GW - 032

GENERAL CORRESPONDENCE

4/2007 - Present

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, June 10, 2011 6:13 AM
To: 'myoung@envirotech-inc.com'
Subject: FW: Gallup Refinery (GW-032) Evaporation Pond Network Geotechnical Stabilization
Attachments: 19.015.0036.pdf; 20115-13DischargePermitQuestionaire.pdf

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3490
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
"Why not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward with the Rest of the Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at:
http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

From: Chavez, Carl J, EMNRD
Sent: Friday, June 10, 2011 6:11 AM
To: 'myoung@envirotech-inc.om'
Cc: 'Riege, Ed'
Subject: Gallup Refinery (GW-032) Evaporation Pond Network Geotechnical Stabilization

Mr. Young

Good morning. It was a pleasure meeting you and your associate yesterday regarding the above subject.

The refinery is currently in the discharge permit renewal process with the OCD revising its WQCC Discharge Permits to only include discharges to surface and ground water while requiring operators to apply for OCD permits under its regulations for all non-WQCC systems, i.e., evaporation ponds (Rule 36: Surface Waste Management Facilities – see attachment and applications forms on OCD Web below-grade tanks, etc.).

The OCD needs to receive a "Modification Request" with attached engineering/geotechnial design and construction plan for the work you briefed me on that will improve or stabilize the existing evaporation pond treatment network, which OCD regards to be an engineered treatment system under the current permit. I recommend that the modification be submitted soon under the existing permit to avoid a separate process under Rule 36 above because there is a time limit specified in a recent OCD Questionnaire to operators (also attached) of November 15, 2012. This way, we can handle it under the existing transition. If this is not Western's path forward, then we will deal with it under a Part 36 application process.

Please contact me if you have questions or to arrange a meeting at your earliest convenience to discuss your draft engineering/geotechnical design and construction plan, etc. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3490
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm

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http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

Western Refining

BLOOMFIELD REFINERY

WNR LISTED NYSE

RECEIVED

2009 JUN 2 AM 10 01

Carl J. Chavez, CHMM
New Mexico Oil Conservation Division
Environmental Bureau
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Certified Mail: #7007 0220 0004 0187 0824

May 29, 2009

RE: Western Refining Southwest, Inc. – Bloomfield Refinery
EPA ID# NMD089416416
GW - 001 & UICL-9

Dear Mr. Chavez,

Western Refining Southwest, Inc – Bloomfield Refinery has scheduled inspection of all water-draw sumps located in the Tank Farm to begin the week of June 8, 2009. Each sump will be cleaned out with a Vacuum Truck, visually inspected, and hydro-tested to insure integrity.

If any representatives from the OCD would like to participate, please contact me so that safety orientation training can be scheduled for incoming personnel.

If you need additional information, please contact me at (505) 632-4161.

Sincerely,

Cindy Hurtado

Cindy Hurtado
Environmental Coordinator
Bloomfield Refinery

Cc: Randy Schmaltz – Environmental Manager – Bloomfield Refinery
Brandon Powell – NMOCD Aztec District Office

Chavez, Carl J, EMNRD

From: Monzeglio, Hope, NMENV
Sent: Wednesday, May 27, 2009 8:18 AM
To: Riege, Ed
Cc: Cobrain, Dave, NMENV; Kieling, John, NMENV; Jones, Brad A., EMNRD; Chavez, Carl J, EMNRD; Rajen, Gaurav; Martinez, Cynthia, NMENV
Subject: Installation of monitoring wells
Attachments: GRCC MISC Requirement install MW.pdf

This will go out in the mail tomorrow.

Hope

Hope Monzeglio
Environmental Specialist
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, BLDG 1
Santa Fe NM 87505
Phone: (505) 476-6045; Main No.: (505)-476-6000
Fax: (505)-476-6060
hope.monzeglio@state.nm.us

Websites:
New Mexico Environment Department
Hazardous Waste Bureau

NEW MEXICO ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Phone (505) 476-6000 Fax (505) 476-6030
www.nmenv.state.nm.us

BILL RICHARDSON
Governor

DIANE DENISH
Lieutenant Governor

RON CURRY
Secretary

JON GOLDSTEIN
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

May 28, 2009

Mr. Ed Riege
Environmental Superintendent
Western Refining, Southwest Inc., Gallup Refinery
Route 3, Box 7
Gallup, New Mexico 87301

RE: REQUIREMENT TO INSTALL MONITORING WELLS
WESTERN REFINING COMPANY, SOUTHWEST, INC., GALLUP REFINERY
HWB-GRCC-MISC
EPA ID # NMD000333211

Dear Mr. Riege:

The New Mexico Environment Department (NMED) requires Western Refining Southwest Inc., (the Permittee) to install two monitoring wells. This requirement was addressed in Comment 14 of NMED's March 26, 2009 Notice of Disapproval (NOD) to the *Oil Conservation Division 2007 Annual Groundwater Report (and OCD Addendum)*, dated August 28, 2008. In Comment 14, NMED stated "[t]he Permittee must install another well(s) downgradient of OW-13 and OW-29 to determine if contamination has migrated north, northwest of the refinery and potentially offsite. NMED will address the installation of additional well(s) in a separate letter."

The Permittee must install two monitoring wells at the Gallup Refinery to meet the specifications described below:

a. The Permittee must locate the extension of the sand/gravel water bearing layer that extends north of OW-29 and install one monitoring well at the approximate location specified in the attached Figure 1.

b. The Permittee must locate and install a monitoring well intersecting the sand stringer that is generally oriented east/west that is anticipated to extend across the northern end of the facility. This relatively coarse-grained zone has been observed near the east end of the old landing strip and in the vicinity of the north ends of Evaporation Ponds 11 and 12. See the attached Figure 1 for the approximate well location.

c. The monitoring wells must be screened to cross the water table with approximately five feet of screen above the water table no less than five and no more than ten feet of screen below the water table. This will accommodate seasonal fluctuations and detection of separate-phase hydrocarbons. The screened intervals in the wells must intersect a minimum water column of five feet, if possible.

d. During drilling, if the Permittee achieves the approximate target depth but does not encounter water, the boring must be left open over night to allow for infiltration of groundwater. The Permittee must contact NMED prior to abandoning the boring or installing the well if these conditions are encountered.

e. The monitoring wells must be developed within ten days of being installed and the initial sampling must analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), RCRA 8 metals, gasoline range organics (GRO), diesel range organics (DRO) extended, and general chemistry parameters.

f. The monitoring wells must be installed no later than October 30, 2009. Once installation is complete, the monitoring wells must be added to the annual update to the Facility Wide Groundwater Monitoring Plan. The Permittee must submit to NMED a summary well installation report that includes the well logs, well construction details, survey data, and initial groundwater monitoring and sampling data no later than December 31, 2009.

The approximate monitoring well locations are not based on specific knowledge of the presence of sand stringers. The Permittee will need to locate the sand stringers based on review of past drilling operations and well logs at the refinery.

If you have questions regarding this letter please contact Hope Monzeglio of my staff at 505-476-6045.

Sincerely,

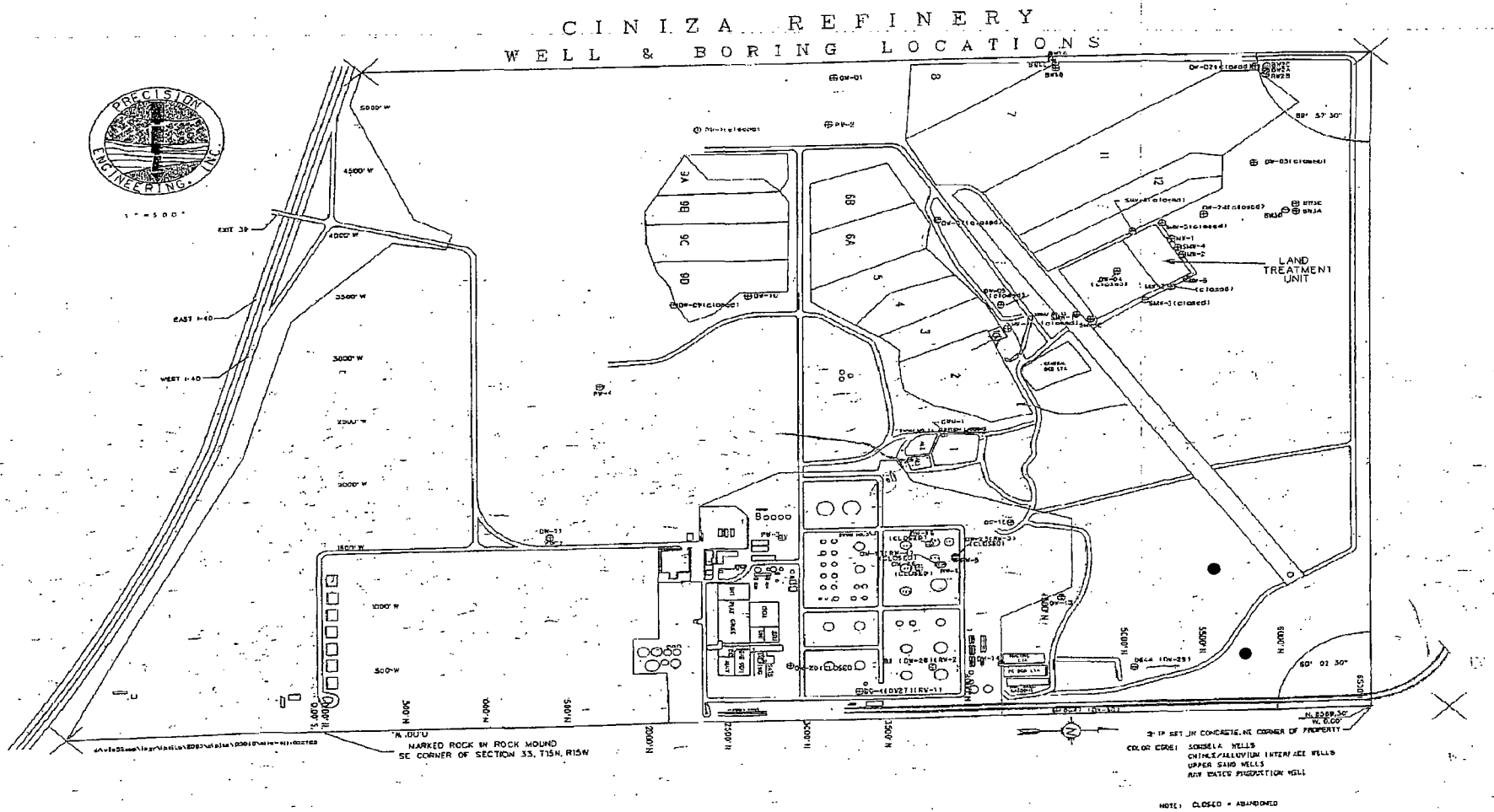
John E. Kieling
Program Manager
Permits Management Program
Hazardous Waste Bureau

cc: D. Cobrain NMED HWB
H. Monzeglio NMED HWB
B. Jones, OCD
C. Chavez, OCD
R. Gaurav, Gallup
File: Reading File and GRCC 2009 File
HWB-GRCC-MISC

