

DEC 2011



Gallup Refinery  
ENTERED

discharge over benzene limit

COVER LETTER

Tuesday, December 13, 2011

Thurman B. Larsen  
Western Refining Southwest, Gallup  
Rt. 3 Box 7  
Gallup, NM 87301

TEL: (505) 722-3833

FAX (505) 722-0210

RE: Benzene Strippers

Dear Thurman B. Larsen:

Order No.: 1112520

Hall Environmental Analysis Laboratory, Inc. received 5 sample(s) on 12/12/2011 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. 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.

Please do not hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901  
AZ license # AZ0682

# Hall Environmental Analysis Laboratory, Inc.

Date: 13-Dec-11

Analytical Report

**CLIENT:** Western Refining Southwest, Gallup  
**Lab Order:** 1112520  
**Project:** Benzene Strippers  
**Lab ID:** 1112520-01

**Client Sample ID:** BZ 1-2 OUT  
**Collection Date:** 12/8/2011 8:00:00 AM  
**Date Received:** 12/12/2011  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Methyl tert-butyl ether (MTBE)	ND	130		µg/L	50	12/12/2011 11:25:38 PM
Benzene	ND	50		µg/L	50	12/12/2011 11:25:38 PM
Toluene	86	50		µg/L	50	12/12/2011 11:25:38 PM
Ethylbenzene	ND	50		µg/L	50	12/12/2011 11:25:38 PM
Xylenes, Total	ND	100		µg/L	50	12/12/2011 11:25:38 PM
Surr: 4-Bromofluorobenzene	99.8	76.5-115		%REC	50	12/12/2011 11:25:38 PM

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

Date: 13-Dec-11

Analytical Report

<b>CLIENT:</b> Western Refining Southwest, Gallup	<b>Client Sample ID:</b> BZ 1-2 OUT
<b>Lab Order:</b> 1112520	<b>Collection Date:</b> 12/9/2011 8:00:00 AM
<b>Project:</b> Benzene Strippers	<b>Date Received:</b> 12/12/2011
<b>Lab ID:</b> 1112520-02	<b>Matrix:</b> AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Methyl tert-butyl ether (MTBE)	ND	130		µg/L	50	12/12/2011 11:54:27 PM
Benzene	470	50		µg/L	50	12/12/2011 11:54:27 PM
Toluene	1500	50		µg/L	50	12/12/2011 11:54:27 PM
Ethylbenzene	340	50		µg/L	50	12/12/2011 11:54:27 PM
Xylenes, Total	2300	100		µg/L	50	12/12/2011 11:54:27 PM
Surr: 4-Bromofluorobenzene	106	76.5-115		%REC	50	12/12/2011 11:54:27 PM

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
 E Estimated value  
 J Analyte detected below quantitation limits  
 NC Non-Chlorinated  
 PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 MCL Maximum Contaminant Level  
 ND Not Detected at the Reporting Limit  
 S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

Date: 13-Dec-11

Analytical Report

**CLIENT:** Western Refining Southwest, Gallup  
**Lab Order:** 1112520  
**Project:** Benzene Strippers  
**Lab ID:** 1112520-03

**Client Sample ID:** BZ 1-2 OUT  
**Collection Date:** 12/10/2011 8:00:00 AM  
**Date Received:** 12/12/2011  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Methyl tert-butyl ether (MTBE)	ND	130		µg/L	50	12/13/2011 12:23:12 AM
Benzene	870	50		µg/L	50	12/13/2011 12:23:12 AM
Toluene	2800	50		µg/L	50	12/13/2011 12:23:12 AM
Ethylbenzene	630	50		µg/L	50	12/13/2011 12:23:12 AM
Xylenes, Total	4300	100		µg/L	50	12/13/2011 12:23:12 AM
Surr: 4-Bromofluorobenzene	114	76.5-115		%REC	50	12/13/2011 12:23:12 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

Date: 13-Dec-11

Analytical Report

<b>CLIENT:</b> Western Refining Southwest, Gallup	<b>Client Sample ID:</b> BZ 1-2 OUT
<b>Lab Order:</b> 1112520	<b>Collection Date:</b> 12/11/2011 8:00:00 AM
<b>Project:</b> Benzene Strippers	<b>Date Received:</b> 12/12/2011
<b>Lab ID:</b> 1112520-04	<b>Matrix:</b> AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Methyl tert-butyl ether (MTBE)	ND	130		µg/L	50	12/13/2011 12:51:59 AM
Benzene	710	50		µg/L	50	12/13/2011 12:51:59 AM
Toluene	2200	50		µg/L	50	12/13/2011 12:51:59 AM
Ethylbenzene	450	50		µg/L	50	12/13/2011 12:51:59 AM
Xylenes, Total	3000	100		µg/L	50	12/13/2011 12:51:59 AM
Surr: 4-Bromofluorobenzene	108	76.5-115		%REC	50	12/13/2011 12:51:59 AM

