

SRCC



**Monzeglio, Hope, NMENV**

**From:** Rajen, Gaurav [Gaurav.Rajen@wnr.com]  
**Sent:** Friday, September 11, 2009 2:36 PM  
**To:** Monzeglio, Hope, NMENV; Chavez, Carl J, EMNRD  
**Cc:** Riege, Ed; Johnson, Cheryl; Larsen, Thurman  
**Subject:** Data for NAPIS-3 and KA-3 for 3rd quarter  
**Attachments:** August 31, 2009.pdf

Dear Hope:

It is a pleasure to send you the latest sampling data for wells NAPIS-3 and KA-3. As you will recall, these wells were covered over because of maintenance work ongoing in the area and were not sampled earlier in the 3<sup>rd</sup> quarter.

Best regards,

Raj

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This inbound email has been scanned by the MessageLabs Email Security System.

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## COVER LETTER

Friday, September 11, 2009

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

TEL: (505) 722-3833  
FAX (505) 722-0210

RE: 3rd Qtr NAPIS

Dear Gaurav Rajen:

Order No.: 0909044

Hall Environmental Analysis Laboratory, Inc. received 3 sample(s) on 9/2/2009 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. No determination of compounds below these (denoted by the ND or < sign) has been made.

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

NM Lab # NM9425  
AZ license # AZ0682  
ORELAP Lab # NM100001  
Texas Lab# T104704424-08-TX



# Hall Environmental Analysis Laboratory, Inc.

Date: 11-Sep-09

CLIENT: Western Refining Southwest, Gallup  
 Lab Order: 0909044  
 Project: 3rd Qtr NAPIS  
 Lab ID: 0909044-01

Client Sample ID: NAPIS-3  
 Collection Date: 8/31/2009 9:58:00 AM  
 Date Received: 9/2/2009  
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Analyst: SCC						
<b>EPA METHOD 8015B: DIESEL RANGE</b>						
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/3/2009 6:17:41 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/3/2009 6:17:41 AM
Surr: DNOP	118	58-140		%REC	1	9/3/2009 6:17:41 AM
Analyst: NSB						
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/8/2009 6:20:08 PM
Surr: BFB	105	55.2-107		%REC	1	9/8/2009 6:20:08 PM
Analyst: NSB						
<b>EPA METHOD 8021B: VOLATILES</b>						
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	9/8/2009 6:20:08 PM
Benzene	ND	1.0		µg/L	1	9/8/2009 6:20:08 PM
Toluene	ND	1.0		µg/L	1	9/8/2009 6:20:08 PM
Ethylbenzene	ND	1.0		µg/L	1	9/8/2009 6:20:08 PM
Xylenes, Total	ND	2.0		µg/L	1	9/8/2009 6:20:08 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/8/2009 6:20:08 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/8/2009 6:20:08 PM
Surr: 4-Bromofluorobenzene	101	65.9-130		%REC	1	9/8/2009 6:20:08 PM
Analyst: JAT						
<b>EPA METHOD 8310: PAHS</b>						
Naphthalene	ND	2.0		µg/L	1	9/9/2009 6:17:03 PM
1-Methylnaphthalene	ND	2.0		µg/L	1	9/9/2009 6:17:03 PM
2-Methylnaphthalene	ND	2.0		µg/L	1	9/9/2009 6:17:03 PM
Acenaphthylene	ND	2.5		µg/L	1	9/9/2009 6:17:03 PM
Acenaphthene	ND	5.0		µg/L	1	9/9/2009 6:17:03 PM
Fluorene	ND	0.80		µg/L	1	9/9/2009 6:17:03 PM
Phenanthrene	ND	0.60		µg/L	1	9/9/2009 6:17:03 PM
Anthracene	ND	0.60		µg/L	1	9/9/2009 6:17:03 PM
Fluoranthene	ND	0.30		µg/L	1	9/9/2009 6:17:03 PM
Pyrene	ND	0.30		µg/L	1	9/9/2009 6:17:03 PM
Benz(a)anthracene	ND	0.070		µg/L	1	9/9/2009 6:17:03 PM
Chrysene	ND	0.20		µg/L	1	9/9/2009 6:17:03 PM
Benzo(b)fluoranthene	ND	0.10		µg/L	1	9/9/2009 6:17:03 PM
Benzo(k)fluoranthene	ND	0.070		µg/L	1	9/9/2009 6:17:03 PM
Benzo(a)pyrene	ND	0.070		µg/L	1	9/9/2009 6:17:03 PM
Dibenz(a,h)anthracene	ND	0.070		µg/L	1	9/9/2009 6:17:03 PM
Benzo(g,h,i)perylene	ND	0.080		µg/L	1	9/9/2009 6:17:03 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	9/9/2009 6:17:03 PM
Surr: Benzo(e)pyrene	66.5	28.3-111		%REC	1	9/9/2009 6:17:03 PM
Analyst: LJB						
<b>EPA METHOD 300.0: ANIONS</b>						
Fluoride	0.47	0.10		mg/L	1	9/2/2009 5:09:38 PM
Chloride	1000	10		mg/L	100	9/4/2009 2:55:35 PM