Figure 1

Monitoring Well Location ●

Monitoring well locations are approximate



Chavez, Carl J, EMNRD

From: Jones, Brad A., EMNRD
Sent: Tuesday, June 02, 2009 8:32 AM
To: Chavez, Carl J, EMNRD
Subject: FW: Benzene results for April, 2009
Attachments: April 2.pdf; April 6.pdf; April 17.pdf; April 20.pdf; April 30.pdf

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From: Rajen, Gaurav [mailto:Gaurav.Rajen@wnr.com]
Sent: Thursday, May 28, 2009 1:54 PM
To: Monzeglio, Hope, NMENV; Jones, Brad A., EMNRD
Cc: Cobrain, Dave, NMENV; Riege, Ed; Turri, Mark
Subject: Benzene results for April, 2009

Dear Hope:

It is a pleasure to send you our flow rate data and benzene strippers' analytical data for the month of April, 2009.

The analytical data are attached in the reports we have received from Hall Environmental Laboratory. You will note in the attached reports (as also for January, February and March 2009) that MTBE levels have consistently always been at non-detection levels. We are working with the laboratory to improve the detection levels as you have requested.

Through the benzene strippers 1 and 2 after the New API Separator (NAPIS), our average flow rate for the month of April 2009 in gallons per minutes was 212 GPM (with a maximum of approximately 301 GPM and a minimum of 166 GPM). We measure these flows by logging the depth in a 60 degrees trapezoidal flume approximately 6 times a day, and then averaging the depth readings, and using the flume's calibration curve to estimate the flow rate.

For the benzene stripper 3 in our process area, in April only our Desalter effluent was routed to this stripper. Previously, we have sent you details of other units that can be routed at times. The Desalter effluents are approximately 4.5% of our crude charge rates, and for April this works out to approximately 18 GPM as the monthly average flow rate. As our crude charge rate varied through April, we estimate that the minimum and maximum average daily flow rates through the benzene stripper 3 varied between 16 GPM and 20 GPM for the month of April, 2009.

Best regards,

Raj

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Wednesday, April 15, 2009

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

TEL: (505) 722-0227
FAX (505) 722-0210

RE: Qtrly Method 8260B Air Quality Permit 0633-m7

Order No.: 0904113

Dear Gaurav Rajen:

Hall Environmental Analysis Laboratory, Inc. received 4 sample(s) on 4/8/2009 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 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,

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

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

Hall Environmental Analysis Laboratory, Inc. **Date:** *15-Apr-09*

CLIENT:	Western Refining Southwest, Gallup
Project:	Qtrly Method 8260B Air Quality Permit 0633-m
Lab Order:	0904113

CASE NARRATIVE

The Benzene stripper 1 and 2 (in and out) both had pHs >2.

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Apr-09*

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	Bz Stripper 1&2 IN
Lab Order:	0904113	**Collection Date:**	4/2/2009 10:00:00 AM
Project:	Qtrly Method 8260B Air Quality Permit 0633-m	**Date Received:**	4/8/2009
Lab ID:	0904113-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Benzene	2400	50		µg/L	50	4/13/2009 6:07:51 PM
Toluene	6700	200		µg/L	200	4/13/2009 5:39:12 PM
Ethylbenzene	510	50		µg/L	50	4/13/2009 6:07:51 PM
Methyl tert-butyl ether (MTBE)	ND	50		µg/L	50	4/13/2009 6:07:51 PM
1,2,4-Trimethylbenzene	520	50		µg/L	50	4/13/2009 6:07:51 PM
1,3,5-Trimethylbenzene	160	50		µg/L	50	4/13/2009 6:07:51 PM
1,2-Dichloroethane (EDC)	ND	50		µg/L	50	4/13/2009 6:07:51 PM
1,2-Dibromoethane (EDB)	ND	50		µg/L	50	4/13/2009 6:07:51 PM
Naphthalene	280	100		µg/L	50	4/13/2009 6:07:51 PM
1-Methylnaphthalene	ND	200		µg/L	50	4/13/2009 6:07:51 PM
2-Methylnaphthalene	230	200		µg/L	50	4/13/2009 6:07:51 PM
Acetone	2600	500		µg/L	50	4/13/2009 6:07:51 PM
Bromobenzene	ND	50		µg/L	50	4/13/2009 6:07:51 PM
Bromodichloromethane	ND	50		µg/L	50	4/13/2009 6:07:51 PM
Bromoform	ND	50		µg/L	50	4/13/2009 6:07:51 PM
Bromomethane	ND	50		µg/L	50	4/13/2009 6:07:51 PM
2-Butanone	ND	500		µg/L	50	4/13/2009 6:07:51 PM
Carbon disulfide	ND	500		µg/L	50	4/13/2009 6:07:51 PM
Carbon Tetrachloride	ND	50		µg/L	50	4/13/2009 6:07:51 PM
Chlorobenzene	ND	50		µg/L	50	4/13/2009 6:07:51 PM
Chloroethane	ND	100		µg/L	50	4/13/2009 6:07:51 PM
Chloroform	ND	50		µg/L	50	4/13/2009 6:07:51 PM
Chloromethane	ND	50		µg/L	50	4/13/2009 6:07:51 PM
2-Chlorotoluene	ND	50		µg/L	50	4/13/2009 6:07:51 PM
4-Chlorotoluene	ND	50		µg/L	50	4/13/2009 6:07:51 PM
cis-1,2-DCE	ND	50		µg/L	50	4/13/2009 6:07:51 PM
cis-1,3-Dichloropropene	ND	50		µg/L	50	4/13/2009 6:07:51 PM
1,2-Dibromo-3-chloropropane	ND	100		µg/L	50	4/13/2009 6:07:51 PM
Dibromochloromethane	ND	50		µg/L	50	4/13/2009 6:07:51 PM
Dibromomethane	ND	50		µg/L	50	4/13/2009 6:07:51 PM
1,2-Dichlorobenzene	ND	50		µg/L	50	4/13/2009 6:07:51 PM
1,3-Dichlorobenzene	ND	50		µg/L	50	4/13/2009 6:07:51 PM
1,4-Dichlorobenzene	ND	50		µg/L	50	4/13/2009 6:07:51 PM
Dichlorodifluoromethane	ND	50		µg/L	50	4/13/2009 6:07:51 PM
1,1-Dichloroethane	ND	50		µg/L	50	4/13/2009 6:07:51 PM
1,1-Dichloroethene	ND	50		µg/L	50	4/13/2009 6:07:51 PM
1,2-Dichloropropane	ND	50		µg/L	50	4/13/2009 6:07:51 PM
1,3-Dichloropropane	ND	50		µg/L	50	4/13/2009 6:07:51 PM
2,2-Dichloropropane	ND	100		µg/L	50	4/13/2009 6:07:51 PM
1,1-Dichloropropene	ND	50		µg/L	50	4/13/2009 6:07:51 PM
Hexachlorobutadiene	ND	50		µg/L	50	4/13/2009 6:07:51 PM
2-Hexanone	ND	500		µg/L	50	4/13/2009 6:07:51 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Apr-09*

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	Bz Stripper 1&2 IN
Lab Order:	0904113	**Collection Date:**	4/2/2009 10:00:00 AM
Project:	Qtrly Method 8260B Air Quality Permit 0633-m	**Date Received:**	4/8/2009
Lab ID:	0904113-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **HL**
Isopropylbenzene	ND	50		µg/L	50	4/13/2009 6:07:51 PM
4-Isopropyltoluene	ND	50		µg/L	50	4/13/2009 6:07:51 PM
4-Methyl-2-pentanone	ND	500		µg/L	50	4/13/2009 6:07:51 PM
Methylene Chloride	ND	150		µg/L	50	4/13/2009 6:07:51 PM
n-Butylbenzene	ND	50		µg/L	50	4/13/2009 6:07:51 PM
n-Propylbenzene	68	50		µg/L	50	4/13/2009 6:07:51 PM
sec-Butylbenzene	ND	50		µg/L	50	4/13/2009 6:07:51 PM
Styrene	ND	50		µg/L	50	4/13/2009 6:07:51 PM
tert-Butylbenzene	ND	50		µg/L	50	4/13/2009 6:07:51 PM
1,1,1,2-Tetrachloroethane	ND	50		µg/L	50	4/13/2009 6:07:51 PM
1,1,2,2-Tetrachloroethane	ND	100		µg/L	50	4/13/2009 6:07:51 PM
Tetrachloroethene (PCE)	ND	50		µg/L	50	4/13/2009 6:07:51 PM
trans-1,2-DCE	ND	50		µg/L	50	4/13/2009 6:07:51 PM
trans-1,3-Dichloropropene	ND	50		µg/L	50	4/13/2009 6:07:51 PM
1,2,3-Trichlorobenzene	ND	50		µg/L	50	4/13/2009 6:07:51 PM
1,2,4-Trichlorobenzene	ND	50		µg/L	50	4/13/2009 6:07:51 PM
1,1,1-Trichloroethane	ND	50		µg/L	50	4/13/2009 6:07:51 PM
1,1,2-Trichloroethane	ND	50		µg/L	50	4/13/2009 6:07:51 PM
Trichloroethene (TCE)	ND	50		µg/L	50	4/13/2009 6:07:51 PM
Trichlorofluoromethane	ND	50		µg/L	50	4/13/2009 6:07:51 PM
1,2,3-Trichloropropane	ND	100		µg/L	50	4/13/2009 6:07:51 PM
Vinyl chloride	ND	50		µg/L	50	4/13/2009 6:07:51 PM
Xylenes, Total	3000	75		µg/L	50	4/13/2009 6:07:51 PM
Surr: 1,2-Dichloroethane-d4	90.0	68.1-123		%REC	50	4/13/2009 6:07:51 PM
Surr: 4-Bromofluorobenzene	101	53.2-145		%REC	50	4/13/2009 6:07:51 PM
Surr: Dibromofluoromethane	90.0	68.5-119		%REC	50	4/13/2009 6:07:51 PM
Surr: Toluene-d8	89.1	64-131		%REC	50	4/13/2009 6:07:51 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Apr-09*

