RunNo: <b>10679</b>							
Prep Date:	Analysis Date: <b>5/16/2013</b>		SeqNo: <b>302157</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	19.28	0	117	70	130	3.97	22.1	
Surr: BFB	820		771.0		107	80	120	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305646

20-May-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID <b>5ML RB</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>R10679</b>		RunNo: <b>10679</b>							
Prep Date:	Analysis Date: <b>5/16/2013</b>		SeqNo: <b>302165</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>100NG BTEX LCS</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>R10679</b>		RunNo: <b>10679</b>							
Prep Date:	Analysis Date: <b>5/16/2013</b>		SeqNo: <b>302166</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	114	80	120			
Toluene	1.1	0.050	1.000	0	114	80	120			
Ethylbenzene	1.1	0.050	1.000	0	113	80	120			
Xylenes, Total	3.4	0.10	3.000	0	114	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Sample ID <b>1305643-002AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>R10679</b>		RunNo: <b>10679</b>							
Prep Date:	Analysis Date: <b>5/16/2013</b>		SeqNo: <b>302169</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.050	0.7153	0	111	67.2	113			
Toluene	0.79	0.050	0.7153	0	111	62.1	116			
Ethylbenzene	0.79	0.050	0.7153	0	110	67.9	127			
Xylenes, Total	2.4	0.10	2.146	0	111	60.6	134			
Surr: 4-Bromofluorobenzene	0.77		0.7153		108	80	120			

Sample ID <b>1305643-002AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>R10679</b>		RunNo: <b>10679</b>							
Prep Date:	Analysis Date: <b>5/16/2013</b>		SeqNo: <b>302170</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.73	0.050	0.7153	0	102	67.2	113	9.07	14.3	
Toluene	0.72	0.050	0.7153	0	101	62.1	116	9.60	15.9	
Ethylbenzene	0.72	0.050	0.7153	0	101	67.9	127	9.15	14.4	
Xylenes, Total	2.2	0.10	2.146	0	102	60.6	134	9.04	12.6	
Surr: 4-Bromofluorobenzene	0.78		0.7153		109	80	120	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

**Sample Log-In Check List**

Client Name: **BLAGG**

Work Order Number: 1305646

RcptNo: 1

Received by/date: *[Signature]* 05/16/13

Logged By: **Lindsay Mangin** 5/16/2013 10:00:00 AM *[Signature]*

Completed By: **Lindsay Mangin** 5/16/2013 10:55:03 AM *[Signature]*

Reviewed By: IO 05/16/2013

**Chain of Custody**

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

**Log In**

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

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

**Special Handling (if applicable)**

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

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

17. Additional remarks:

**18. Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.2	Good	Yes			



# Chain-of-Custody Record

Client: Blake Engineering Inc  
BP America  
 Mailing Address: P.O. Box 87  
Brownfield NM 87413  
 Phone #: 505-632-1199

email or Fax#: \_\_\_\_\_  
 QA/QC Package:  Level 4 (Full Validation)  
 Standard  NELAP  Other \_\_\_\_\_  
 EDD (Type) \_\_\_\_\_

Date	Time	Matrix	Sample Request ID
5/15/13	1059	Soil	BH 8 @ 19'-20'
"	1145	"	BH 9 @ 20'-21'
"	1307	"	BH 10 @ 18'-19'
"	1405	"	BH 11 @ 19'-20'

Turn-Around Time: B4 FRI/DAF  
5/17/2013  
 Standard  Rush  
 Project Name: IRVW COM IE  
 Project #: \_\_\_\_\_

Project Manager: J. Bagg  
 Sampler: J. Bagg  
 On Ice:  Yes  No  
 Sample Temperature: 2

Container Type and #	Preservative Type	HEAL Np.
4oz x 1	MeOH	1305646
"	"	-001
"	"	-002
"	"	-003
"	"	-004

Relinquished by: J-H Bagg Date: 5/15/13 Time: 1508  
 Relinquished by: Walter Weller Date: 5/16/13 Time: 1000

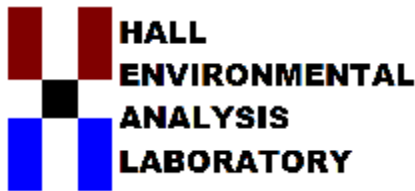


**HALL ENVIRONMENTAL ANALYSIS LABORATORY**  
 www.hallenvironmental.com  
 4901 Hawkins NE - Albuquerque, NM 87109  
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request	
BTEX + MTBE + TMS (8021)	X
BTEX + MTBE + TPH (Gas only)	X
TPH 8015B (GRO / DRO / MRO)	X
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)	