Qualifiers: \* Value exceeds Maximum Contaminant Level  
 E Estimated value  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit  
 S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 MCL Maximum Contaminant Level  
 RL Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 11-Sep-09

**CLIENT:** Western Refining Southwest, Gallup  
**Lab Order:** 0909044  
**Project:** 3rd Qtr NAPIS  
**Lab ID:** 0909044-01

**Client Sample ID:** NAPIS-3  
**Collection Date:** 8/31/2009 9:58:00 AM  
**Date Received:** 9/2/2009  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: LJB
Nitrate (As N)+Nitrite (As N)	14	4.0		mg/L	20	9/4/2009 3:13:00 PM
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/2/2009 5:09:38 PM
Sulfate	ND	10		mg/L	20	9/2/2009 5:27:03 PM
<b>EPA 120.1: SPECIFIC CONDUCTANCE</b>						Analyst: DAM
Specific Conductance	4000	0.010		µmhos/cm	1	9/3/2009 4:29:00 PM
<b>SM4500-H+B: PH</b>						Analyst: DAM
pH	8.07	0.1		pH units	1	9/3/2009 4:29:00 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 11-Sep-09

CLIENT: Western Refining Southwest, Gallup      Client Sample ID: KA-3  
 Lab Order: 0909044      Collection Date: 8/31/2009 10:31:00 AM  
 Project: 3rd Qtr NAPIS      Date Received: 9/2/2009  
 Lab ID: 0909044-02      Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						
Diesel Range Organics (DRO)	1.4	1.0		mg/L	1	9/3/2009 6:53:54 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/3/2009 6:53:54 AM
Surr: DNOP	120	58-140		%REC	1	9/3/2009 6:53:54 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						
Gasoline Range Organics (GRO)	0.52	0.050		mg/L	1	9/8/2009 7:20:46 PM
Surr: BFB	127	55.2-107	S	%REC	1	9/8/2009 7:20:46 PM
<b>EPA METHOD 8021B: VOLATILES</b>						
Methyl tert-butyl ether (MTBE)	170	25		µg/L	10	9/8/2009 6:50:36 PM
Benzene	ND	1.0		µg/L	1	9/8/2009 7:20:46 PM
Toluene	ND	1.0		µg/L	1	9/8/2009 7:20:46 PM
Ethylbenzene	ND	1.0		µg/L	1	9/8/2009 7:20:46 PM
Xylenes, Total	ND	2.0		µg/L	1	9/8/2009 7:20:46 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/8/2009 7:20:46 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/8/2009 7:20:46 PM
Surr: 4-Bromofluorobenzene	107	65.9-130		%REC	1	9/8/2009 7:20:46 PM
<b>EPA METHOD 8310: PAHS</b>						
Naphthalene	ND	2.0		µg/L	1	9/9/2009 6:37:15 PM
1-Methylnaphthalene	ND	2.0		µg/L	1	9/9/2009 6:37:15 PM
2-Methylnaphthalene	ND	2.0		µg/L	1	9/9/2009 6:37:15 PM
Acenaphthylene	ND	2.5		µg/L	1	9/9/2009 6:37:15 PM
Acenaphthene	ND	5.0		µg/L	1	9/9/2009 6:37:15 PM
Fluorene	ND	0.80		µg/L	1	9/9/2009 6:37:15 PM
Phenanthrene	ND	0.60		µg/L	1	9/9/2009 6:37:15 PM
Anthracene	ND	0.60		µg/L	1	9/9/2009 6:37:15 PM
Fluoranthene	ND	0.30		µg/L	1	9/9/2009 6:37:15 PM
Pyrene	ND	0.30		µg/L	1	9/9/2009 6:37:15 PM
Benz(a)anthracene	ND	0.070		µg/L	1	9/9/2009 6:37:15 PM
Chrysene	ND	0.20		µg/L	1	9/9/2009 6:37:15 PM
Benzo(b)fluoranthene	ND	0.10		µg/L	1	9/9/2009 6:37:15 PM
Benzo(k)fluoranthene	ND	0.070		µg/L	1	9/9/2009 6:37:15 PM
Benzo(a)pyrene	ND	0.070		µg/L	1	9/9/2009 6:37:15 PM
Dibenz(a,h)anthracene	ND	0.070		µg/L	1	9/9/2009 6:37:15 PM
Benzo(g,h,i)perylene	ND	0.080		µg/L	1	9/9/2009 6:37:15 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	9/9/2009 6:37:15 PM
Surr: Benzo(e)pyrene	40.1	28.3-111		%REC	1	9/9/2009 6:37:15 PM
<b>EPA METHOD 300.0: ANIONS</b>						
Fluoride	2.4	0.10		mg/L	1	9/2/2009 6:19:17 PM
Chloride	230	2.0		mg/L	20	9/2/2009 6:36:41 PM

