

MAR 2012

Gallup Refining
ENTERED
benzene exceedance



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

March 07, 2012

Thurman B. Larsen
Western Refining Southwest, Gallup
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: BZ Strippers

OrderNo.: 1203110

Dear Thurman B. Larsen:

Hall Environmental Analysis Laboratory received 7 sample(s) on 3/5/2012 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. 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 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 horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1203110

Date Reported: 3/7/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BZ 1-2 OUT

Project: BZ Strippers

Collection Date: 2/27/2012 8:00:00 PM

Lab ID: 1203110-001

Matrix: AQUEOUS

Received Date: 3/5/2012 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Methyl tert-butyl ether (MTBE)	ND	120		µg/L	50	3/5/2012 4:10:18 PM
Benzene	730	50		µg/L	50	3/5/2012 4:10:18 PM
Toluene	1,300	50		µg/L	50	3/5/2012 4:10:18 PM
Ethylbenzene	130	50		µg/L	50	3/5/2012 4:10:18 PM
Xylenes, Total	920	100		µg/L	50	3/5/2012 4:10:18 PM
Surr: 4-Bromofluorobenzene	102	76.5-115		%REC	50	3/5/2012 4:10:18 PM

Qualifiers: *X Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit

Analytical Report

Lab Order 1203110

Date Reported: 3/7/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BZ 1-2 OUT

Project: BZ Strippers

Collection Date: 2/28/2012 3:00:00 AM

Lab ID: 1203110-002

Matrix: AQUEOUS

Received Date: 3/5/2012 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Methyl tert-butyl ether (MTBE)	ND	120		µg/L	50	3/5/2012 6:11:11 PM
Benzene	760	50		µg/L	50	3/5/2012 6:11:11 PM
Toluene	1,500	50		µg/L	50	3/5/2012 6:11:11 PM
Ethylbenzene	160	50		µg/L	50	3/5/2012 6:11:11 PM
Xylenes, Total	1,100	100		µg/L	50	3/5/2012 6:11:11 PM
Surr: 4-Bromofluorobenzene	128	76.5-115	S	%REC	50	3/5/2012 6:11:11 PM

Qualifiers: *X Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit

Analytical Report

Lab Order 1203110

Date Reported: 3/7/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BZ 1-2 OUT

Project: BZ Strippers

Collection Date: 2/29/2012 8:00:00 AM

Lab ID: 1203110-003

Matrix: AQUEOUS

Received Date: 3/5/2012 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Methyl tert-butyl ether (MTBE)	ND	120		µg/L	50	3/5/2012 6:42:24 PM
Benzene	120	50		µg/L	50	3/5/2012 6:42:24 PM
Toluene	210	50		µg/L	50	3/5/2012 6:42:24 PM
Ethylbenzene	ND	50		µg/L	50	3/5/2012 6:42:24 PM
Xylenes, Total	160	100		µg/L	50	3/5/2012 6:42:24 PM
Surr: 4-Bromofluorobenzene	112	76.5-115		%REC	50	3/5/2012 6:42:24 PM

Qualifiers: *X Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1203110

Date Reported: 3/7/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BZ 1-2 OUT

Project: BZ Strippers

Collection Date: 3/1/2012 8:00:00 AM

Lab ID: 1203110-004

Matrix: AQUEOUS

Received Date: 3/5/2012 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Methyl tert-butyl ether (MTBE)	ND	120		µg/L	50	3/5/2012 7:12:41 PM
Benzene	88	50		µg/L	50	3/5/2012 7:12:41 PM
Toluene	140	50		µg/L	50	3/5/2012 7:12:41 PM
Ethylbenzene	ND	50		µg/L	50	3/5/2012 7:12:41 PM
Xylenes, Total	ND	100		µg/L	50	3/5/2012 7:12:41 PM
Surr: 4-Bromofluorobenzene	92.6	76.5-115		%REC	50	3/5/2012 7:12:41 PM