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	Bz Stripper 1&2 OUT
Lab Order:	0904113	**Collection Date:**	4/2/2009 10:15:00 AM
Project:	Qtrly Method 8260B Air Quality Permit 0633-m	**Date Received:**	4/8/2009
Lab ID:	0904113-02	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **HL**
Benzene	180	20		µg/L	20	4/13/2009 6:36:28 PM
Toluene	590	20		µg/L	20	4/13/2009 6:36:28 PM
Ethylbenzene	75	20		µg/L	20	4/13/2009 6:36:28 PM
Methyl tert-butyl ether (MTBE)	ND	20		µg/L	20	4/13/2009 6:36:28 PM
1,2,4-Trimethylbenzene	210	20		µg/L	20	4/13/2009 6:36:28 PM
1,3,5-Trimethylbenzene	68	20		µg/L	20	4/13/2009 6:36:28 PM
1,2-Dichloroethane (EDC)	ND	20		µg/L	20	4/13/2009 6:36:28 PM
1,2-Dibromoethane (EDB)	ND	20		µg/L	20	4/13/2009 6:36:28 PM
Naphthalene	100	40		µg/L	20	4/13/2009 6:36:28 PM
1-Methylnaphthalene	96	80		µg/L	20	4/13/2009 6:36:28 PM
2-Methylnaphthalene	190	80		µg/L	20	4/13/2009 6:36:28 PM
Acetone	3000	200		µg/L	20	4/13/2009 6:36:28 PM
Bromobenzene	ND	20		µg/L	20	4/13/2009 6:36:28 PM
Bromodichloromethane	ND	20		µg/L	20	4/13/2009 6:36:28 PM
Bromoform	ND	20		µg/L	20	4/13/2009 6:36:28 PM
Bromomethane	ND	20		µg/L	20	4/13/2009 6:36:28 PM
2-Butanone	ND	200		µg/L	20	4/13/2009 6:36:28 PM
Carbon disulfide	ND	200		µg/L	20	4/13/2009 6:36:28 PM
Carbon Tetrachloride	ND	20		µg/L	20	4/13/2009 6:36:28 PM
Chlorobenzene	ND	20		µg/L	20	4/13/2009 6:36:28 PM
Chloroethane	ND	40		µg/L	20	4/13/2009 6:36:28 PM
Chloroform	ND	20		µg/L	20	4/13/2009 6:36:28 PM
Chloromethane	ND	20		µg/L	20	4/13/2009 6:36:28 PM
2-Chlorotoluene	ND	20		µg/L	20	4/13/2009 6:36:28 PM
4-Chlorotoluene	ND	20		µg/L	20	4/13/2009 6:36:28 PM
cis-1,2-DCE	ND	20		µg/L	20	4/13/2009 6:36:28 PM
cis-1,3-Dichloropropene	ND	20		µg/L	20	4/13/2009 6:36:28 PM
1,2-Dibromo-3-chloropropane	ND	40		µg/L	20	4/13/2009 6:36:28 PM
Dibromochloromethane	ND	20		µg/L	20	4/13/2009 6:36:28 PM
Dibromomethane	ND	20		µg/L	20	4/13/2009 6:36:28 PM
1,2-Dichlorobenzene	ND	20		µg/L	20	4/13/2009 6:36:28 PM
1,3-Dichlorobenzene	ND	20		µg/L	20	4/13/2009 6:36:28 PM
1,4-Dichlorobenzene	ND	20		µg/L	20	4/13/2009 6:36:28 PM
Dichlorodifluoromethane	ND	20		µg/L	20	4/13/2009 6:36:28 PM
1,1-Dichloroethane	ND	20		µg/L	20	4/13/2009 6:36:28 PM
1,1-Dichloroethene	ND	20		µg/L	20	4/13/2009 6:36:28 PM
1,2-Dichloropropane	ND	20		µg/L	20	4/13/2009 6:36:28 PM
1,3-Dichloropropane	ND	20		µg/L	20	4/13/2009 6:36:28 PM
2,2-Dichloropropane	ND	40		µg/L	20	4/13/2009 6:36:28 PM
1,1-Dichloropropene	ND	20		µg/L	20	4/13/2009 6:36:28 PM
Hexachlorobutadiene	ND	20		µg/L	20	4/13/2009 6:36:28 PM
2-Hexanone	ND	200		µg/L	20	4/13/2009 6:36:28 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Apr-09*

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	Bz Stripper 1&2 OUT
Lab Order:	0904113	**Collection Date:**	4/2/2009 10:15:00 AM
Project:	Qtrly Method 8260B Air Quality Permit 0633-m	**Date Received:**	4/8/2009
Lab ID:	0904113-02	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Isopropylbenzene	ND	20		µg/L	20	4/13/2009 6:36:28 PM
4-Isopropyltoluene	ND	20		µg/L	20	4/13/2009 6:36:28 PM
4-Methyl-2-pentanone	ND	200		µg/L	20	4/13/2009 6:36:28 PM
Methylene Chloride	ND	60		µg/L	20	4/13/2009 6:36:28 PM
n-Butylbenzene	36	20		µg/L	20	4/13/2009 6:36:28 PM
n-Propylbenzene	26	20		µg/L	20	4/13/2009 6:36:28 PM
sec-Butylbenzene	ND	20		µg/L	20	4/13/2009 6:36:28 PM
Styrene	ND	20		µg/L	20	4/13/2009 6:36:28 PM
tert-Butylbenzene	ND	20		µg/L	20	4/13/2009 6:36:28 PM
1,1,1,2-Tetrachloroethane	ND	20		µg/L	20	4/13/2009 6:36:28 PM
1,1,2,2-Tetrachloroethane	ND	40		µg/L	20	4/13/2009 6:36:28 PM
Tetrachloroethene (PCE)	ND	20		µg/L	20	4/13/2009 6:36:28 PM
trans-1,2-DCE	ND	20		µg/L	20	4/13/2009 6:36:28 PM
trans-1,3-Dichloropropene	ND	20		µg/L	20	4/13/2009 6:36:28 PM
1,2,3-Trichlorobenzene	ND	20		µg/L	20	4/13/2009 6:36:28 PM
1,2,4-Trichlorobenzene	ND	20		µg/L	20	4/13/2009 6:36:28 PM
1,1,1-Trichloroethane	ND	20		µg/L	20	4/13/2009 6:36:28 PM
1,1,2-Trichloroethane	ND	20		µg/L	20	4/13/2009 6:36:28 PM
Trichloroethene (TCE)	ND	20		µg/L	20	4/13/2009 6:36:28 PM
Trichlorofluoromethane	ND	20		µg/L	20	4/13/2009 6:36:28 PM
1,2,3-Trichloropropane	ND	40		µg/L	20	4/13/2009 6:36:28 PM
Vinyl chloride	ND	20		µg/L	20	4/13/2009 6:36:28 PM
Xylenes, Total	550	30		µg/L	20	4/13/2009 6:36:28 PM
Surr: 1,2-Dichloroethane-d4	84.4	68.1-123		%REC	20	4/13/2009 6:36:28 PM
Surr: 4-Bromofluorobenzene	104	53.2-145		%REC	20	4/13/2009 6:36:28 PM
Surr: Dibromofluoromethane	96.4	68.5-119		%REC	20	4/13/2009 6:36:28 PM
Surr: Toluene-d8	94.1	64-131		%REC	20	4/13/2009 6:36:28 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Apr-09*