Qualifiers: \* Value exceeds Maximum Contaminant Level  
 E Estimated value  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit  
 S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 MCL Maximum Contaminant Level  
 RL Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 11-Sep-09

**CLIENT:** Western Refining Southwest, Gallup  
**Lab Order:** 0909044  
**Project:** 3rd Qtr NAPIS  
**Lab ID:** 0909044-02

**Client Sample ID:** KA-3  
**Collection Date:** 8/31/2009 10:31:00 AM  
**Date Received:** 9/2/2009  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
						Analyst: LJB
<b>EPA METHOD 300.0: ANIONS</b>						
Nitrate (As N)+Nitrite (As N)	ND	2.0		mg/L	10	9/4/2009 1:02:30 AM
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/2/2009 6:19:17 PM
Sulfate	50	0.50		mg/L	1	9/2/2009 6:19:17 PM
						Analyst: DAM
<b>EPA 120.1: SPECIFIC CONDUCTANCE</b>						
Specific Conductance	1500	0.010		µmhos/cm	1	9/3/2009 4:37:00 PM
						Analyst: DAM
<b>SM4500-H+B: PH</b>						
pH	7.58	0.1		pH units	1	9/3/2009 4:37:00 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 11-Sep-09

**CLIENT:** Western Refining Southwest, Gallup  
**Lab Order:** 0909044  
**Project:** 3rd Qtr NAPIS  
**Lab ID:** 0909044-03

**Client Sample ID:** Trip Blank  
**Collection Date:**  
**Date Received:** 9/2/2009  
**Matrix:** TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/8/2009 8:21:12 PM
Surr: BFB	104	55.2-107		%REC	1	9/8/2009 8:21:12 PM
<b>EPA METHOD 8021B: VOLATILES</b>						
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	9/8/2009 8:21:12 PM
Benzene	ND	1.0		µg/L	1	9/8/2009 8:21:12 PM
Toluene	ND	1.0		µg/L	1	9/8/2009 8:21:12 PM
Ethylbenzene	ND	1.0		µg/L	1	9/8/2009 8:21:12 PM
Xylenes, Total	ND	2.0		µg/L	1	9/8/2009 8:21:12 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/8/2009 8:21:12 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/8/2009 8:21:12 PM
Surr: 4-Bromofluorobenzene	102	65.9-130		%REC	1	9/8/2009 8:21:12 PM

Analyst: NSB

Analyst: NSB

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit



**ENVIRONMENTAL  
SCIENCE CORP.**

12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289  
Est. 1970

**REPORT OF ANALYSIS**

Anne Thorne  
Hall Environmental Analysis Laborat  
4901 Hawkins NE  
Albuquerque, NM 87109

September 10, 2009

Date Received : September 04, 2009  
Description : 0909044  
Sample ID : NAPIS-3  
Collected By :  
Collection Date : 08/31/09 09:58

ESC Sample # : L420901-01  
Site ID :  
Project # : 0909044

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Mercury	BDL	0.00020	mg/l	7470A	09/09/09	1
Arsenic	BDL	0.020	mg/l	6010B	09/09/09	1
Barium	0.092	0.0050	mg/l	6010B	09/09/09	1
Cadmium	BDL	0.0050	mg/l	6010B	09/09/09	1
Calcium	39.	0.50	mg/l	6010B	09/09/09	1
Chromium	BDL	0.010	mg/l	6010B	09/09/09	1
Lead	BDL	0.0050	mg/l	6010B	09/09/09	1
Magnesium	6.4	0.10	mg/l	6010B	09/09/09	1
Potassium	4.0	0.50	mg/l	6010B	09/09/09	1
Selenium	BDL	0.020	mg/l	6010B	09/09/09	1
Silver	BDL	0.010	mg/l	6010B	09/09/09	1
Sodium	870	0.50	mg/l	6010B	09/09/09	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit (PQL)

Note:  
The reported analytical results relate only to the sample submitted.  
This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 09/10/09 16:01 Printed: 09/10/09 16:02