Remarks: Bill Bagg  
BP Contact: Jeff Peace

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



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

May 30, 2013

Jeff Blagg

Blagg Engineering

P. O. Box 87

Bloomfield, NM 87413

TEL: (505) 320-1183

FAX (505) 632-3903

RE: Irvin COM 1E

OrderNo.: 1305874

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/22/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1305874

Date Reported: 5/30/2013

CLIENT: Blagg Engineering

Client Sample ID: K @ 20'

Project: Irvin COM 1E

Collection Date: 5/20/2013 1:20:00 PM

Lab ID: 1305874-001

Matrix: SOIL

Received Date: 5/22/2013 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	9.9		mg/Kg	1	5/23/2013 6:14:46 PM	7560
Surr: DNOP	97.5	63-147		%REC	1	5/23/2013 6:14:46 PM	7560
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>DAM</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/23/2013 3:32:50 PM	7561
Surr: BFB	96.7	80-120		%REC	1	5/23/2013 3:32:50 PM	7561
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>DAM</b>
Benzene	ND	0.049		mg/Kg	1	5/23/2013 3:32:50 PM	7561
Toluene	ND	0.049		mg/Kg	1	5/23/2013 3:32:50 PM	7561
Ethylbenzene	ND	0.049		mg/Kg	1	5/23/2013 3:32:50 PM	7561
Xylenes, Total	ND	0.098		mg/Kg	1	5/23/2013 3:32:50 PM	7561
Surr: 4-Bromofluorobenzene	99.3	80-120		%REC	1	5/23/2013 3:32:50 PM	7561

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
	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#: 1305874

30-May-13

**Client:** Blagg Engineering

**Project:** Irvin COM 1E

Sample ID <b>MB-7560</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7560</b>		RunNo: <b>10785</b>							
Prep Date: <b>5/22/2013</b>	Analysis Date: <b>5/22/2013</b>		SeqNo: <b>305354</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	7.8		10.00		77.9	63	147			

Sample ID <b>LCS-7560</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7560</b>		RunNo: <b>10785</b>							
Prep Date: <b>5/22/2013</b>	Analysis Date: <b>5/22/2013</b>		SeqNo: <b>305355</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	102	77.1	128			
Surr: DNOP	3.9		5.000		78.8	63	147			

Sample ID <b>1305803-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7534</b>		RunNo: <b>10785</b>							
Prep Date: <b>5/21/2013</b>	Analysis Date: <b>5/22/2013</b>		SeqNo: <b>305663</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.1		5.025		101	63	147			

Sample ID <b>1305803-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7534</b>		RunNo: <b>10785</b>							
Prep Date: <b>5/21/2013</b>	Analysis Date: <b>5/22/2013</b>		SeqNo: <b>305664</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.8		4.980		116	63	147	0	0	

Sample ID <b>MB-7579</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7579</b>		RunNo: <b>10810</b>							
Prep Date: <b>5/23/2013</b>	Analysis Date: <b>5/23/2013</b>		SeqNo: <b>306110</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		102	63	147			

Sample ID <b>LCS-7579</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7579</b>		RunNo: <b>10810</b>							
Prep Date: <b>5/23/2013</b>	Analysis Date: <b>5/23/2013</b>		SeqNo: <b>306204</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.9		5.000		119	63	147			

**Qualifiers:**

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- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305874

30-May-13

**Client:** Blagg Engineering

**Project:** Irvin COM 1E

Sample ID	<b>1305873-001AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>7560</b>	RunNo:	<b>10862</b>					
Prep Date:	<b>5/22/2013</b>	Analysis Date:	<b>5/24/2013</b>	SeqNo:	<b>307309</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.9	49.65	0	96.5	61.3	138			
Surr: DNOP	5.1		4.965		103	63	147			

Sample ID	<b>1305873-001AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>7560</b>	RunNo:	<b>10862</b>					
Prep Date:	<b>5/22/2013</b>	Analysis Date:	<b>5/24/2013</b>	SeqNo:	<b>307310</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.30	0	90.0	61.3	138	5.72	20	
Surr: DNOP	5.2		5.030		103	63	147	0	0	

**Qualifiers:**

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- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305874