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	3rd Bz Stripper IN
Lab Order:	0904113	**Collection Date:**	4/2/2009 10:45:00 AM
Project:	Qtrly Method 8260B Air Quality Permit 0633-m	**Date Received:**	4/8/2009
Lab ID:	0904113-03	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Benzene	30000	800		µg/L	800	4/13/2009 7:05:06 PM
Toluene	31000	800		µg/L	800	4/13/2009 7:05:06 PM
Ethylbenzene	1200	100		µg/L	100	4/13/2009 7:33:44 PM
Methyl tert-butyl ether (MTBE)	ND	100		µg/L	100	4/13/2009 7:33:44 PM
1,2,4-Trimethylbenzene	960	100		µg/L	100	4/13/2009 7:33:44 PM
1,3,5-Trimethylbenzene	340	100		µg/L	100	4/13/2009 7:33:44 PM
1,2-Dichloroethane (EDC)	ND	100		µg/L	100	4/13/2009 7:33:44 PM
1,2-Dibromoethane (EDB)	ND	100		µg/L	100	4/13/2009 7:33:44 PM
Naphthalene	390	200		µg/L	100	4/13/2009 7:33:44 PM
1-Methylnaphthalene	ND	400		µg/L	100	4/13/2009 7:33:44 PM
2-Methylnaphthalene	ND	400		µg/L	100	4/13/2009 7:33:44 PM
Acetone	2000	1000		µg/L	100	4/13/2009 7:33:44 PM
Bromobenzene	ND	100		µg/L	100	4/13/2009 7:33:44 PM
Bromodichloromethane	ND	100		µg/L	100	4/13/2009 7:33:44 PM
Bromoform	ND	100		µg/L	100	4/13/2009 7:33:44 PM
Bromomethane	ND	100		µg/L	100	4/13/2009 7:33:44 PM
2-Butanone	ND	1000		µg/L	100	4/13/2009 7:33:44 PM
Carbon disulfide	ND	1000		µg/L	100	4/13/2009 7:33:44 PM
Carbon Tetrachloride	ND	100		µg/L	100	4/13/2009 7:33:44 PM
Chlorobenzene	ND	100		µg/L	100	4/13/2009 7:33:44 PM
Chloroethane	ND	200		µg/L	100	4/13/2009 7:33:44 PM
Chloroform	ND	100		µg/L	100	4/13/2009 7:33:44 PM
Chloromethane	ND	100		µg/L	100	4/13/2009 7:33:44 PM
2-Chlorotoluene	ND	100		µg/L	100	4/13/2009 7:33:44 PM
4-Chlorotoluene	ND	100		µg/L	100	4/13/2009 7:33:44 PM
cis-1,2-DCE	ND	100		µg/L	100	4/13/2009 7:33:44 PM
cis-1,3-Dichloropropene	ND	100		µg/L	100	4/13/2009 7:33:44 PM
1,2-Dibromo-3-chloropropane	ND	200		µg/L	100	4/13/2009 7:33:44 PM
Dibromochloromethane	ND	100		µg/L	100	4/13/2009 7:33:44 PM
Dibromomethane	ND	100		µg/L	100	4/13/2009 7:33:44 PM
1,2-Dichlorobenzene	ND	100		µg/L	100	4/13/2009 7:33:44 PM
1,3-Dichlorobenzene	ND	100		µg/L	100	4/13/2009 7:33:44 PM
1,4-Dichlorobenzene	ND	100		µg/L	100	4/13/2009 7:33:44 PM
Dichlorodifluoromethane	ND	100		µg/L	100	4/13/2009 7:33:44 PM
1,1-Dichloroethane	ND	100		µg/L	100	4/13/2009 7:33:44 PM
1,1-Dichloroethene	ND	100		µg/L	100	4/13/2009 7:33:44 PM
1,2-Dichloropropane	ND	100		µg/L	100	4/13/2009 7:33:44 PM
1,3-Dichloropropane	ND	100		µg/L	100	4/13/2009 7:33:44 PM
2,2-Dichloropropane	ND	200		µg/L	100	4/13/2009 7:33:44 PM
1,1-Dichloropropene	ND	100		µg/L	100	4/13/2009 7:33:44 PM
Hexachlorobutadiene	ND	100		µg/L	100	4/13/2009 7:33:44 PM
2-Hexanone	ND	1000		µg/L	100	4/13/2009 7:33:44 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Apr-09*

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	3rd Bz Stripper IN
Lab Order:	0904113	**Collection Date:**	4/2/2009 10:45:00 AM
Project:	Qtrly Method 8260B Air Quality Permit 0633-m	**Date Received:**	4/8/2009
Lab ID:	0904113-03	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Isopropylbenzene	ND	100		µg/L	100	4/13/2009 7:33:44 PM
4-Isopropyltoluene	ND	100		µg/L	100	4/13/2009 7:33:44 PM
4-Methyl-2-pentanone	ND	1000		µg/L	100	4/13/2009 7:33:44 PM
Methylene Chloride	ND	300		µg/L	100	4/13/2009 7:33:44 PM
n-Butylbenzene	ND	100		µg/L	100	4/13/2009 7:33:44 PM
n-Propylbenzene	120	100		µg/L	100	4/13/2009 7:33:44 PM
sec-Butylbenzene	ND	100		µg/L	100	4/13/2009 7:33:44 PM
Styrene	ND	100		µg/L	100	4/13/2009 7:33:44 PM
tert-Butylbenzene	ND	100		µg/L	100	4/13/2009 7:33:44 PM
1,1,1,2-Tetrachloroethane	ND	100		µg/L	100	4/13/2009 7:33:44 PM
1,1,2,2-Tetrachloroethane	ND	200		µg/L	100	4/13/2009 7:33:44 PM
Tetrachloroethene (PCE)	ND	100		µg/L	100	4/13/2009 7:33:44 PM
trans-1,2-DCE	ND	100		µg/L	100	4/13/2009 7:33:44 PM
trans-1,3-Dichloropropene	ND	100		µg/L	100	4/13/2009 7:33:44 PM
1,2,3-Trichlorobenzene	ND	100		µg/L	100	4/13/2009 7:33:44 PM
1,2,4-Trichlorobenzene	ND	100		µg/L	100	4/13/2009 7:33:44 PM
1,1,1-Trichloroethane	ND	100		µg/L	100	4/13/2009 7:33:44 PM
1,1,2-Trichloroethane	ND	100		µg/L	100	4/13/2009 7:33:44 PM
Trichloroethene (TCE)	ND	100		µg/L	100	4/13/2009 7:33:44 PM
Trichlorofluoromethane	ND	100		µg/L	100	4/13/2009 7:33:44 PM
1,2,3-Trichloropropane	ND	200		µg/L	100	4/13/2009 7:33:44 PM
Vinyl chloride	ND	100		µg/L	100	4/13/2009 7:33:44 PM
Xylenes, Total	9000	150		µg/L	100	4/13/2009 7:33:44 PM
Surr: 1,2-Dichloroethane-d4	90.9	68.1-123		%REC	100	4/13/2009 7:33:44 PM
Surr: 4-Bromofluorobenzene	111	53.2-145		%REC	100	4/13/2009 7:33:44 PM
Surr: Dibromofluoromethane	81.0	68.5-119		%REC	100	4/13/2009 7:33:44 PM
Surr: Toluene-d8	80.1	64-131		%REC	100	4/13/2009 7:33:44 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Apr-09*

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	3rd BZ Stripper OUT
Lab Order:	0904113	**Collection Date:**	4/2/2009 11:00:00 AM
Project:	Qtrly Method 8260B Air Quality Permit 0633-m	**Date Received:**	4/8/2009
Lab ID:	0904113-04	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Benzene	4100	50		µg/L	50	4/13/2009 8:02:23 PM
Toluene	3900	50		µg/L	50	4/13/2009 8:02:23 PM
Ethylbenzene	230	10		µg/L	10	4/13/2009 8:31:00 PM
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	4/13/2009 8:31:00 PM
1,2,4-Trimethylbenzene	200	10		µg/L	10	4/13/2009 8:31:00 PM
1,3,5-Trimethylbenzene	75	10		µg/L	10	4/13/2009 8:31:00 PM
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	4/13/2009 8:31:00 PM
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	4/13/2009 8:31:00 PM
Naphthalene	150	20		µg/L	10	4/13/2009 8:31:00 PM
1-Methylnaphthalene	87	40		µg/L	10	4/13/2009 8:31:00 PM
2-Methylnaphthalene	110	40		µg/L	10	4/13/2009 8:31:00 PM
Acetone	1700	100		µg/L	10	4/13/2009 8:31:00 PM
Bromobenzene	ND	10		µg/L	10	4/13/2009 8:31:00 PM
Bromodichloromethane	ND	10		µg/L	10	4/13/2009 8:31:00 PM
Bromoform	ND	10		µg/L	10	4/13/2009 8:31:00 PM
Bromomethane	ND	10		µg/L	10	4/13/2009 8:31:00 PM
2-Butanone	120	100		µg/L	10	4/13/2009 8:31:00 PM
Carbon disulfide	ND	100		µg/L	10	4/13/2009 8:31:00 PM
Carbon Tetrachloride	ND	10		µg/L	10	4/13/2009 8:31:00 PM
Chlorobenzene	ND	10		µg/L	10	4/13/2009 8:31:00 PM
Chloroethane	ND	20		µg/L	10	4/13/2009 8:31:00 PM
Chloroform	ND	10		µg/L	10	4/13/2009 8:31:00 PM
Chloromethane	ND	10		µg/L	10	4/13/2009 8:31:00 PM
2-Chlorotoluene	ND	10		µg/L	10	4/13/2009 8:31:00 PM
4-Chlorotoluene	ND	10		µg/L	10	4/13/2009 8:31:00 PM
cis-1,2-DCE	ND	10		µg/L	10	4/13/2009 8:31:00 PM
cis-1,3-Dichloropropene	ND	10		µg/L	10	4/13/2009 8:31:00 PM
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	4/13/2009 8:31:00 PM
Dibromochloromethane	ND	10		µg/L	10	4/13/2009 8:31:00 PM
Dibromomethane	ND	10		µg/L	10	4/13/2009 8:31:00 PM
1,2-Dichlorobenzene	ND	10		µg/L	10	4/13/2009 8:31:00 PM
1,3-Dichlorobenzene	ND	10		µg/L	10	4/13/2009 8:31:00 PM
1,4-Dichlorobenzene	ND	10		µg/L	10	4/13/2009 8:31:00 PM
Dichlorodifluoromethane	ND	10		µg/L	10	4/13/2009 8:31:00 PM
1,1-Dichloroethane	ND	10		µg/L	10	4/13/2009 8:31:00 PM
1,1-Dichloroethene	ND	10		µg/L	10	4/13/2009 8:31:00 PM
1,2-Dichloropropane	ND	10		µg/L	10	4/13/2009 8:31:00 PM
1,3-Dichloropropane	ND	10		µg/L	10	4/13/2009 8:31:00 PM
2,2-Dichloropropane	ND	20		µg/L	10	4/13/2009 8:31:00 PM
1,1-Dichloropropene	ND	10		µg/L	10	4/13/2009 8:31:00 PM
Hexachlorobutadiene	ND	10		µg/L	10	4/13/2009 8:31:00 PM
2-Hexanone	ND	100		µg/L	10	4/13/2009 8:31:00 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Apr-09*