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Tax I.D. 62-0814289

Est. 1970

**REPORT OF ANALYSIS**

September 10, 2009

Anne Thorne  
Hall Environmental Analysis Laborat  
4901 Hawkins NE  
Albuquerque, NM 87109

ESC Sample # : L420901-02

Date Received : September 04, 2009  
Description : 0909044

Site ID :

Sample ID : KA-3

Project # : 0909044

Collected By :  
Collection Date : 08/31/09 10:31

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Mercury	BDL	0.00020	mg/l	7470A	09/09/09	1
Arsenic	BDL	0.020	mg/l	6010B	09/09/09	1
Barium	0.22	0.0050	mg/l	6010B	09/09/09	1
Cadmium	BDL	0.0050	mg/l	6010B	09/09/09	1
Calcium	53.	0.50	mg/l	6010B	09/09/09	1
Chromium	BDL	0.010	mg/l	6010B	09/09/09	1
Lead	BDL	0.0050	mg/l	6010B	09/09/09	1
Magnesium	8.9	0.10	mg/l	6010B	09/09/09	1
Potassium	0.73	0.50	mg/l	6010B	09/09/09	1
Selenium	BDL	0.020	mg/l	6010B	09/09/09	1
Silver	BDL	0.010	mg/l	6010B	09/09/09	1
Sodium	330	0.50	mg/l	6010B	09/09/09	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Reported: 09/10/09 16:01 Printed: 09/10/09 16:02



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SCIENCE CORP.**

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Tax I.D. 62-0814289

Est. 1970

Hall Environmental Analysis Laboratory  
Anne Thorne  
4901 Hawkins NE

Quality Assurance Report  
Level II

Albuquerque, NM 87109

L420901

September 10, 2009

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Mercury	0.00	mg/l		20	WG439934	09/08/09 22:26
Potassium	< .5	mg/l		20	WG439934	09/09/09 18:32
Sodium	0.00	mg/l		20	WG439934	09/09/09 18:32
Arsenic	< .02	mg/l		20	WG439934	09/08/09 22:26
Barium	< .005	mg/l		20	WG439934	09/08/09 22:26
Cadmium	< .005	mg/l		20	WG439934	09/08/09 22:26
Calcium	< .5	mg/l		20	WG439934	09/08/09 22:26
Chromium	< .01	mg/l		20	WG439934	09/08/09 22:26
Lead	< .005	mg/l		20	WG439934	09/08/09 22:26
Magnesium	< .1	mg/l		20	WG439934	09/08/09 22:26
Selenium	< .02	mg/l		20	WG439934	09/08/09 22:26
Silver	< .01	mg/l		20	WG439934	09/08/09 22:26

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Mercury	mg/l	0.00	0.00	0.00	20	L420909-06	WG439864
Arsenic	mg/l	0.00	0.00	0.00	20	L420909-06	WG439934
Barium	mg/l	0.00	0.00	NA	20	L420909-06	WG439934
Cadmium	mg/l	0.00	0.00	0.00	20	L420909-06	WG439934
Calcium	mg/l	0.00	0.315	NA	20	L420909-06	WG439934
Chromium	mg/l	0.00	0.00100	NA	20	L420909-06	WG439934
Lead	mg/l	0.00	0.00126	NA	20	L420909-06	WG439934
Magnesium	mg/l	0.00	0.0973	NA	20	L420909-06	WG439934
Potassium	mg/l	0.881	0.833	0.833	20	L420909-06	WG439934
Selenium	mg/l	0.00	0.00180	NA	20	L420909-06	WG439934
Silver	mg/l	0.00	0.000300	NA	20	L420909-06	WG439934
Sodium	mg/l	0.655	0.09	0.808	20	L420909-06	WG439934

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Mercury	mg/l	0.003	0.0036	102.3	85-115	WG439864
Arsenic	mg/l	1.13	0.991	87.7	85-115	WG439934
Barium	mg/l	1.13	1.05	92.9	85-115	WG439934
Cadmium	mg/l	1.13	1.04	92.0	85-115	WG439934
Calcium	mg/l	11.3	10.3	91.2	85-115	WG439934
Chromium	mg/l	1.13	1.04	92.0	85-115	WG439934
Lead	mg/l	1.13	1.06	93.8	85-115	WG439934
Magnesium	mg/l	11.3	10.4	92.0	85-115	WG439934
Potassium	mg/l	1.13	1.11	98.2	85-115	WG439934
Selenium	mg/l	1.13	0.959	84.9*	85-115	WG439934
Silver	mg/l	1.13	1.02	90.3	85-115	WG439934
Sodium	mg/l	1.13	1.06	93.8	85-115	WG439934