Qualifiers: */X Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit

Analytical Report

Lab Order 1203110

Date Reported: 3/7/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BZ 1-2 OUT

Project: BZ Strippers

Collection Date: 3/2/2012 8:00:00 AM

Lab ID: 1203110-005

Matrix: AQUEOUS

Received Date: 3/5/2012 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Methyl tert-butyl ether (MTBE)	ND	120		µg/L	50	3/5/2012 7:42:54 PM
Benzene	97	50		µg/L	50	3/5/2012 7:42:54 PM
Toluene	220	50		µg/L	50	3/5/2012 7:42:54 PM
Ethylbenzene	ND	50		µg/L	50	3/5/2012 7:42:54 PM
Xylenes, Total	260	100		µg/L	50	3/5/2012 7:42:54 PM
Surr: 4-Bromofluorobenzene	121	76.5-115	S	%REC	50	3/5/2012 7:42:54 PM

Qualifiers: *X Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1203110

Date Reported: 3/7/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BZ 1-2 OUT

Project: BZ Strippers

Collection Date: 3/3/2012 9:00:00 AM

Lab ID: 1203110-006

Matrix: AQUEOUS

Received Date: 3/5/2012 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Methyl tert-butyl ether (MTBE)	ND	120		µg/L	50	3/5/2012 8:13:13 PM
Benzene	130	50		µg/L	50	3/5/2012 8:13:13 PM
Toluene	340	50		µg/L	50	3/5/2012 8:13:13 PM
Ethylbenzene	63	50		µg/L	50	3/5/2012 8:13:13 PM
Xylenes, Total	460	100		µg/L	50	3/5/2012 8:13:13 PM
Surr: 4-Bromofluorobenzene	119	76.5-115	S	%REC	50	3/5/2012 8:13:13 PM

Qualifiers:

- * / X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

Analytical Report

Lab Order 1203110

Date Reported: 3/7/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BZ 1-2 OUT

Project: BZ Strippers

Collection Date: 3/4/2012 8:00:00 AM

Lab ID: 1203110-007

Matrix: AQUEOUS

Received Date: 3/5/2012 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Methyl tert-butyl ether (MTBE)	ND	120		µg/L	50	3/5/2012 8:43:24 PM
Benzene	150	50		µg/L	50	3/5/2012 8:43:24 PM
Toluene	340	50		µg/L	50	3/5/2012 8:43:24 PM
Ethylbenzene	ND	50		µg/L	50	3/5/2012 8:43:24 PM
Xylenes, Total	290	100		µg/L	50	3/5/2012 8:43:24 PM
Surr: 4-Bromofluorobenzene	117	76.5-115	S	%REC	50	3/5/2012 8:43:24 PM

Qualifiers: *X Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1203110

07-Mar-12

Client: Western Refining Southwest, Gallup
Project: BZ Strippers

Sample ID	5ML-RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBW	Batch ID:	R1288	RunNo:	1288					
Prep Date:		Analysis Date:	3/5/2012	SeqNo:	36582	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	22		20.00		110	76.5	115			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSW	Batch ID:	R1288	RunNo:	1288					
Prep Date:		Analysis Date:	3/5/2012	SeqNo:	36585	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Methyl tert-butyl ether (MTBE)	24	2.5	20.00	0	120	50.5	158			
Benzene	21	1.0	20.00	0	104	80	120			
Toluene	22	1.0	20.00	0	109	80	120			
Ethylbenzene	21	1.0	20.00	0	105	80	120			
Xylenes, Total	65	2.0	60.00	0	108	80	120			
Surr: 4-Bromofluorobenzene	25		20.00		124	76.5	115			S

Sample ID	1203110-001A MS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BZ 1-2 OUT	Batch ID:	R1288	RunNo:	1288					
Prep Date:		Analysis Date:	3/5/2012	SeqNo:	36586	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Methyl tert-butyl ether (MTBE)	1,100	120	1,000	0	112	58	139			
Benzene	1,700	50	1,000	727.4	99.1	70.1	118			
Toluene	2,300	50	1,000	1,321	102	72.3	117			
Ethylbenzene	1,200	50	1,000	132.6	105	73.5	117			
Xylenes, Total	4,200	100	3,000	920.4	108	73.1	119			
Surr: 4-Bromofluorobenzene	1,200		1,000		116	76.5	115			S