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	3rd BZ Stripper OUT
Lab Order:	0904113	**Collection Date:**	4/2/2009 11:00:00 AM
Project:	Qtrly Method 8260B Air Quality Permit 0633-m	**Date Received:**	4/8/2009
Lab ID:	0904113-04	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Isopropylbenzene	20	10		µg/L	10	4/13/2009 8:31:00 PM
4-Isopropyltoluene	ND	10		µg/L	10	4/13/2009 8:31:00 PM
4-Methyl-2-pentanone	ND	100		µg/L	10	4/13/2009 8:31:00 PM
Methylene Chloride	ND	30		µg/L	10	4/13/2009 8:31:00 PM
n-Butylbenzene	13	10		µg/L	10	4/13/2009 8:31:00 PM
n-Propylbenzene	24	10		µg/L	10	4/13/2009 8:31:00 PM
sec-Butylbenzene	ND	10		µg/L	10	4/13/2009 8:31:00 PM
Styrene	ND	10		µg/L	10	4/13/2009 8:31:00 PM
tert-Butylbenzene	ND	10		µg/L	10	4/13/2009 8:31:00 PM
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	4/13/2009 8:31:00 PM
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	4/13/2009 8:31:00 PM
Tetrachloroethene (PCE)	ND	10		µg/L	10	4/13/2009 8:31:00 PM
trans-1,2-DCE	ND	10		µg/L	10	4/13/2009 8:31:00 PM
trans-1,3-Dichloropropene	ND	10		µg/L	10	4/13/2009 8:31:00 PM
1,2,3-Trichlorobenzene	ND	10		µg/L	10	4/13/2009 8:31:00 PM
1,2,4-Trichlorobenzene	ND	10		µg/L	10	4/13/2009 8:31:00 PM
1,1,1-Trichloroethane	ND	10		µg/L	10	4/13/2009 8:31:00 PM
1,1,2-Trichloroethane	ND	10		µg/L	10	4/13/2009 8:31:00 PM
Trichloroethene (TCE)	ND	10		µg/L	10	4/13/2009 8:31:00 PM
Trichlorofluoromethane	ND	10		µg/L	10	4/13/2009 8:31:00 PM
1,2,3-Trichloropropane	ND	20		µg/L	10	4/13/2009 8:31:00 PM
Vinyl chloride	ND	10		µg/L	10	4/13/2009 8:31:00 PM
Xylenes, Total	1800	15		µg/L	10	4/13/2009 8:31:00 PM
Surr: 1,2-Dichloroethane-d4	91.5	68.1-123		%REC	10	4/13/2009 8:31:00 PM
Surr: 4-Bromofluorobenzene	98.0	53.2-145		%REC	10	4/13/2009 8:31:00 PM
Surr: Dibromofluoromethane	80.7	68.5-119		%REC	50	4/13/2009 8:02:23 PM
Surr: Toluene-d8	93.9	64-131		%REC	10	4/13/2009 8:31:00 PM

Qualifiers:

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

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Gallup
Project: Qtrly Method 8260B Air Quality Permit 0633-m **Work Order:** 0904113

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260B: VOLATILES									
Sample ID: 5ml rb		*MBLK*			Batch ID: **R33223**		Analysis Date:	4/13/2009 8:34:24 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						
1,2,4-Trimethylbenzene	ND	µg/L	1.0						
1,3,5-Trimethylbenzene	ND	µg/L	1.0						
1,2-Dichloroethane (EDC)	ND	µg/L	1.0						
1,2-Dibromoethane (EDB)	ND	µg/L	1.0						
Naphthalene	ND	µg/L	2.0						
1-Methylnaphthalene	ND	µg/L	4.0						
2-Methylnaphthalene	ND	µg/L	4.0						
Acetone	ND	µg/L	10						
Bromobenzene	ND	µg/L	1.0						
Bromodichloromethane	ND	µg/L	1.0						
Bromoform	ND	µg/L	1.0						
Bromomethane	ND	µg/L	1.0						
2-Butanone	ND	µg/L	10						
Carbon disulfide	ND	µg/L	10						
Carbon Tetrachloride	ND	µg/L	1.0						
Chlorobenzene	ND	µg/L	1.0						
Chloroethane	ND	µg/L	2.0						
Chloroform	ND	µg/L	1.0						
Chloromethane	ND	µg/L	1.0						
2-Chlorotoluene	ND	µg/L	1.0						
4-Chlorotoluene	ND	µg/L	1.0						
cis-1,2-DCE	ND	µg/L	1.0						
cis-1,3-Dichloropropene	ND	µg/L	1.0						
1,2-Dibromo-3-chloropropane	ND	µg/L	2.0						
Dibromochloromethane	ND	µg/L	1.0						
Dibromomethane	ND	µg/L	1.0						
1,2-Dichlorobenzene	ND	µg/L	1.0						
1,3-Dichlorobenzene	ND	µg/L	1.0						
1,4-Dichlorobenzene	ND	µg/L	1.0						
Dichlorodifluoromethane	ND	µg/L	1.0						
1,1-Dichloroethane	ND	µg/L	1.0						
1,1-Dichloroethene	ND	µg/L	1.0						
1,2-Dichloropropane	ND	µg/L	1.0						
1,3-Dichloropropane	ND	µg/L	1.0						
2,2-Dichloropropane	ND	µg/L	2.0						
1,1-Dichloropropene	ND	µg/L	1.0						
Hexachlorobutadiene	ND	µg/L	1.0						
2-Hexanone	ND	µg/L	10						
Isopropylbenzene	ND	µg/L	1.0						
4-Isopropyltoluene	ND	µg/L	1.0						

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

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Gallup
Project: Qtrly Method 8260B Air Quality Permit 0633-m **Work Order:** 0904113

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260B: VOLATILES									
Sample ID: 5ml rb		*MBLK*			Batch ID: **R33223**		Analysis Date:	4/13/2009 8:34:24 AM	
4-Methyl-2-pentanone	ND	µg/L	10						
Methylene Chloride	ND	µg/L	3.0						
n-Butylbenzene	ND	µg/L	1.0						
n-Propylbenzene	ND	µg/L	1.0						
sec-Butylbenzene	ND	µg/L	1.0						
Styrene	ND	µg/L	1.0						
tert-Butylbenzene	ND	µg/L	1.0						
1,1,1,2-Tetrachloroethane	ND	µg/L	1.0						
1,1,2,2-Tetrachloroethane	ND	µg/L	2.0						
Tetrachloroethene (PCE)	ND	µg/L	1.0						
trans-1,2-DCE	ND	µg/L	1.0						
trans-1,3-Dichloropropene	ND	µg/L	1.0						
1,2,3-Trichlorobenzene	ND	µg/L	1.0						
1,2,4-Trichlorobenzene	ND	µg/L	1.0						
1,1,1-Trichloroethane	ND	µg/L	1.0						
1,1,2-Trichloroethane	ND	µg/L	1.0						
Trichloroethene (TCE)	ND	µg/L	1.0						
Trichlorofluoromethane	ND	µg/L	1.0						
1,2,3-Trichloropropane	ND	µg/L	2.0						
Vinyl chloride	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	1.5						
Sample ID: 100ng lcs		*LCS*			Batch ID: **R33223**		Analysis Date:	4/13/2009 9:31:27 AM	
Benzene	17.68	µg/L	1.0	88.4	88	116			
Toluene	18.72	µg/L	1.0	93.6	82.9	112			
Chlorobenzene	21.82	µg/L	1.0	109	71.4	133			
1,1-Dichloroethene	21.49	µg/L	1.0	107	97.9	140			
Trichloroethene (TCE)	18.38	µg/L	1.0	91.9	90.5	112			

Qualifiers:

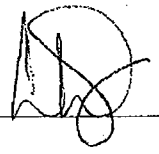
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name WESTERN REFINING GALLU Date Received: 4/8/2009

Work Order Number 0904113 Received by: TLS

Checklist completed by:  4/8/09 Sample ID labels checked by: TS

Signature Date Initials

Matrix: Carrier name: UPS

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☑	No ☐	N/A ☐	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	5°	*<6° C Acceptable* 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 #: 505 722 3833
email or Fax#: 505722 0210

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)
☐ Other
☐ EDD (Type)

Turn-Around Time:
☐ Standard ☐ Rush

Project Name: QUARTERLY METHOD 8260B 2ND QT AIR QUALITY PERMIT 0633-M7

Project #:

Project Manager: GAURAV, RAJEN

Sampler: ALVIN DORSEY

On Ice: ☒ Yes ☐ No

Sample Temperature: 5

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 904113	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) ALL VOC	8270 (Semi-VOA)	Air Bubbles (Y or N)
04-02-09	1000	Air	B2 Stripper 12 IN	3-40 mL	HCl	1										X		
04-02-09	1015	"	B2 Stripper 12 OUT	3-40 mL	HCl	2										X		
04-02-09	1045	"	3rd B2 Stripper IN	3-40 mL	HCl	3										X		
04-02-09	1100	"	3rd B2 Stripper OUT	3-40 mL	HCl	4										X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
4-07-09 ~~4/6/09~~	12:00	Alvin Dorsey			
Date:	Time:	Relinquished by:	Received by:	4/3/09 Date	1030 Time

Remarks:

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

COVER LETTER

Wednesday, April 22, 2009

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

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

RE: BZ Strippers

Order No.: 0904114

Dear Gaurav Rajen:

Hall Environmental Analysis Laboratory, Inc. received 4 sample(s) on 4/8/2009 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 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,

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

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

Hall Environmental Analysis Laboratory, Inc.