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Mercury	mg/l	0.00319	0.00	0.003	106.7	70-130	L420982-04	WG439864
Arsenic	mg/l	0.954	0.00	1.13	84.4	75-125	L420909-06	WG439934
Barium	mg/l	0.003	0.00024	1.13	91.1	75-125	L420909-06	WG439934

\* Performance of this Analyte is outside of established criteria.  
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

## QA/QC SUMMARY REPORT

**Client:** Western Refining Southwest, Gallup  
**Project:** 3rd Qtr NAPIS

**Work Order:** 0909044

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
<b>Method:</b> EPA Method 300.0: Anions											
<b>Sample ID:</b> 0909044-01CMSD <span style="float: right;">Batch ID: <b>R35157</b> Analysis Date: 9/2/2009 6:01:52 PM</span>											
Fluoride	0.9447	mg/L	0.10	0.5	0.4669	95.6	75.3	117	4.90	20	
Nitrate (As N)+Nitrite (As N)	20.42	mg/L	0.20	3.5	17.44	85.0	72.5	119	1.06	20	
Phosphorus, Orthophosphate (As P)	4.929	mg/L	0.50	5	0	98.6	74.5	116	7.12	20	
<b>Sample ID:</b> MB <span style="float: right;">Batch ID: <b>R35157</b> Analysis Date: 9/2/2009 4:34:50 PM</span>											
Fluoride	ND	mg/L	0.10								
Chloride	ND	mg/L	0.10								
Nitrate (As N)+Nitrite (As N)	ND	mg/L	0.20								
Phosphorus, Orthophosphate (As P)	ND	mg/L	0.50								
Sulfate	ND	mg/L	0.50								
<b>Sample ID:</b> MB <span style="float: right;">Batch ID: <b>R35172</b> Analysis Date: 9/3/2009 2:01:00 PM</span>											
Fluoride	ND	mg/L	0.10								
Chloride	ND	mg/L	0.10								
Nitrate (As N)+Nitrite (As N)	ND	mg/L	0.20								
Phosphorus, Orthophosphate (As P)	ND	mg/L	0.50								
Sulfate	ND	mg/L	0.50								
<b>Sample ID:</b> MB <span style="float: right;">Batch ID: <b>R35195</b> Analysis Date: 9/4/2009 11:44:05 AM</span>											
Fluoride	ND	mg/L	0.10								
Chloride	ND	mg/L	0.10								
Nitrate (As N)+Nitrite (As N)	ND	mg/L	0.20								
Phosphorus, Orthophosphate (As P)	ND	mg/L	0.50								
Sulfate	ND	mg/L	0.50								
<b>Sample ID:</b> LCS <span style="float: right;">Batch ID: <b>R35157</b> Analysis Date: 9/2/2009 4:52:14 PM</span>											
Fluoride	0.5343	mg/L	0.10	0.5	0	107	90	110			
Chloride	4.833	mg/L	0.10	5	0	96.7	90	110			
Nitrate (As N)+Nitrite (As N)	3.426	mg/L	0.20	3.5	0	97.9	90	110			
Phosphorus, Orthophosphate (As P)	5.218	mg/L	0.50	5	0	104	90	110			
Sulfate	10.03	mg/L	0.50	10	0	100	90	110			
<b>Sample ID:</b> LCS <span style="float: right;">Batch ID: <b>R35172</b> Analysis Date: 9/3/2009 2:18:24 PM</span>											
Fluoride	0.5550	mg/L	0.10	0.5	0	111	90	110			S
Chloride	4.844	mg/L	0.10	5	0	96.9	90	110			
Nitrate (As N)+Nitrite (As N)	3.436	mg/L	0.20	3.5	0	98.2	90	110			
Phosphorus, Orthophosphate (As P)	4.973	mg/L	0.50	5	0	99.5	90	110			
Sulfate	9.844	mg/L	0.50	10	0	98.4	90	110			
<b>Sample ID:</b> LCS <span style="float: right;">Batch ID: <b>R35195</b> Analysis Date: 9/4/2009 12:01:30 PM</span>											
Fluoride	0.5134	mg/L	0.10	0.5	0	103	90	110			
Chloride	4.819	mg/L	0.10	5	0	96.4	90	110			
Nitrate (As N)+Nitrite (As N)	3.427	mg/L	0.20	3.5	0	97.9	90	110			
Phosphorus, Orthophosphate (As P)	4.869	mg/L	0.50	5	0	97.4	90	110			
Sulfate	9.825	mg/L	0.50	10	0	98.3	90	110			
<b>Sample ID:</b> 0909044-01CMS <span style="float: right;">Batch ID: <b>R35157</b> Analysis Date: 9/2/2009 5:44:28 PM</span>											
Fluoride	0.9922	mg/L	0.10	0.5	0.4669	105	75.3	117			
Nitrate (As N)+Nitrite (As N)	20.20	mg/L	0.20	3.5	17.44	78.8	72.5	119			
Phosphorus, Orthophosphate (As P)	4.590	mg/L	0.50	5	0	91.8	74.5	116			

