



**Van Horn, Kristen, NMENV**

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**From:** Rajen, Gaurav [Gaurav.Rajen@wnr.com]  
**Sent:** Monday, March 22, 2010 8:11 AM  
**To:** Monzeglio, Hope, NMENV; Van Horn, Kristen, NMENV  
**Cc:** Chavez, Carl J, EMNRD; Cobrain, Dave, NMENV; Riege, Ed; Turri, Mark; Allen, Ann  
**Subject:** Benzene results for March 12, and March 15, 2010  
**Attachments:** March 12 and 15 - 2010.pdf

Dear Kristen and Hope:

Please find attached our latest benzene results for March 12 (0.026 ppm in the outlet of the combined strippers at the lagoons), and March 15, 2010, (0.61 ppm in the outlet of the combined strippers at the lagoons).

We are expecting results from March 16<sup>th</sup> today which we will send on to you all shortly after receipt.

Best regards,

Raj



COVER LETTER

Thursday, March 18, 2010

Gaurav Rajen  
Western Refining Southwest, Gallup  
Rt. 3 Box 7  
Gallup, NM 87301

TEL: (505) 722-3833

FAX (505) 722-0210

RE: Benzene Strippers

Order No.: 1003369

Dear Gaurav Rajen:

Hall Environmental Analysis Laboratory, Inc. received 6 sample(s) on 3/16/2010 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.

Reporting limits are determined by EPA methodology.

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", is written over a horizontal line.

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901

AZ license # AZ0682

ORELAP Lab # NM100001

Texas Lab# T104704424-08-TX



# Hall Environmental Analysis Laboratory, Inc.

Date: 18-Mar-10

**CLIENT:** Western Refining Southwest, Gallup  
**Project:** Benzene Strippers

**Lab Order:** 1003369

**Lab ID:** 1003369-01  
**Client Sample ID:** BZ 3 IN

**Collection Date:** 3/15/2010 9:40:00 AM  
**Matrix:** AQUEOUS

| Analyses                                     | Result | PQL      | Qual | Units | DF  | Date Analyzed        |
|--|--------|----------|------|-------|-----|----------------------|
| <b>EPA METHOD 8260: VOLATILES SHORT LIST</b> |        |          |      |       |     | Analyst: DAM         |
| Benzene                                      | 37000  | 500      |      | µg/L  | 500 | 3/16/2010 2:50:06 PM |
| Toluene                                      | 28000  | 500      |      | µg/L  | 500 | 3/16/2010 2:50:06 PM |
| Ethylbenzene                                 | 1500   | 500      |      | µg/L  | 500 | 3/16/2010 2:50:06 PM |
| Methyl tert-butyl ether (MTBE)               | ND     | 500      |      | µg/L  | 500 | 3/16/2010 2:50:06 PM |
| Xylenes, Total                               | 8300   | 1000     |      | µg/L  | 500 | 3/16/2010 2:50:06 PM |
| Surr: 1,2-Dichloroethane-d4                  | 97.3   | 54.6-141 |      | %REC  | 500 | 3/16/2010 2:50:06 PM |
| Surr: 4-Bromofluorobenzene                   | 109    | 60.1-133 |      | %REC  | 500 | 3/16/2010 2:50:06 PM |
| Surr: Dibromofluoromethane                   | 98.0   | 78.5-130 |      | %REC  | 500 | 3/16/2010 2:50:06 PM |
| Surr: Toluene-d8                             | 96.8   | 79.5-126 |      | %REC  | 500 | 3/16/2010 2:50:06 PM |

**Lab ID:** 1003369-02  
**Client Sample ID:** BZ 3 OUT

**Collection Date:** 3/15/2010 9:55:00 AM  
**Matrix:** AQUEOUS

| Analyses                                     | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|--|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8260: VOLATILES SHORT LIST</b> |        |          |      |       |    | Analyst: DAM         |
| Benzene                                      | 660    | 50       |      | µg/L  | 50 | 3/17/2010 6:42:31 PM |
| Toluene                                      | 820    | 50       |      | µg/L  | 50 | 3/17/2010 6:42:31 PM |
| Ethylbenzene                                 | 73     | 50       |      | µg/L  | 50 | 3/17/2010 6:42:31 PM |
| Methyl tert-butyl ether (MTBE)               | ND     | 50       |      | µg/L  | 50 | 3/17/2010 6:42:31 PM |
| Xylenes, Total                               | 470    | 100      |      | µg/L  | 50 | 3/17/2010 6:42:31 PM |
| Surr: 1,2-Dichloroethane-d4                  | 97.7   | 54.6-141 |      | %REC  | 50 | 3/17/2010 6:42:31 PM |
| Surr: 4-Bromofluorobenzene                   | 113    | 60.1-133 |      | %REC  | 50 | 3/17/2010 6:42:31 PM |
| Surr: Dibromofluoromethane                   | 90.9   | 78.5-130 |      | %REC  | 50 | 3/17/2010 6:42:31 PM |
| Surr: Toluene-d8                             | 101    | 79.5-126 |      | %REC  | 50 | 3/17/2010 6:42:31 PM |