Date: *22-Apr-09*

CLIENT: Western Refining Southwest, Gallup
Project: BZ Strippers
Lab Order: 0904114

Lab ID: 0904114-01 **Collection Date:** 4/6/2009 9:15:00 AM
Client Sample ID: 3RD BZ Stripper-IN **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Methyl tert-butyl ether (MTBE)	ND	2500		µg/L	1000	4/15/2009 11:54:45 AM
Benzene	37000	1000		µg/L	1000	4/15/2009 11:54:45 AM
Toluene	41000	1000		µg/L	1000	4/15/2009 11:54:45 AM
Ethylbenzene	1700	1000		µg/L	1000	4/15/2009 11:54:45 AM
Xylenes, Total	12000	2000		µg/L	1000	4/15/2009 11:54:45 AM
Surr: 4-Bromofluorobenzene	92.9	65.9-130		%REC	1000	4/15/2009 11:54:45 AM

Lab ID: 0904114-02 **Collection Date:** 4/6/2009 9:30:00 AM
Client Sample ID: 3RD BZ Stripper-OUT **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Methyl tert-butyl ether (MTBE)	ND	130		µg/L	50	4/15/2009 12:25:19 PM
Benzene	8900	200		µg/L	200	4/16/2009 11:40:34 AM
Toluene	8500	200		µg/L	200	4/16/2009 11:40:34 AM
Ethylbenzene	290	50		µg/L	50	4/15/2009 12:25:19 PM
Xylenes, Total	2300	100		µg/L	50	4/15/2009 12:25:19 PM
Surr: 4-Bromofluorobenzene	97.7	65.9-130		%REC	50	4/15/2009 12:25:19 PM

Lab ID: 0904114-03 **Collection Date:** 4/6/2009 9:55:00 AM
Client Sample ID: BZ Stripper 1&2 IN **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Methyl tert-butyl ether (MTBE)	ND	500		µg/L	200	4/15/2009 12:55:53 PM
Benzene	11000	200		µg/L	200	4/15/2009 12:55:53 PM
Toluene	20000	400		µg/L	400	4/16/2009 12:11:01 PM
Ethylbenzene	1300	200		µg/L	200	4/15/2009 12:55:53 PM
Xylenes, Total	8300	400		µg/L	200	4/15/2009 12:55:53 PM
Surr: 4-Bromofluorobenzene	96.7	65.9-130		%REC	200	4/15/2009 12:55:53 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *22-Apr-09*

CLIENT: Western Refining Southwest, Gallup
Project: BZ Strippers
Lab Order: 0904114

Lab ID: 0904114-04
Collection Date: 4/6/2009 10:10:00 AM
Client Sample ID: BZ Stripper 1&2 OUT
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Methyl tert-butyl ether (MTBE)	ND	130		µg/L	50	4/15/2009 1:26:14 PM
Benzene	3900	50		µg/L	50	4/15/2009 1:26:14 PM
Toluene	12000	200		µg/L	200	4/16/2009 12:41:38 PM
Ethylbenzene	1200	50		µg/L	50	4/15/2009 1:26:14 PM
Xylenes, Total	7400	100		µg/L	50	4/15/2009 1:26:14 PM
Surr: 4-Bromofluorobenzene	111	65.9-130		%REC	50	4/15/2009 1:26:14 PM

Qualifiers:

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

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Gallup
Project: BZ Strippers **Work Order:** 0904114

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles									
Sample ID: 5ML RB		*MBLK*			Batch ID:	**R33261**	Analysis Date:		4/15/2009 9:22:06 AM
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						
Sample ID: 100NG BTEX LCS		*LCS*			Batch ID:	**R33261**	Analysis Date:		4/16/2009 4:50:43 AM
Methyl tert-butyl ether (MTBE)	18.77	µg/L	2.5	93.9	51.2	138			
Benzene	20.72	µg/L	1.0	104	85.9	113			
Toluene	21.35	µg/L	1.0	107	86.4	113			
Ethylbenzene	20.68	µg/L	1.0	103	83.5	118			
Xylenes, Total	60.64	µg/L	2.0	101	83.4	122			
Sample ID: 100NG BTEX LCSD		*LCSD*			Batch ID:	**R33261**	Analysis Date:		4/16/2009 5:21:06 AM
Methyl tert-butyl ether (MTBE)	19.31	µg/L	2.5	96.5	51.2	138	2.80	28	
Benzene	20.83	µg/L	1.0	104	85.9	113	0.539	27	
Toluene	21.22	µg/L	1.0	106	86.4	113	0.601	19	
Ethylbenzene	20.69	µg/L	1.0	103	83.5	118	0.0290	10	
Xylenes, Total	61.03	µg/L	2.0	102	83.4	122	0.638	13	

Qualifiers:

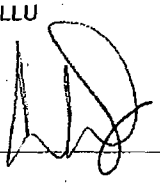
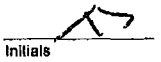
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name WESTERN REFINING GALLU Date Received: 4/8/2009

Work Order Number 0904114 Received by: TLS

Checklist completed by:  4/8/09 Sample ID labels checked by: 

Signature Date Initials

Matrix: Carrier name: UPS

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☑	No ☐	N/A ☐	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace? No VOA vials submitted ☐		Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	5°	<6° C Acceptable 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 #: 505 722 3833
email or Fax#: 505 722 0210

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)
☐ Other _____
☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☐ Rush _____

Project Name: BZ Strippers
Project #:

Project Manager: Gaurav, Rajen
Sampler: Alvin Dorsey
On Ice: ☒ Yes ☐ No
Sample Temperature: 5

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No 0904114	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)	8021B BTEX-MTBE				Air Bubbles (Y or N)
4/06/09	0915	Air	3rd Bz Stripper-IN			1												X				
4/06/09	0930		3rd Bz Stripper-OUT			2												X				
4/06/09	0955		Bz Stripper 12 IN			3												X				
4/06/09	1010		Bz Stripper 12 OUT			4												X				

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
4-07-09	12:00			4/8/09	1030	
Date:	Time:	Relinquished by:	Received by:	Date	Time	

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

COVER LETTER

Thursday, May 07, 2009

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

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

RE: BZ Strippers

Order No.: 0904337

Dear Gaurav Rajen:

Hall Environmental Analysis Laboratory, Inc. received 4 sample(s) on 4/21/2009 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 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,

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory, Inc.

Date: *07-May-09*

CLIENT: Western Refining Southwest, Gallup
Project: BZ Strippers
Lab Order: 0904337

Lab ID: 0904337-01 **Collection Date:** 4/17/2009 8:00:00 AM
Client Sample ID: 3RD BZ Stripper-IN **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: HL
Benzene	8200000	200000		µg/L	200000	4/29/2009 4:52:43 PM
Toluene	2500000	40000		µg/L	40000	4/29/2009 5:23:01 PM
Ethylbenzene	2600	100		µg/L	100	4/28/2009 8:21:04 PM
Methyl tert-butyl ether (MTBE)	ND	100		µg/L	100	4/28/2009 8:21:04 PM
Xylenes, Total	12000	200		µg/L	100	4/28/2009 8:21:04 PM
Surr: 4-Bromofluorobenzene	99.7	80.4-119		%REC	100	4/28/2009 8:21:04 PM

Lab ID: 0904337-02 **Collection Date:** 4/17/2009 8:15:00 AM
Client Sample ID: 3RD BZ Stripper-OUT **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: HL
Benzene	120000	2000	H	µg/L	2000	5/1/2009 2:49:33 PM
Toluene	130000	2000	H	µg/L	2000	5/1/2009 2:49:33 PM
Ethylbenzene	260	20		µg/L	20	4/28/2009 9:19:18 PM
Methyl tert-butyl ether (MTBE)	ND	20		µg/L	20	4/28/2009 9:19:18 PM
Xylenes, Total	1100	40		µg/L	20	4/28/2009 9:19:18 PM
Surr: 4-Bromofluorobenzene	104	80.4-119		%REC	20	4/28/2009 9:19:18 PM

Lab ID: 0904337-03 **Collection Date:** 4/17/2009 9:10:00 AM
Client Sample ID: BZ Stripper 1&2 IN **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: HL
Benzene	33000	500		µg/L	500	4/29/2009 6:50:47 PM
Toluene	22000	250		µg/L	250	4/28/2009 9:48:22 PM
Ethylbenzene	160	50		µg/L	50	4/28/2009 10:17:19 PM
Methyl tert-butyl ether (MTBE)	ND	50		µg/L	50	4/28/2009 10:17:19 PM
Xylenes, Total	920	100		µg/L	50	4/28/2009 10:17:19 PM
Surr: 4-Bromofluorobenzene	96.4	80.4-119		%REC	50	4/28/2009 10:17:19 PM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *07-May-09*

CLIENT: Western Refining Southwest, Gallup
Project: BZ Strippers
Lab Order: 0904337

Lab ID: 0904337-04
Collection Date: 4/17/2009 9:20:00 AM
Client Sample ID: BZ Stripper 1&2 OUT
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: HL
Benzene	18000	400		µg/L	400	4/29/2009 7:19:55 PM
Toluene	17000	400		µg/L	400	4/29/2009 7:19:55 PM
Ethylbenzene	180	50		µg/L	50	4/28/2009 10:46:28 PM
Methyl tert-butyl ether (MTBE)	ND	50		µg/L	50	4/28/2009 10:46:28 PM
Xylenes, Total	1100	100		µg/L	50	4/28/2009 10:46:28 PM
Surr: 4-Bromofluorobenzene	94.9	80.4-119		%REC	50	4/28/2009 10:46:28 PM

Qualifiers:

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

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Gallup
Project: BZ Strippers **Work Order:** 0904337

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260: Volatiles Short List									
Sample ID: 5ml rb		*MBLK*			Batch ID:	**R33452**	Analysis Date:	4/28/2009 10:38:31 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: 5ml rb		*MBLK*			Batch ID:	**R33464**	Analysis Date:	4/29/2009 1:40:24 PM	
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: 5ml rb		*MBLK*			Batch ID:	**R33496**	Analysis Date:	5/1/2009 8:54:14 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:	**R33452**	Analysis Date:	4/28/2009 11:36:45 AM	
Benzene	21.00	µg/L	1.0	105	86.8	120			
Toluene	20.22	µg/L	1.0	101	64.1	127			
Sample ID: 100ng lcs_b		*LCS*			Batch ID:	**R33464**	Analysis Date:	4/29/2009 3:53:13 PM	
Benzene	22.00	µg/L	1.0	110	86.8	120			
Toluene	18.99	µg/L	1.0	95.0	64.1	127			
Sample ID: 100ng lcs_b		*LCS*			Batch ID:	**R33496**	Analysis Date:	5/1/2009 10:58:26 AM	
Benzene	19.52	µg/L	1.0	97.6	86.8	120			
Toluene	19.53	µg/L	1.0	97.7	64.1	127			

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: 4/21/2009

Work Order Number 0904337 | Received by: AT

Checklist completed by: _____ 4/21/09 | Sample ID labels checked by: _____

Signature | Date | Initials

Matrix: | Carrier name: Client drop-off

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☐	Not Shipped ☑
Custody seals intact on sample bottles?	Yes ☑	No ☐	N/A ☐	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace? No VOA vials submitted ☐		Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	2°	<6° C Acceptable 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 #: 505 722 3833
email or Fax#: 505 722 0210

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)
☐ Other _____
☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☐ Rush _____

Project Name: Bz Strippers

Project #:

Project Manager: Gaurav Rajen

Sampler: Alvin Dorsey

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.4

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 0904331
04-17-09	0800	Air	3rd Bz Stripper-IN	340ML		1
04-17-09	0815		3rd Bz Stripper-Out	340 mL		2
04-17-09	0910		Bz Stripper 12 IN	340 mL		3
04-17-09	0920		Bz Stripper 12 Out	340 mL		4

Analysis Request

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				Air Bubbles (Y or N)
											X				
											X				
											X				
											X				

Date	Time	Relinquished by:	Received by:	Date	Time
04-21-09		Alvin			
				4/21/09	1610

Remarks:

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

COVER LETTER

Friday, May 01, 2009

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

TEL: (505) 722-0227
FAX (505) 722-0210

RE: Qtrly Method 8260B Air Quality Permit 0633-M7

Order No.: 0904335

Dear Gaurav Rajen:

Hall Environmental Analysis Laboratory, Inc. received 4 sample(s) on 4/21/2009 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 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,

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

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

Hall Environmental Analysis Laboratory, Inc.