30-May-13

**Client:** Blagg Engineering

**Project:** Irvin COM 1E

Sample ID <b>MB-7561</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7561</b>		RunNo: <b>10831</b>							
Prep Date: <b>5/22/2013</b>	Analysis Date: <b>5/23/2013</b>		SeqNo: <b>306665</b>		Units: <b>mg/Kg</b>					
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		92.7	80	120			

Sample ID <b>LCS-7561</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7561</b>		RunNo: <b>10831</b>							
Prep Date: <b>5/22/2013</b>	Analysis Date: <b>5/24/2013</b>		SeqNo: <b>306666</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	113	62.6	136			
Surr: BFB	1000		1000		104	80	120			

Sample ID <b>1305873-002AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7561</b>		RunNo: <b>10831</b>							
Prep Date: <b>5/22/2013</b>	Analysis Date: <b>5/24/2013</b>		SeqNo: <b>306667</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	37	4.7	23.47	7.905	124	70	130			
Surr: BFB	1400		939.0		149	80	120			S

Sample ID <b>1305873-002AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7561</b>		RunNo: <b>10831</b>							
Prep Date: <b>5/22/2013</b>	Analysis Date: <b>5/24/2013</b>		SeqNo: <b>306668</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	33	4.7	23.43	7.905	109	70	130	9.94	22.1	
Surr: BFB	1200		937.2		128	80	120	0	0	S

Sample ID <b>MB-7587</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7587</b>		RunNo: <b>10880</b>							
Prep Date: <b>5/23/2013</b>	Analysis Date: <b>5/24/2013</b>		SeqNo: <b>307514</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	960		1000		96.0	80	120			

Sample ID <b>MB-7587</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>R10880</b>		RunNo: <b>10880</b>							
Prep Date: <b>5/23/2013</b>	Analysis Date: <b>5/24/2013</b>		SeqNo: <b>307515</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	960		1000		96.0	80	120			

**Qualifiers:**

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- E Value above quantitation range
- J Analyte detected below quantitation limits
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- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305874

30-May-13

**Client:** Blagg Engineering

**Project:** Irvin COM 1E

Sample ID	<b>LCS-7587</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>7587</b>	RunNo:	<b>10880</b>					
Prep Date:	<b>5/23/2013</b>	Analysis Date:	<b>5/24/2013</b>	SeqNo:	<b>307516</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		101	80	120			

Sample ID	<b>LCS-7587</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R10880</b>	RunNo:	<b>10880</b>					
Prep Date:	<b>5/23/2013</b>	Analysis Date:	<b>5/24/2013</b>	SeqNo:	<b>307517</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		101	80	120			

Sample ID	<b>1305949-001AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>7587</b>	RunNo:	<b>10880</b>					
Prep Date:	<b>5/23/2013</b>	Analysis Date:	<b>5/24/2013</b>	SeqNo:	<b>307518</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		929.4		122	80	120			S

Sample ID	<b>1305949-001AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>7587</b>	RunNo:	<b>10880</b>					
Prep Date:	<b>5/23/2013</b>	Analysis Date:	<b>5/24/2013</b>	SeqNo:	<b>307519</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		928.5		117	80	120	0	0	

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305874

30-May-13

**Client:** Blagg Engineering

**Project:** Irvin COM 1E

Sample ID <b>MB-7561</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7561</b>		RunNo: <b>10831</b>							
Prep Date: <b>5/22/2013</b>	Analysis Date: <b>5/23/2013</b>		SeqNo: <b>306644</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	0.99		1.000		99.1	80	120			

Sample ID <b>LCS-7561</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7561</b>		RunNo: <b>10831</b>							
Prep Date: <b>5/22/2013</b>	Analysis Date: <b>5/23/2013</b>		SeqNo: <b>306645</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	110	80	120			
Toluene	1.1	0.050	1.000	0	109	80	120			
Ethylbenzene	1.1	0.050	1.000	0	108	80	120			
Xylenes, Total	3.2	0.10	3.000	0	108	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID <b>1305873-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7561</b>		RunNo: <b>10831</b>							
Prep Date: <b>5/22/2013</b>	Analysis Date: <b>5/23/2013</b>		SeqNo: <b>306646</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.046	0.9225	0	129	67.2	113			S
Toluene	1.2	0.046	0.9225	0	132	62.1	116			S
Ethylbenzene	1.2	0.046	0.9225	0	133	67.9	127			S
Xylenes, Total	3.7	0.092	2.768	0	134	60.6	134			
Surr: 4-Bromofluorobenzene	0.97		0.9225		105	80	120			