**Lab ID:** 1003369-03  
**Client Sample ID:** BZ 1-2 IN

**Collection Date:** 3/15/2010 10:20:00 AM  
**Matrix:** AQUEOUS

| Analyses                                     | Result | PQL      | Qual | Units | DF  | Date Analyzed        |
|--|--------|----------|------|-------|-----|----------------------|
| <b>EPA METHOD 8260: VOLATILES SHORT LIST</b> |        |          |      |       |     | Analyst: DAM         |
| Benzene                                      | 8400   | 250      |      | µg/L  | 250 | 3/16/2010 3:47:03 PM |
| Toluene                                      | 18000  | 250      |      | µg/L  | 250 | 3/16/2010 3:47:03 PM |
| Ethylbenzene                                 | 1900   | 250      |      | µg/L  | 250 | 3/16/2010 3:47:03 PM |
| Methyl tert-butyl ether (MTBE)               | ND     | 250      |      | µg/L  | 250 | 3/16/2010 3:47:03 PM |
| Xylenes, Total                               | 10000  | 500      |      | µg/L  | 250 | 3/16/2010 3:47:03 PM |
| Surr: 1,2-Dichloroethane-d4                  | 99.9   | 54.6-141 |      | %REC  | 250 | 3/16/2010 3:47:03 PM |
| Surr: 4-Bromofluorobenzene                   | 113    | 60.1-133 |      | %REC  | 250 | 3/16/2010 3:47:03 PM |
| Surr: Dibromofluoromethane                   | 103    | 78.5-130 |      | %REC  | 250 | 3/16/2010 3:47:03 PM |
| Surr: Toluene-d8                             | 87.6   | 79.5-126 |      | %REC  | 250 | 3/16/2010 3:47:03 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: 18-Mar-10

**CLIENT:** Western Refining Southwest, Gallup  
**Project:** Benzene Strippers

**Lab Order:** 1003369

**Lab ID:** 1003369-04

**Collection Date:** 3/15/2010 10:25:00 AM

**Client Sample ID:** BZ 1-2 OUT

**Matrix:** AQUEOUS

| Analyses                                     | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|--|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8260: VOLATILES SHORT LIST</b> |        |          |      |       |    | <b>Analyst: DAM</b>  |
| Benzene                                      | 610    | 50       |      | µg/L  | 50 | 3/16/2010 4:15:29 PM |
| Toluene                                      | 3500   | 50       |      | µg/L  | 50 | 3/16/2010 4:15:29 PM |
| Ethylbenzene                                 | 570    | 50       |      | µg/L  | 50 | 3/16/2010 4:15:29 PM |
| Methyl tert-butyl ether (MTBE)               | ND     | 50       |      | µg/L  | 50 | 3/16/2010 4:15:29 PM |
| Xylenes, Total                               | 3200   | 100      |      | µg/L  | 50 | 3/16/2010 4:15:29 PM |
| Surr: 1,2-Dichloroethane-d4                  | 109    | 54.6-141 |      | %REC  | 50 | 3/16/2010 4:15:29 PM |
| Surr: 4-Bromofluorobenzene                   | 127    | 60.1-133 |      | %REC  | 50 | 3/16/2010 4:15:29 PM |
| Surr: Dibromofluoromethane                   | 112    | 78.5-130 |      | %REC  | 50 | 3/16/2010 4:15:29 PM |
| Surr: Toluene-d8                             | 81.1   | 79.5-126 |      | %REC  | 50 | 3/16/2010 4:15:29 PM |