Date: *01-May-09*

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	3RD Bz Stripper-IN
Lab Order:	0904335	**Collection Date:**	4/20/2009 8:15:00 AM
Project:	Qtrly Method 8260B Air Quality Permit 0633-M	**Date Received:**	4/21/2009
Lab ID:	0904335-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **HL**
Benzene	43000	800		µg/L	800	4/24/2009 5:52:03 PM
Toluene	32000	500		µg/L	500	4/24/2009 3:30:36 AM
Ethylbenzene	1300	50		µg/L	50	4/24/2009 3:59:18 AM
Methyl tert-butyl ether (MTBE)	ND	50		µg/L	50	4/24/2009 3:59:18 AM
1,2,4-Trimethylbenzene	690	50		µg/L	50	4/24/2009 3:59:18 AM
1,3,5-Trimethylbenzene	270	50		µg/L	50	4/24/2009 3:59:18 AM
1,2-Dichloroethane (EDC)	ND	50		µg/L	50	4/24/2009 3:59:18 AM
1,2-Dibromoethane (EDB)	ND	50		µg/L	50	4/24/2009 3:59:18 AM
Naphthalene	200	100		µg/L	50	4/24/2009 3:59:18 AM
1-Methylnaphthalene	ND	200		µg/L	50	4/24/2009 3:59:18 AM
2-Methylnaphthalene	ND	200		µg/L	50	4/24/2009 3:59:18 AM
Acetone	1900	500		µg/L	50	4/24/2009 3:59:18 AM
Bromobenzene	ND	50		µg/L	50	4/24/2009 3:59:18 AM
Bromodichloromethane	ND	50		µg/L	50	4/24/2009 3:59:18 AM
Bromoform	ND	50		µg/L	50	4/24/2009 3:59:18 AM
Bromomethane	ND	50		µg/L	50	4/24/2009 3:59:18 AM
2-Butanone	ND	500		µg/L	50	4/24/2009 3:59:18 AM
Carbon disulfide	ND	500		µg/L	50	4/24/2009 3:59:18 AM
Carbon Tetrachloride	ND	50		µg/L	50	4/24/2009 3:59:18 AM
Chlorobenzene	ND	50		µg/L	50	4/24/2009 3:59:18 AM
Chloroethane	ND	100		µg/L	50	4/24/2009 3:59:18 AM
Chloroform	ND	50		µg/L	50	4/24/2009 3:59:18 AM
Chloromethane	ND	50		µg/L	50	4/24/2009 3:59:18 AM
2-Chlorotoluene	ND	50		µg/L	50	4/24/2009 3:59:18 AM
4-Chlorotoluene	ND	50		µg/L	50	4/24/2009 3:59:18 AM
cis-1,2-DCE	ND	50		µg/L	50	4/24/2009 3:59:18 AM
cis-1,3-Dichloropropene	ND	50		µg/L	50	4/24/2009 3:59:18 AM
1,2-Dibromo-3-chloropropane	ND	100		µg/L	50	4/24/2009 3:59:18 AM
Dibromochloromethane	ND	50		µg/L	50	4/24/2009 3:59:18 AM
Dibromomethane	ND	50		µg/L	50	4/24/2009 3:59:18 AM
1,2-Dichlorobenzene	ND	50		µg/L	50	4/24/2009 3:59:18 AM
1,3-Dichlorobenzene	ND	50		µg/L	50	4/24/2009 3:59:18 AM
1,4-Dichlorobenzene	ND	50		µg/L	50	4/24/2009 3:59:18 AM
Dichlorodifluoromethane	ND	50		µg/L	50	4/24/2009 3:59:18 AM
1,1-Dichloroethane	ND	50		µg/L	50	4/24/2009 3:59:18 AM
1,1-Dichloroethene	ND	50		µg/L	50	4/24/2009 3:59:18 AM
1,2-Dichloropropane	ND	50		µg/L	50	4/24/2009 3:59:18 AM
1,3-Dichloropropane	ND	50		µg/L	50	4/24/2009 3:59:18 AM
2,2-Dichloropropane	ND	100		µg/L	50	4/24/2009 3:59:18 AM
1,1-Dichloropropene	ND	50		µg/L	50	4/24/2009 3:59:18 AM
Hexachlorobutadiene	ND	50		µg/L	50	4/24/2009 3:59:18 AM
2-Hexanone	ND	500		µg/L	50	4/24/2009 3:59:18 AM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *01-May-09*

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	3RD Bz Stripper-IN
Lab Order:	0904335	**Collection Date:**	4/20/2009 8:15:00 AM
Project:	Qtrly Method 8260B Air Quality Permit 0633-M	**Date Received:**	4/21/2009
Lab ID:	0904335-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **HL**
Isopropylbenzene	120	50		µg/L	50	4/24/2009 3:59:18 AM
4-Isopropyltoluene	ND	50		µg/L	50	4/24/2009 3:59:18 AM
4-Methyl-2-pentanone	ND	500		µg/L	50	4/24/2009 3:59:18 AM
Methylene Chloride	ND	150		µg/L	50	4/24/2009 3:59:18 AM
n-Butylbenzene	ND	50		µg/L	50	4/24/2009 3:59:18 AM
n-Propylbenzene	120	50		µg/L	50	4/24/2009 3:59:18 AM
sec-Butylbenzene	ND	50		µg/L	50	4/24/2009 3:59:18 AM
Styrene	ND	50		µg/L	50	4/24/2009 3:59:18 AM
tert-Butylbenzene	ND	50		µg/L	50	4/24/2009 3:59:18 AM
1,1,1,2-Tetrachloroethane	ND	50		µg/L	50	4/24/2009 3:59:18 AM
1,1,2,2-Tetrachloroethane	ND	100		µg/L	50	4/24/2009 3:59:18 AM
Tetrachloroethene (PCE)	ND	50		µg/L	50	4/24/2009 3:59:18 AM
trans-1,2-DCE	ND	50		µg/L	50	4/24/2009 3:59:18 AM
trans-1,3-Dichloropropene	ND	50		µg/L	50	4/24/2009 3:59:18 AM
1,2,3-Trichlorobenzene	ND	50		µg/L	50	4/24/2009 3:59:18 AM
1,2,4-Trichlorobenzene	ND	50		µg/L	50	4/24/2009 3:59:18 AM
1,1,1-Trichloroethane	ND	50		µg/L	50	4/24/2009 3:59:18 AM
1,1,2-Trichloroethane	ND	50		µg/L	50	4/24/2009 3:59:18 AM
Trichloroethene (TCE)	ND	50		µg/L	50	4/24/2009 3:59:18 AM
Trichlorofluoromethane	ND	50		µg/L	50	4/24/2009 3:59:18 AM
1,2,3-Trichloropropane	ND	100		µg/L	50	4/24/2009 3:59:18 AM
Vinyl chloride	ND	50		µg/L	50	4/24/2009 3:59:18 AM
Xylenes, Total	8500	75		µg/L	50	4/24/2009 3:59:18 AM
Surr: 1,2-Dichloroethane-d4	84.7	68.1-123		%REC	50	4/24/2009 3:59:18 AM
Surr: 4-Bromofluorobenzene	99.9	53.2-145		%REC	50	4/24/2009 3:59:18 AM
Surr: Dibromofluoromethane	92.9	68.5-119		%REC	500	4/24/2009 3:30:36 AM
Surr: Toluene-d8	101	64-131		%REC	50	4/24/2009 3:59:18 AM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *01-May-09*