Sample ID	1203110-001A MSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BZ 1-2 OUT	Batch ID:	R1288	RunNo:	1288					
Prep Date:		Analysis Date:	3/5/2012	SeqNo:	36587	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Methyl tert-butyl ether (MTBE)	1,100	120	1,000	0	113	58	139	0.463	15.2	
Benzene	1,700	50	1,000	727.4	95.6	70.1	118	2.08	16.4	
Toluene	2,300	50	1,000	1,321	100	72.3	117	0.528	13.9	
Ethylbenzene	1,200	50	1,000	132.6	104	73.5	117	0.357	13.5	
Xylenes, Total	4,100	100	3,000	920.4	107	73.1	119	0.519	12.9	
Surr: 4-Bromofluorobenzene	1,400		1,000		136	76.5	115	0	0	S

Qualifiers:

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 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 RL Reporting Detection Limit



Hall Environmental Analysis Laboratory
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 Albuquerque, NM 87109
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 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1203110**

Received by/date: **LM 03/05/12**

Logged By: **Michelle Garcia** 3/5/2012 12:00:00 PM *Michelle Garcia*

Completed By: **Michelle Garcia** 3/5/2012 12:13:17 PM *Michelle Garcia*

Reviewed By: *[Signature]* 03/05/2012

Chain of Custody

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

Log In

- 4. Coolers are present? (see 19. for cooler specific information) Yes No NA
- 5. Was an attempt made to cool the samples? Yes No NA
- 6. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 7. Sample(s) in proper container(s)? Yes No
- 8. Sufficient sample volume for indicated test(s)? Yes No
- 9. Are samples (except VOA and ONG) properly preserved? Yes No
- 10. Was preservative added to bottles? Yes No NA
- 11. VOA vials have zero headspace? Yes No No VOA Vials
- 12. Were any sample containers received broken? Yes No
- 13. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No # of preserved bottles checked for pH:
- 14. Are matrices correctly identified on Chain of Custody? Yes No (<2 or >12 unless noted)
- 15. Is it clear what analyses were requested? Yes No Adjusted?
- 16. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes No Checked by:

Special Handling (if applicable)

- 17. 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: _____

18. Additional remarks: **1203110-002A & -007A pH>2 EA 3/6/12**

19. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.4	Good	Not Present			

Chain-of-Custody Record

Client: WESTERN Refining
Gallup Refinery
 Mailing Address: RT 3 Box 7
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 #: BZ API-OUT 122
 Project Manager: Thuman Larsen
 Sampler: RJ Raul API OPS
 Sample ID: 211



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 ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	8021 B BTEX - MTBE	
2-27-12	8 PM	H ₂ O	BZ 1-200T	40ml-3	HCl	-1													X
2-28-12	3 AM	H ₂ O	BZ 1-200T	40ml-3	HCl	-2													X
2-29-12	8 AM	H ₂ O	BZ 1-200T	40ml-3	HCl	-3													X
3-1-12	8 AM	H ₂ O	BZ 1-200T	40ml-3	HCl	-4													X
3-2-12	8 AM	H ₂ O	BZ 1-200T	40ml-3	HCl	-5													X
3-3-12	9 AM	H ₂ O	BZ 1-200T	40ml-3	HCl	-6													X
3-4-12	8 AM	H ₂ O	BZ 1-200T	40ml-3	HCl	-7													X

Date: 3-5-12 Time: 1200 Relinquished by: [Signature]
 Received by: [Signature] Date: 03/05/12 Time: 1200
 Date: _____ Time: _____ Relinquished by: _____
 Received by: _____ Date: _____ Time: _____

Remarks: CC: KRISTEN VAN HOIN
WNT : 5.0

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.