Sample ID <b>1305873-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7561</b>		RunNo: <b>10831</b>							
Prep Date: <b>5/22/2013</b>	Analysis Date: <b>5/23/2013</b>		SeqNo: <b>306649</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.046	0.9251	0	116	67.2	113	10.7	14.3	S
Toluene	1.1	0.046	0.9251	0	117	62.1	116	11.7	15.9	S
Ethylbenzene	1.1	0.046	0.9251	0	118	67.9	127	11.3	14.4	
Xylenes, Total	3.3	0.093	2.775	0	118	60.6	134	11.8	12.6	
Surr: 4-Bromofluorobenzene	0.98		0.9251		105	80	120	0	0	

**Qualifiers:**

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- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1305874

30-May-13

**Client:** Blagg Engineering

**Project:** Irvin COM 1E

Sample ID <b>MB-7587</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>R10880</b>		RunNo: <b>10880</b>							
Prep Date: <b>5/23/2013</b>	Analysis Date: <b>5/24/2013</b>		SeqNo: <b>307477</b>				Units: <b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID <b>MB-7587</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7587</b>		RunNo: <b>10880</b>							
Prep Date: <b>5/23/2013</b>	Analysis Date: <b>5/24/2013</b>		SeqNo: <b>307478</b>				Units: <b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID <b>LCS-7587</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>R10880</b>		RunNo: <b>10880</b>							
Prep Date: <b>5/23/2013</b>	Analysis Date: <b>5/24/2013</b>		SeqNo: <b>307479</b>				Units: <b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID <b>LCS-7587</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7587</b>		RunNo: <b>10880</b>							
Prep Date: <b>5/23/2013</b>	Analysis Date: <b>5/24/2013</b>		SeqNo: <b>307480</b>				Units: <b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID <b>1305949-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7587</b>		RunNo: <b>10880</b>							
Prep Date: <b>5/23/2013</b>	Analysis Date: <b>5/24/2013</b>		SeqNo: <b>307481</b>				Units: <b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.98		0.9294		105	80	120			

Sample ID <b>1305949-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7587</b>		RunNo: <b>10880</b>							
Prep Date: <b>5/23/2013</b>	Analysis Date: <b>5/24/2013</b>		SeqNo: <b>307482</b>				Units: <b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.98		0.9285		105	80	120	0	0	

**Qualifiers:**

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- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
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- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Client Name: **BLAGG**

Work Order Number: 1305874

RcptNo: 1

Received by/date: AG 05/22/13

Logged By: **Michelle Garcia** 5/22/2013 10:00:00 AM *Michelle Garcia*

Completed By: **Michelle Garcia** 5/22/2013 10:20:44 AM *Michelle Garcia*

Reviewed By: AG 05/22/13

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

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

**Special Handling (if applicable)**

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

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

17. Additional remarks:

**18. Cooler Information**

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

# Chain-of-Custody Record

Client: BLAGG ENGINEERING INC.  
BP AMERICA  
 Mailing Address: P.O. Box 87  
BLANFIELD NM 87413  
 Phone #: 505-632-1199

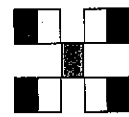
email or Fax#: \_\_\_\_\_  
 QA/QC Package:  
 Standard  Level 4 (Full Validation)  
 Accreditation  
 NELAP  Other \_\_\_\_\_  
 EDD (Type) \_\_\_\_\_

Turn-Around Time: By Friday 5/24/2013  
 Standard  Rush  
 Project Name: IRVIN COM 1E  
 Project #: \_\_\_\_\_

Project Manager: J. Blagg  
 Sampler: J. Blagg  
 On Ice:  Yes  No  
 Sample Temperature: 1.0  
 Container Type and # 402 x 1 CELL  
 Preservative Type \_\_\_\_\_  
 HEAL No 1305874  
-001

Date 5/21/13 Time 1025  
 Matrix SOIL Sample Request ID K @ 20'  
 Date 5/21/13 Time 1748  
 Relinquished by: JM Blagg  
 Relinquished by: CM Watts

Date 5/21/13 Time 1025  
 Received by: Christina Weber  
 Date 5/22/13 Time 1000  
 Received by: [Signature]



# HALL ENVIRONMENTAL ANALYSIS LABORATORY

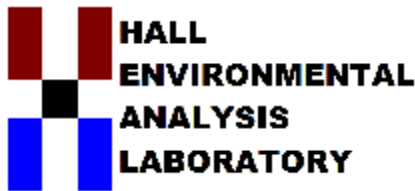
www.hallenvironmental.com  
 4901 Hawkins NE - Albuquerque, NM 87109  
 Tel. 505-345-3975 Fax 505-345-4107