**Qualifiers:**

- E Estimated value
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Gallup  
 Project: 3rd Qtr NAPIS

Work Order: 0909044

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
<b>Method: EPA Method 8015B: Diesel Range</b>											
Sample ID: MB-20013		MBLK									
Diesel Range Organics (DRO)	ND	mg/L	1.0								
Motor Oil Range Organics (MRO)	ND	mg/L	5.0								
Sample ID: LCS-20013		LCS									
Diesel Range Organics (DRO)	4.778	mg/L	1.0	5	0	95.6	74	157			
Sample ID: LCSD-20013		LCSD									
Diesel Range Organics (DRO)	4.764	mg/L	1.0	5	0	95.3	74	157	0.289	23	

<b>Method: EPA Method 8015B: Gasoline Range</b>											
Sample ID: 0909044-01A MSD		MSD									
Gasoline Range Organics (GRO)	0.5564	mg/L	0.050	0.5	0	111	80	115	8.82	8.39	R
Sample ID: 5ML RB		MBLK									
Gasoline Range Organics (GRO)	ND	mg/L	0.050								
Sample ID: 2.5UG GRO LCS		LCS									
Gasoline Range Organics (GRO)	0.5232	mg/L	0.050	0.5	0	105	80	115			
Sample ID: 0909044-01A MS		MS									
Gasoline Range Organics (GRO)	0.5094	mg/L	0.050	0.5	0	102	80	115			

Qualifiers:

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QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Gallup  
 Project: 3rd Qtr NAPIS

Work Order: 0909044

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
<b>Method: EPA Method 8021B: Volatiles</b>											
<b>Sample ID: 0909044-01A MSD</b>											
		<i>MSD</i>									
Methyl tert-butyl ether (MTBE)	20.22	µg/L	2.5	20	0	101	51.2	138	0.208		28
Benzene	21.26	µg/L	1.0	20	0	106	85.9	113	0.169		27
Toluene	22.58	µg/L	1.0	20	0	113	86.4	113	0.470		19
Ethylbenzene	21.97	µg/L	1.0	20	0.082	109	83.5	118	2.20		10
Xylenes, Total	63.67	µg/L	2.0	60	0	106	83.4	122	0.820		13
1,2,4-Trimethylbenzene	19.82	µg/L	1.0	20	0	99.1	83.5	115	1.53		21
1,3,5-Trimethylbenzene	19.34	µg/L	1.0	20	0	96.7	85.2	113	0.155		10
<b>Sample ID: 5ML RB</b>											
		<i>MBLK</i>									
Methyl tert-butyl ether (MTBE)	ND	µg/L	2.5								
Benzene	ND	µg/L	1.0								
Toluene	ND	µg/L	1.0								
Ethylbenzene	ND	µg/L	1.0								
Xylenes, Total	ND	µg/L	2.0								
1,2,4-Trimethylbenzene	ND	µg/L	1.0								
1,3,5-Trimethylbenzene	ND	µg/L	1.0								
<b>Sample ID: 100NG BTEX LCS</b>											
		<i>LCS</i>									
Methyl tert-butyl ether (MTBE)	20.97	µg/L	2.5	20	0	105	51.2	138			
Benzene	21.17	µg/L	1.0	20	0	106	85.9	113			
Toluene	21.76	µg/L	1.0	20	0	109	86.4	113			
Ethylbenzene	21.04	µg/L	1.0	20	0.134	105	83.5	118			
Xylenes, Total	62.33	µg/L	2.0	60	0	104	83.4	122			
1,2,4-Trimethylbenzene	21.00	µg/L	1.0	20	0.132	104	83.5	115			
1,3,5-Trimethylbenzene	19.74	µg/L	1.0	20	0	98.7	85.2	113			
<b>Sample ID: 0909044-01A MS</b>											
		<i>MS</i>									
Methyl tert-butyl ether (MTBE)	20.18	µg/L	2.5	20	0	101	51.2	138			
Benzene	21.22	µg/L	1.0	20	0	106	85.9	113			
Toluene	22.48	µg/L	1.0	20	0	112	86.4	113			
Ethylbenzene	21.49	µg/L	1.0	20	0.082	107	83.5	118			
Xylenes, Total	63.15	µg/L	2.0	60	0	105	83.4	122			
1,2,4-Trimethylbenzene	19.52	µg/L	1.0	20	0	97.6	83.5	115			
1,3,5-Trimethylbenzene	19.31	µg/L	1.0	20	0	96.5	85.2	113			