**Lab ID:** 1003369-05

**Collection Date:** 3/12/2010 10:30:00 AM

**Client Sample ID:** BZ Stripper 1-2 IN

**Matrix:** AQUEOUS

| Analyses                                     | Result | PQL      | Qual | Units | DF  | Date Analyzed        |
|--|--------|----------|------|-------|-----|----------------------|
| <b>EPA METHOD 8260: VOLATILES SHORT LIST</b> |        |          |      |       |     | <b>Analyst: DAM</b>  |
| Benzene                                      | 9300   | 250      |      | µg/L  | 250 | 3/16/2010 4:43:59 PM |
| Toluene                                      | 21000  | 250      |      | µg/L  | 250 | 3/16/2010 4:43:59 PM |
| Ethylbenzene                                 | 1700   | 250      |      | µg/L  | 250 | 3/16/2010 4:43:59 PM |
| Methyl tert-butyl ether (MTBE)               | ND     | 250      |      | µg/L  | 250 | 3/16/2010 4:43:59 PM |
| Xylenes, Total                               | 8800   | 500      |      | µg/L  | 250 | 3/16/2010 4:43:59 PM |
| Surr: 1,2-Dichloroethane-d4                  | 103    | 54.6-141 |      | %REC  | 250 | 3/16/2010 4:43:59 PM |
| Surr: 4-Bromofluorobenzene                   | 105    | 60.1-133 |      | %REC  | 250 | 3/16/2010 4:43:59 PM |
| Surr: Dibromofluoromethane                   | 104    | 78.5-130 |      | %REC  | 250 | 3/16/2010 4:43:59 PM |
| Surr: Toluene-d8                             | 91.5   | 79.5-126 |      | %REC  | 250 | 3/16/2010 4:43:59 PM |

**Lab ID:** 1003369-06

**Collection Date:** 3/12/2010 10:45:00 AM

**Client Sample ID:** BZ Stripper 1-2 OUT

**Matrix:** AQUEOUS

| Analyses                                     | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|--|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8260: VOLATILES SHORT LIST</b> |        |          |      |       |    | <b>Analyst: DAM</b>  |
| Benzene                                      | 26     | 20       |      | µg/L  | 20 | 3/17/2010 7:10:43 PM |
| Toluene                                      | 70     | 20       |      | µg/L  | 20 | 3/17/2010 7:10:43 PM |
| Ethylbenzene                                 | ND     | 20       |      | µg/L  | 20 | 3/17/2010 7:10:43 PM |
| Methyl tert-butyl ether (MTBE)               | ND     | 20       |      | µg/L  | 20 | 3/17/2010 7:10:43 PM |
| Xylenes, Total                               | 72     | 40       |      | µg/L  | 20 | 3/17/2010 7:10:43 PM |
| Surr: 1,2-Dichloroethane-d4                  | 97.8   | 54.6-141 |      | %REC  | 20 | 3/17/2010 7:10:43 PM |
| Surr: 4-Bromofluorobenzene                   | 112    | 60.1-133 |      | %REC  | 20 | 3/17/2010 7:10:43 PM |
| Surr: Dibromofluoromethane                   | 92.9   | 78.5-130 |      | %REC  | 20 | 3/17/2010 7:10:43 PM |
| Surr: Toluene-d8                             | 95.3   | 79.5-126 |      | %REC  | 20 | 3/17/2010 7:10:43 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

**QA/QC SUMMARY REPORT**

**Client:** Western Refining Southwest, Gallup  
**Project:** Benzene Strippers

**Work Order:** 1003369

| Analyte | Result | Units | PQL | SPK Va | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|--------|---------|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|--------|---------|------|----------|-----------|------|----------|------|

**Method:** EPA Method 8260: Volatiles Short List

**Sample ID:** 5ml rb *MBLK* **Batch ID:** R37790 **Analysis Date:** 3/16/2010 11:33:29 AM

|                                |    |      |     |  |  |  |  |  |  |  |  |
|--------------------------------|----|------|-----|--|--|--|--|--|--|--|--|
| Benzene                        | ND | µg/L | 1.0 |  |  |  |  |  |  |  |  |
| Toluene                        | ND | µg/L | 1.0 |  |  |  |  |  |  |  |  |
| Ethylbenzene                   | ND | µg/L | 1.0 |  |  |  |  |  |  |  |  |
| Methyl tert-butyl ether (MTBE) | ND | µg/L | 1.0 |  |  |  |  |  |  |  |  |
| Xylenes, Total                 | ND | µg/L | 2.0 |  |  |  |  |  |  |  |  |

**Sample ID:** 100ng lcs *LCS* **Batch ID:** R37790 **Analysis Date:** 3/16/2010 12:30:03 PM

|         |       |      |     |    |   |     |      |     |  |  |  |
|---------|-------|------|-----|----|---|-----|------|-----|--|--|--|
| Benzene | 20.04 | µg/L | 1.0 | 20 | 0 | 100 | 86.8 | 120 |  |  |  |
| Toluene | 22.03 | µg/L | 1.0 | 20 | 0 | 110 | 64.1 | 127 |  |  |  |

**Sample ID:** 100ng lcsd *LCSD* **Batch ID:** R37790 **Analysis Date:** 3/17/2010 4:02:29 AM

|         |       |      |     |    |   |      |      |     |      |    |  |
|---------|-------|------|-----|----|---|------|------|-----|------|----|--|
| Benzene | 19.70 | µg/L | 1.0 | 20 | 0 | 98.5 | 86.8 | 120 | 1.69 | 20 |  |
|---------|-------|------|-----|----|---|------|------|-----|------|----|--|