### Analysis Request

Analysis Request	Remarks
BTEX + MTBE + THPs (8021)	X
BTEX + MTBE + TPH (Gas only)	X
TPH 8015B (GRO / DRO / MRO)	X
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)	
Air Bubbles (Y or N)	

Remarks: Bill Blagg  
BP CONTACT: JEFF PEACE

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



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

June 06, 2013

Jeff Blagg

Blagg Engineering

P. O. Box 87

Bloomfield, NM 87413

TEL: (505) 320-1183

FAX (505) 632-3903

RE: Irvin Com 1E

OrderNo.: 1306002

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/1/2013 for the analyses presented in the following report.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1306002

Date Reported: 6/6/2013

**CLIENT:** Blagg Engineering

**Client Sample ID:** N @ 20'

**Project:** Irvin Com 1E

**Collection Date:** 5/31/2013 9:02:00 AM

**Lab ID:** 1306002-001

**Matrix:** SOIL

**Received Date:** 6/1/2013 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>GSA</b>
Diesel Range Organics (DRO)	740	10		mg/Kg	1	6/4/2013 1:12:56 PM	7713
Surr: DNOP	124	63-147		%REC	1	6/4/2013 1:12:56 PM	7713
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	380	250		mg/Kg	50	6/4/2013 1:35:33 PM	R11057
Surr: BFB	114	80-120		%REC	50	6/4/2013 1:35:33 PM	R11057
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	2.2	1.2		mg/Kg	50	6/4/2013 1:35:33 PM	R11057
Toluene	15	2.5		mg/Kg	50	6/4/2013 1:35:33 PM	R11057
Ethylbenzene	3.0	2.5		mg/Kg	50	6/4/2013 1:35:33 PM	R11057
Xylenes, Total	27	5.0		mg/Kg	50	6/4/2013 1:35:33 PM	R11057
Surr: 4-Bromofluorobenzene	109	80-120		%REC	50	6/4/2013 1:35:33 PM	R11057

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

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1306002

Date Reported: 6/6/2013

CLIENT: Blagg Engineering

Client Sample ID: 0 @ 20'

Project: Irvin Com 1E

Collection Date: 5/31/2013 9:11:00 AM

Lab ID: 1306002-002

Matrix: SOIL

Received Date: 6/1/2013 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>GSA</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/4/2013 1:41:48 PM	7713
Surr: DNOP	93.4	63-147		%REC	1	6/4/2013 1:41:48 PM	7713
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/4/2013 2:04:15 PM	R11057
Surr: BFB	98.5	80-120		%REC	1	6/4/2013 2:04:15 PM	R11057
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.050		mg/Kg	1	6/4/2013 2:04:15 PM	R11057
Toluene	ND	0.050		mg/Kg	1	6/4/2013 2:04:15 PM	R11057
Ethylbenzene	ND	0.050		mg/Kg	1	6/4/2013 2:04:15 PM	R11057
Xylenes, Total	ND	0.10		mg/Kg	1	6/4/2013 2:04:15 PM	R11057
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	6/4/2013 2:04:15 PM	R11057

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#: 1306002

06-Jun-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID <b>MB-7713</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7713</b>		RunNo: <b>11021</b>							
Prep Date: <b>6/3/2013</b>	Analysis Date: <b>6/3/2013</b>		SeqNo: <b>311874</b>		Units: <b>mg/Kg</b>					
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		105	63	147			

Sample ID <b>LCS-7713</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7713</b>		RunNo: <b>11021</b>							
Prep Date: <b>6/3/2013</b>	Analysis Date: <b>6/3/2013</b>		SeqNo: <b>311875</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	95.0	77.1	128			
Surr: DNOP	5.1		5.000		102	63	147			

Sample ID <b>MB-7743</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7743</b>		RunNo: <b>11054</b>							
Prep Date: <b>6/4/2013</b>	Analysis Date: <b>6/4/2013</b>		SeqNo: <b>312839</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.9		10.00		99.1	63	147			

Sample ID <b>LCS-7743</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7743</b>		RunNo: <b>11054</b>							
Prep Date: <b>6/4/2013</b>	Analysis Date: <b>6/4/2013</b>		SeqNo: <b>312840</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		5.000		99.3	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#: 1306002