Qualifiers:

- E Estimated value
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Gallup  
 Project: 3rd Qtr NAPIS

Work Order: 0909044

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: EPA Method 8310: PAHs

Sample ID: MB-20037 MBLK Batch ID: 20037 Analysis Date: 9/9/2009 5:16:32 PM

Naphthalene	ND	µg/L	2.0								
1-Methylnaphthalene	ND	µg/L	2.0								
2-Methylnaphthalene	ND	µg/L	2.0								
Acenaphthylene	ND	µg/L	2.5								
Acenaphthene	ND	µg/L	5.0								
Fluorene	ND	µg/L	0.80								
Phenanthrene	ND	µg/L	0.60								
Anthracene	ND	µg/L	0.60								
Fluoranthene	ND	µg/L	0.30								
Pyrene	ND	µg/L	0.30								
Benz(a)anthracene	ND	µg/L	0.070								
Chrysene	ND	µg/L	0.20								
Benzo(b)fluoranthene	ND	µg/L	0.10								
Benzo(k)fluoranthene	ND	µg/L	0.070								
Benzo(a)pyrene	ND	µg/L	0.070								
Dibenz(a,h)anthracene	ND	µg/L	0.070								
Benzo(g,h,i)perylene	ND	µg/L	0.080								
Indeno(1,2,3-cd)pyrene	ND	µg/L	0.080								

Sample ID: LCS-20037 LCS Batch ID: 20037 Analysis Date: 9/9/2009 5:36:43 PM

Naphthalene	38.23	µg/L	2.0	80	0	47.8	20.5	109			
1-Methylnaphthalene	37.76	µg/L	2.0	80.2	0	47.1	23.1	116			
2-Methylnaphthalene	34.08	µg/L	2.0	80	0	42.6	19.5	112			
Acenaphthylene	41.89	µg/L	2.5	80.2	0	52.2	27.5	119			
Acenaphthene	43.97	µg/L	5.0	80	0	55.0	31	117			
Fluorene	3.950	µg/L	0.80	8.02	0	49.3	17.1	109			
Phenanthrene	2.460	µg/L	0.60	4.02	0	61.2	25.5	112			
Anthracene	2.440	µg/L	0.60	4.02	0	60.7	25.8	119			
Fluoranthene	4.970	µg/L	0.30	8.02	0	62.0	27.2	122			
Pyrene	4.510	µg/L	0.30	8.02	0	56.2	24.1	118			
Benz(a)anthracene	0.4700	µg/L	0.070	0.802	0	58.6	31.1	125			
Chrysene	2.350	µg/L	0.20	4.02	0	58.5	32.8	119			
Benzo(b)fluoranthene	0.5500	µg/L	0.10	1.002	0	54.9	24.4	117			
Benzo(k)fluoranthene	0.3000	µg/L	0.070	0.5	0	60.0	28.4	132			
Benzo(a)pyrene	0.2600	µg/L	0.070	0.502	0	51.8	32.4	119			
Dibenz(a,h)anthracene	0.5700	µg/L	0.070	1.002	0	56.9	33.9	120			
Benzo(g,h,i)perylene	0.5600	µg/L	0.080	1	0	56.0	35.2	113			
Indeno(1,2,3-cd)pyrene	1.140	µg/L	0.080	2.004	0	56.9	33.6	115			

Sample ID: LCSD-20037 LCSD Batch ID: 20037 Analysis Date: 9/9/2009 5:56:54 PM

Naphthalene	41.02	µg/L	2.0	80	0	51.3	20.5	109	7.04	32.1	
1-Methylnaphthalene	41.64	µg/L	2.0	80.2	0	51.9	23.1	116	9.77	32.7	
2-Methylnaphthalene	40.22	µg/L	2.0	80	0	50.3	19.5	112	16.5	34	
Acenaphthylene	41.73	µg/L	2.5	80.2	0	52.0	27.5	119	0.383	38.8	
Acenaphthene	46.47	µg/L	5.0	80	0	58.1	31	117	5.53	38.6	
Fluorene	4.170	µg/L	0.80	8.02	0	52.0	17.1	109	5.42	29.3	

Qualifiers:

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

## QA/QC SUMMARY REPORT

**Client:** Western Refining Southwest, Gallup  
**Project:** 3rd Qtr NAPIS

**Work Order:** 0909044

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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<b>Method:</b> EPA Method 8310: PAHs						<b>Batch ID:</b> 20037	<b>Analysis Date:</b> 9/9/2009 5:56:54 PM				
<b>Sample ID:</b> LCSD-20037		LCSD									
Phenanthrene	2.550	µg/L	0.60	4.02	0	63.4	25.5	112	3.59	25	
Anthracene	2.510	µg/L	0.60	4.02	0	62.4	25.8	119	2.83	23.9	
Fluoranthene	5.510	µg/L	0.30	8.02	0	68.7	27.2	122	10.3	15.7	
Pyrene	5.160	µg/L	0.30	8.02	0	64.3	24.1	118	13.4	15.3	
Benzo(a)anthracene	0.4700	µg/L	0.070	0.802	0	58.6	31.1	125	0	19	
Chrysene	2.410	µg/L	0.20	4.02	0	60.0	32.8	119	2.52	16.6	
Benzo(b)fluoranthene	0.5600	µg/L	0.10	1.002	0	55.9	24.4	117	1.80	21.7	
Benzo(k)fluoranthene	0.2900	µg/L	0.070	0.5	0	58.0	28.4	132	3.39	19.4	
Benzo(a)pyrene	0.2000	µg/L	0.070	0.502	0	39.8	32.4	119	26.1	16.7	R
Dibenz(a,h)anthracene	0.4900	µg/L	0.070	1.002	0	48.9	33.9	120	15.1	17.3	
Benzo(g,h,i)perylene	0.4700	µg/L	0.080	1	0	47.0	35.2	113	17.5	18	
Indeno(1,2,3-cd)pyrene	0.9700	µg/L	0.080	2.004	0	48.4	33.6	115	16.1	17.7	

**Qualifiers:**

- |  |  |
|--|--|
| E Estimated value                            | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | 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.

## Sample Receipt Checklist

Client Name **WESTERN REFINING GALLU**

Date Received: **9/2/2009**

Work Order Number **0909044**

Received by: **ARS**

Checklist completed by: \_\_\_\_\_

Signature

9/2/09  
Date

Sample ID labels checked by: \_\_\_\_\_

ARS  
Initials

Matrix: \_\_\_\_\_

Carrier name: UPS

- |   |  |  |   |
|---|--|--|---|
| 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 checked="" type="checkbox"/>                    | No <input type="checkbox"/>                                      | Not Present <input type="checkbox"/> Not Shipped <input type="checkbox"/> |
| Custody seals intact on sample bottles?                 | Yes <input checked="" type="checkbox"/>                    | No <input type="checkbox"/>                                      | N/A <input checked="" 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 type="checkbox"/>                               | No <input checked="" type="checkbox"/>                           |   |
| Water - VOA vials have zero headspace?                  | No VOA vials submitted <input checked="" type="checkbox"/> | Yes <input type="checkbox"/>                                     | No <input type="checkbox"/>   |
| Water - Preservation labels on bottle and cap match?    | Yes <input checked="" type="checkbox"/>                    | No <input type="checkbox"/>                                      | N/A <input type="checkbox"/>  |
| Water - pH acceptable upon receipt?                     | Yes <input checked="" type="checkbox"/>                    | No <input type="checkbox"/>                                      | N/A <input type="checkbox"/>  |
| Container/Temp Blank temperature?                       | <b>19.7°</b>   | <i>&lt;6° C Acceptable<br/>If given sufficient time to cool.</i> |   |

Number of preserved bottles checked for pH: 6  
<2 >12 unless noted below.

COMMENTS: \_\_\_\_\_

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

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

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

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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

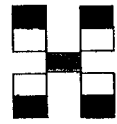
\_\_\_\_\_



# Chain-of-Custody Record

Client: Western Refining  
Coallup Refinery  
 Mailing Address: RT 3 BOX 7  
Coallup, 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: 3rd QTR NAPIS  
 Project #:  
 Project Manager: G Rajen  
 Sampler: Cheryl Johnson  
 Sample Temperature: 79°F



## 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	Total	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)	Gen Chem	Air Bubbles (Y c)
8/31/09	0958	H <sub>2</sub> O	<del>KA 3</del> NAPIS 3			1	X		X			X	X						X	
8/31/09	1031	H <sub>2</sub> O	NAPIS 3 KA 3			2	X	X				X	X						X	
			Trip Blank			3														

Date: 8/31/09 Time: 1138 Relinquished by: [Signature]

Received by: [Signature] Date: 12:20 Time: 9/2/09

Remarks: Gen Chem: Cations, Anions, pH Conductivity

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.