**Qualifiers:**

- |    |  |    |  |
|----|--|----|--|
| E  | Estimated value                            | H  | Holding times for preparation or analysis exceeded |
| J  | Analyte detected below quantitation limits | NC | Non-Chlorinated                                    |
| ND | Not Detected at the Reporting Limit        | R  | RPD outside accepted recovery limits               |

# Hall Environmental Analysis Laboratory, Inc.

## Sample Receipt Checklist

Client Name **WESTERN REFINING GALLU**

Date Received:

**3/16/2010**

Work Order Number **1003369**

Received by: **ARS**

Checklist completed by:

Signature



**3/16/10**  
Date

Sample ID labels checked by:

Initials

**TR**

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:<br><br><u>                    </u><br><i>&lt;2 &gt;12 unless noted below.</i> |
| 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"/> |   |
| Container/Temp Blank temperature?                       | <b>5.6°</b>                                     | <i>&lt;6° C Acceptable</i>              |   |   |

If given sufficient time to cool.

COMMENTS:

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 9

Gallup NM 87301

Phone #:

email or Fax#:

QA/QC Package:

Standard  Level 4 (Full Validation)

Accreditation

NELAP  Other \_\_\_\_\_

EDD (Type) \_\_\_\_\_

Turn-Around Time:

Standard  Rush

Project Name:

BZ STRIPPERS

Project #:

MONTHLY CONDITIONS

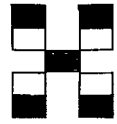
Project Manager:

GAURAV RAJEN

Sampler:

\_\_\_\_\_

Sample Description: \_\_\_\_\_



## 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 | FEA 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) BTEX-MTBE | 8270 (Semi-VOA) | Air Bubbles (Y or N) |
|----------|-------|---------|-------------------|----------------------|-------------------|---------|----------------------------|------------------------------|-------------------------------|--------------------|--------------------|-------------------|---------------|--|------------------------------|-----------------------|-----------------|----------------------|
| 03-15-10 | 0940  | AQ 3/15 | BZ 3 IN           |                      |                   | 1003369 |                            |                              |                               |                    |                    |                   |               |  |                              | X                     |                 |                      |
| 03-15-10 | 0955  |         | BZ 3 OUT          |                      |                   | 2       |                            |                              |                               |                    |                    |                   |               |  |                              | X                     |                 |                      |
| 03-15-10 | 1020  |         | BZ 1-2 IN         |                      |                   | 3       |                            |                              |                               |                    |                    |                   |               |  |                              | X                     |                 |                      |
| 03-15-10 | 1025  |         | BZ 1-2 OUT *      |                      |                   | 4       |                            |                              |                               |                    |                    |                   |               |  |                              | X                     |                 |                      |
| 03-12-10 | 10:30 |         | BZ 1-2 IN         |                      |                   | 5       |                            |                              |                               |                    |                    |                   |               |  |                              | X                     |                 |                      |
| 03-12-10 | 10:45 | ↓       | BZ 1-2 OUT *      |                      |                   | 6       |                            |                              |                               |                    |                    |                   |               |  |                              | X                     |                 |                      |

Date: 03-15-10 Time: 12:00 Relinquished by: [Signature]

Date: 03-15-10 Time: 12:00 Received by: [Signature]

Remarks: \* NO CHARGE - RUSH FOR BZ 1-2 OUT - 2 SAMPLES; ALSO CC HOPE MONZEGLO & KRISTEN VAN HORN (CHECK WAND)

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.

**Van Horn, Kristen, NMENV**

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**From:** Rajen, Gaurav [Gaurav.Rajen@wnr.com]  
**Sent:** Monday, March 15, 2010 7:58 AM  
**To:** Monzeglio, Hope, NMENV; Van Horn, Kristen, NMENV  
**Cc:** Chavez, Carl J, EMNRD; Cobrain, Dave, NMENV; Riege, Ed; Turri, Mark; Allen, Ann  
**Subject:** Benzene results for last week of February, 2010 and first week of March 2010  
**Attachments:** March 1-2010.pdf; Fenruary 24-2010.pdf

Dear Hope and Kristen:

It is a pleasure to send you our latest benzene results for the last week of February (0.028 ppm entering AL-1) and the first week of March 2010 (0.027 ppm entering AL-1). These results (plus others) are presented in the two reports from Hall Environmental Analytical Laboratory that are attached. The results were sent to us electronically on March 8, 2010, after close of business. The paper copies were received two days later.

Best regards,

Raj

PS: Please note that once a month (as on the report for March 1, 2010) to satisfy requirements of our Air Quality Permit we collect and analyze samples for more constituents than the BTEX+MTBE required by the NMED/HWB.