**Qualifiers:**

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 E Estimated value  
 J Analyte detected below quantitation limits  
 NC Non-Chlorinated  
 PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 MCL Maximum Contaminant Level  
 ND Not Detected at the Reporting Limit  
 S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

Date: 13-Dec-11

Analytical Report

CLIENT: Western Refining Southwest, Gallup  
 Lab Order: 1112520  
 Project: Benzene Strippers  
 Lab ID: 1112520-05

Client Sample ID: BZ 1-2 OUT  
 Collection Date: 12/12/2011 8:00:00 AM  
 Date Received: 12/12/2011  
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Methyl tert-butyl ether (MTBE)	ND	130		µg/L	50	12/13/2011 1:20:43 AM
Benzene	510	50		µg/L	50	12/13/2011 1:20:43 AM
Toluene	1700	50		µg/L	50	12/13/2011 1:20:43 AM
Ethylbenzene	450	50		µg/L	50	12/13/2011 1:20:43 AM
Xylenes, Total	3100	100		µg/L	50	12/13/2011 1:20:43 AM
Surr: 4-Bromofluorobenzene	110	76.5-115		%REC	50	12/13/2011 1:20:43 AM

**Qualifiers:**

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- PQL Practical Quantitation Limit
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# Hall Environmental Analysis Laboratory, Inc.

## Sample Receipt Checklist

Client Name **WESTERN REFINING GALLU**

Date Received:

**12/12/2011**

Work Order Number **1112520**

Received by: **AT**

Checklist completed by:

Signature

Date

Sample ID labels checked by:

Initials

Matrix:

Carrier name: Client drop-off

- |   |   |   |   |   |
|---|---|---|---|---|
| Shipping container/cooler in good condition?            | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             | Not Present <input type="checkbox"/>    |   |
| Custody seals intact on shipping container/cooler?      | Yes <input type="checkbox"/>                    | No <input type="checkbox"/>             | Not Present <input type="checkbox"/>    | Not Shipped <input checked="" type="checkbox"/> |
| Custody seals intact on sample bottles?                 | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             | N/A <input type="checkbox"/>            |   |
| Chain of custody present?                               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |   |   |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |   |   |
| Chain of custody agrees with sample labels?             | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |   |   |
| Samples in proper container/bottle?                     | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |   |   |
| Sample containers intact?                               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |   |   |
| Sufficient sample volume for indicated test?            | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |   |   |
| All samples received within holding time?               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |   |   |
| Water - VOA vials have zero headspace?                  | No VOA vials submitted <input type="checkbox"/> | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>             | Number of preserved bottles checked for pH:     |
| Water - Preservation labels on bottle and cap match?    | Yes <input type="checkbox"/>                    | No <input type="checkbox"/>             | N/A <input checked="" type="checkbox"/> |   |
| Water - pH acceptable upon receipt?                     | Yes <input type="checkbox"/>                    | No <input type="checkbox"/>             | N/A <input checked="" type="checkbox"/> | <2 >12 unless noted below.                      |

Container/Temp Blank temperature?

**1.0°**

<6° C Acceptable

If given sufficient time to cool.

COMMENTS:

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Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding: \_\_\_\_\_

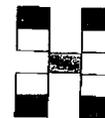
Comments: \_\_\_\_\_

Corrective Action \_\_\_\_\_

# Chain-of-Custody Record

Client: **WESTERN-Refining**  
**Gallup Refinery**  
 Mailing Address: **RT 3 Box 7**  
**Gallup NM 87301**  
 Phone #: **505 722 3833**  
 email or Fax#: **505 722 0210**  
 QA/QC Package:  
 Standard  Level 4 (Full Validation)  
 Accreditation  
 NELAP  Other \_\_\_\_\_  
 EDD (Type) \_\_\_\_\_

Turn-Around Time:  
 Standard  Rush  
 Project Name: **BZ STRIPPERS**  
 Project #: **BZ APL-OUT**  
 Project Manager: **Thurman Larsen**  
 Sampler: **APL OPS**  
 On Ice:  Yes  No  
 Sample Temperature: **10**



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	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)	8021 B BTEX-MTBE	Air Bubbles (Y or N)	
12-8-11	0800	H2O	BZ 1-20UT	40ML-3	HCL	112520														
12-9-11	0800	H2O	BZ 1-20UT	40ML-3	HCL														X	
12-10-11	0800	H2O	BZ 1-20UT	40ML-3	HCL														X	
12-11-11	0800	H2O	BZ 1-20UT	40ML-3	HCL														X	
12-12-11	0800	H2O	BZ 1-20UT	40ML-3	HCL														X	

12/12/11 Date: 12/11 Time: 2:00 Relinquished by: *[Signature]*

Received by: *[Signature]* Date: 12/2/11 Time: 1400

Remarks: **WNT 5.0**  
**CC KRISTIN VAN HORN**

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.