06-Jun-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID <b>MB-7716</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>R11057</b>		RunNo: <b>11057</b>							
Prep Date: <b>6/3/2013</b>	Analysis Date: <b>6/4/2013</b>		SeqNo: <b>313364</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	940		1000		94.3	80	120			

Sample ID <b>LCS-7716</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>R11057</b>		RunNo: <b>11057</b>							
Prep Date: <b>6/3/2013</b>	Analysis Date: <b>6/4/2013</b>		SeqNo: <b>313365</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	107	62.6	136			
Surr: BFB	1000		1000		104	80	120			

Sample ID <b>MB-7716</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7716</b>		RunNo: <b>11057</b>							
Prep Date: <b>6/3/2013</b>	Analysis Date: <b>6/4/2013</b>		SeqNo: <b>313385</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	940		1000		94.3	80	120			

Sample ID <b>LCS-7716</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7716</b>		RunNo: <b>11057</b>							
Prep Date: <b>6/3/2013</b>	Analysis Date: <b>6/4/2013</b>		SeqNo: <b>313386</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		104	80	120			

Sample ID <b>1305C16-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7716</b>		RunNo: <b>11057</b>							
Prep Date: <b>6/3/2013</b>	Analysis Date: <b>6/4/2013</b>		SeqNo: <b>313389</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		958.8		105	80	120			

Sample ID <b>1305C16-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7716</b>		RunNo: <b>11057</b>							
Prep Date: <b>6/3/2013</b>	Analysis Date: <b>6/4/2013</b>		SeqNo: <b>313390</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		960.6		107	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#: 1306002

06-Jun-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID <b>MB-7716</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>R11057</b>		RunNo: <b>11057</b>							
Prep Date: <b>6/3/2013</b>	Analysis Date: <b>6/4/2013</b>		SeqNo: <b>313400</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		99.9	80	120			

Sample ID <b>LCS-7716</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>R11057</b>		RunNo: <b>11057</b>							
Prep Date: <b>6/3/2013</b>	Analysis Date: <b>6/4/2013</b>		SeqNo: <b>313401</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	104	80	120			
Toluene	1.0	0.050	1.000	0	104	80	120			
Ethylbenzene	1.0	0.050	1.000	0	104	80	120			
Xylenes, Total	3.1	0.10	3.000	0	104	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Sample ID <b>MB-7716</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>7716</b>		RunNo: <b>11057</b>							
Prep Date: <b>6/3/2013</b>	Analysis Date: <b>6/4/2013</b>		SeqNo: <b>313419</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		99.9	80	120			

Sample ID <b>LCS-7716</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>7716</b>		RunNo: <b>11057</b>							
Prep Date: <b>6/3/2013</b>	Analysis Date: <b>6/4/2013</b>		SeqNo: <b>313420</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Sample ID <b>1305C20-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>7716</b>		RunNo: <b>11057</b>							
Prep Date: <b>6/3/2013</b>	Analysis Date: <b>6/4/2013</b>		SeqNo: <b>313427</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		0.9443		106	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#: 1306002

06-Jun-13

**Client:** Blagg Engineering

**Project:** Irvin Com 1E

Sample ID	1305C20-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BatchQC	Batch ID:	7716	RunNo:	11057					
Prep Date:	6/3/2013	Analysis Date:	6/4/2013	SeqNo:	313428	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		0.9443		106	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                         |

Client Name: **BLAGG**

Work Order Number: **1306002**

RcptNo: **1**

Received by/date: AF 06/01/13

Logged By: **Anne Thorne** 6/1/2013 11:00:00 AM *Anne Thorne*

Completed By: **Anne Thorne** 6/3/2013 *Anne Thorne*

Reviewed By: *Mg* 06/03/13

**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° C to 6.0°C Yes  No  NA
- 6. Sample(s) in proper container(s)? Yes  No
- 7. Sufficient sample volume for indicated test(s)? Yes  No
- 8. Are samples (except VOA and ONG) properly preserved? Yes  No
- 9. Was preservative added to bottles? Yes  No  NA
- 10. VOA vials have zero headspace? Yes  No  No VOA Vials
- 11. Were any sample containers received broken? Yes  No
- 12. Does paperwork match bottle labels? Yes  No   
(Note discrepancies on chain of custody)
- 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? Yes  No   
(If no, notify customer for authorization.)

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

**Special Handling (if applicable)**

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

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

17. Additional remarks:

**18. Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.2	Good	Yes			