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	3RD Bz Stripper-OUT
Lab Order:	0904335	**Collection Date:**	4/20/2009 8:30:00 AM
Project:	Qtrly Method 8260B Air Quality Permit 0633-M	**Date Received:**	4/21/2009
Lab ID:	0904335-02	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Benzene	5200	100		µg/L	100	4/24/2009 6:20:53 PM
Toluene	5900	100		µg/L	100	4/24/2009 6:20:53 PM
Ethylbenzene	90	10		µg/L	10	4/24/2009 4:56:38 AM
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	4/24/2009 4:56:38 AM
1,2,4-Trimethylbenzene	63	10		µg/L	10	4/24/2009 4:56:38 AM
1,3,5-Trimethylbenzene	17	10		µg/L	10	4/24/2009 4:56:38 AM
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	4/24/2009 4:56:38 AM
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	4/24/2009 4:56:38 AM
Naphthalene	40	20		µg/L	10	4/24/2009 4:56:38 AM
1-Methylnaphthalene	ND	40		µg/L	10	4/24/2009 4:56:38 AM
2-Methylnaphthalene	ND	40		µg/L	10	4/24/2009 4:56:38 AM
Acetone	1300	100		µg/L	10	4/24/2009 4:56:38 AM
Bromobenzene	ND	10		µg/L	10	4/24/2009 4:56:38 AM
Bromodichloromethane	ND	10		µg/L	10	4/24/2009 4:56:38 AM
Bromoform	ND	10		µg/L	10	4/24/2009 4:56:38 AM
Bromomethane	ND	10		µg/L	10	4/24/2009 4:56:38 AM
2-Butanone	ND	100		µg/L	10	4/24/2009 4:56:38 AM
Carbon disulfide	ND	100		µg/L	10	4/24/2009 4:56:38 AM
Carbon Tetrachloride	ND	10		µg/L	10	4/24/2009 4:56:38 AM
Chlorobenzene	ND	10		µg/L	10	4/24/2009 4:56:38 AM
Chloroethane	ND	20		µg/L	10	4/24/2009 4:56:38 AM
Chloroform	ND	10		µg/L	10	4/24/2009 4:56:38 AM
Chloromethane	ND	10		µg/L	10	4/24/2009 4:56:38 AM
2-Chlorotoluene	ND	10		µg/L	10	4/24/2009 4:56:38 AM
4-Chlorotoluene	ND	10		µg/L	10	4/24/2009 4:56:38 AM
cis-1,2-DCE	ND	10		µg/L	10	4/24/2009 4:56:38 AM
cis-1,3-Dichloropropene	ND	10		µg/L	10	4/24/2009 4:56:38 AM
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	4/24/2009 4:56:38 AM
Dibromochloromethane	ND	10		µg/L	10	4/24/2009 4:56:38 AM
Dibromomethane	ND	10		µg/L	10	4/24/2009 4:56:38 AM
1,2-Dichlorobenzene	ND	10		µg/L	10	4/24/2009 4:56:38 AM
1,3-Dichlorobenzene	ND	10		µg/L	10	4/24/2009 4:56:38 AM
1,4-Dichlorobenzene	ND	10		µg/L	10	4/24/2009 4:56:38 AM
Dichlorodifluoromethane	ND	10		µg/L	10	4/24/2009 4:56:38 AM
1,1-Dichloroethane	ND	10		µg/L	10	4/24/2009 4:56:38 AM
1,1-Dichloroethene	ND	10		µg/L	10	4/24/2009 4:56:38 AM
1,2-Dichloropropane	ND	10		µg/L	10	4/24/2009 4:56:38 AM
1,3-Dichloropropane	ND	10		µg/L	10	4/24/2009 4:56:38 AM
2,2-Dichloropropane	ND	20		µg/L	10	4/24/2009 4:56:38 AM
1,1-Dichloropropene	ND	10		µg/L	10	4/24/2009 4:56:38 AM
Hexachlorobutadiene	ND	10		µg/L	10	4/24/2009 4:56:38 AM
2-Hexanone	ND	100		µg/L	10	4/24/2009 4:56:38 AM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *01-May-09*

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	3RD Bz Stripper-OUT
Lab Order:	0904335	**Collection Date:**	4/20/2009 8:30:00 AM
Project:	Qtrly Method 8260B Air Quality Permit 0633-M	**Date Received:**	4/21/2009
Lab ID:	0904335-02	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Isopropylbenzene	ND	10		µg/L	10	4/24/2009 4:56:38 AM
4-Isopropyltoluene	ND	10		µg/L	10	4/24/2009 4:56:38 AM
4-Methyl-2-pentanone	ND	100		µg/L	10	4/24/2009 4:56:38 AM
Methylene Chloride	ND	30		µg/L	10	4/24/2009 4:56:38 AM
n-Butylbenzene	ND	10		µg/L	10	4/24/2009 4:56:38 AM
n-Propylbenzene	ND	10		µg/L	10	4/24/2009 4:56:38 AM
sec-Butylbenzene	ND	10		µg/L	10	4/24/2009 4:56:38 AM
Styrene	ND	10		µg/L	10	4/24/2009 4:56:38 AM
tert-Butylbenzene	ND	10		µg/L	10	4/24/2009 4:56:38 AM
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	4/24/2009 4:56:38 AM
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	4/24/2009 4:56:38 AM
Tetrachloroethene (PCE)	ND	10		µg/L	10	4/24/2009 4:56:38 AM
trans-1,2-DCE	ND	10		µg/L	10	4/24/2009 4:56:38 AM
trans-1,3-Dichloropropene	ND	10		µg/L	10	4/24/2009 4:56:38 AM
1,2,3-Trichlorobenzene	ND	10		µg/L	10	4/24/2009 4:56:38 AM
1,2,4-Trichlorobenzene	ND	10		µg/L	10	4/24/2009 4:56:38 AM
1,1,1-Trichloroethane	ND	10		µg/L	10	4/24/2009 4:56:38 AM
1,1,2-Trichloroethane	ND	10		µg/L	10	4/24/2009 4:56:38 AM
Trichloroethene (TCE)	ND	10		µg/L	10	4/24/2009 4:56:38 AM
Trichlorofluoromethane	ND	10		µg/L	10	4/24/2009 4:56:38 AM
1,2,3-Trichloropropane	ND	20		µg/L	10	4/24/2009 4:56:38 AM
Vinyl chloride	ND	10		µg/L	10	4/24/2009 4:56:38 AM
Xylenes, Total	540	15		µg/L	10	4/24/2009 4:56:38 AM
Surr: 1,2-Dichloroethane-d4	89.0	68.1-123		%REC	10	4/24/2009 4:56:38 AM
Surr: 4-Bromofluorobenzene	92.4	53.2-145		%REC	10	4/24/2009 4:56:38 AM
Surr: Dibromofluoromethane	87.4	68.5-119		%REC	100	4/24/2009 6:20:53 PM
Surr: Toluene-d8	93.3	64-131		%REC	10	4/24/2009 4:56:38 AM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *01-May-09*

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	Bz Stripper 1&2-IN
Lab Order:	0904335	**Collection Date:**	4/20/2009 9:25:00 AM
Project:	Qtrly Method 8260B Air Quality Permit 0633-M	**Date Received:**	4/21/2009
Lab ID:	0904335-03	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Benzene	13000	200		µg/L	200	4/24/2009 5:25:20 AM
Toluene	23000	400		µg/L	400	4/24/2009 6:49:35 PM
Ethylbenzene	1600	50		µg/L	50	4/24/2009 5:54:00 AM
Methyl tert-butyl ether (MTBE)	ND	50		µg/L	50	4/24/2009 5:54:00 AM
1,2,4-Trimethylbenzene	1800	50		µg/L	50	4/24/2009 5:54:00 AM
1,3,5-Trimethylbenzene	700	50		µg/L	50	4/24/2009 5:54:00 AM
1,2-Dichloroethane (EDC)	ND	50		µg/L	50	4/24/2009 5:54:00 AM
1,2-Dibromoethane (EDB)	ND	50		µg/L	50	4/24/2009 5:54:00 AM
Naphthalene	470	100		µg/L	50	4/24/2009 5:54:00 AM
1-Methylnaphthalene	300	200		µg/L	50	4/24/2009 5:54:00 AM
2-Methylnaphthalene	460	200		µg/L	50	4/24/2009 5:54:00 AM
Acetone	1100	500		µg/L	50	4/24/2009 5:54:00 AM
Bromobenzene	ND	50		µg/L	50	4/24/2009 5:54:00 AM
Bromodichloromethane	ND	50		µg/L	50	4/24/2009 5:54:00 AM
Bromoform	ND	50		µg/L	50	4/24/2009 5:54:00 AM
Bromomethane	ND	50		µg/L	50	4/24/2009 5:54:00 AM
2-Butanone	ND	500		µg/L	50	4/24/2009 5:54:00 AM
Carbon disulfide	ND	500		µg/L	50	4/24/2009 5:54:00 AM
Carbon Tetrachloride	ND	50		µg/L	50	4/24/2009 5:54:00 AM
Chlorobenzene	ND	50		µg/L	50	4/24/2009 5:54:00 AM
Chloroethane	ND	100		µg/L	50	4/24/2009 5:54:00 AM
Chloroform	ND	50		µg/L	50	4/24/2009 5:54:00 AM
Chloromethane	ND	50		µg/L	50	4/24/2009 5:54:00 AM
2-Chlorotoluene	ND	50		µg/L	50	4/24/2009 5:54:00 AM
4-Chlorotoluene	ND	50		µg/L	50	4/24/2009 5:54:00 AM
cis-1,2-DCE	ND	50		µg/L	50	4/24/2009 5:54:00 AM
cis-1,3-Dichloropropene	ND	50		µg/L	50	4/24/2009 5:54:00 AM
1,2-Dibromo-3-chloropropane	ND	100		µg/L	50	4/24/2009 5:54:00 AM
Dibromochloromethane	ND	50		µg/L	50	4/24/2009 5:54:00 AM
Dibromomethane	ND	50		µg/L	50	4/24/2009 5:54:00 AM
1,2-Dichlorobenzene	ND	50		µg/L	50	4/24/2009 5:54:00 AM
1,3-Dichlorobenzene	ND	50		µg/L	50	4/24/2009 5:54:00 AM
1,4-Dichlorobenzene	ND	50		µg/L	50	4/24/2009 5:54:00 AM
Dichlorodifluoromethane	ND	50		µg/L	50	4/24/2009 5:54:00 AM
1,1-Dichloroethane	ND	50		µg/L	50	4/24/2009 5:54:00 AM
1,1-Dichloroethene	ND	50		µg/L	50	4/24/2009 5:54:00 AM
1,2-Dichloropropane	ND	50		µg/L	50	4/24/2009 5:54:00 AM
1,3-Dichloropropane	ND	50		µg/L	50	4/24/2009 5:54:00 AM
2,2-Dichloropropane	ND	100		µg/L	50	4/24/2009 5:54:00 AM
1,1-Dichloropropene	ND	50		µg/L	50	4/24/2009 5:54:00 AM
Hexachlorobutadiene	ND	50		µg/L	50	4/24/2009 5:54:00 AM
2-Hexanone	ND	500		µg/L	50	4/24/2009 5:54:00 AM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *01-May-09*

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	Bz Stripper 1&2-IN
Lab Order:	0904335	**Collection Date:**	4/20/2009 9:25:00 AM
Project:	Qtrly Method 8260B Air Quality Permit 0633-M	**Date Received:**	4/21/2009
Lab ID:	0904335-03	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Isopropylbenzene	100	50		µg/L	50	4/24/2009 5:54:00 AM
4-Isopropyltoluene	ND	50		µg/L	50	4/24/2009 5:54:00 AM
4-Methyl-2-pentanone	ND	500		µg/L	50	4/24/2009 5:54:00 AM
Methylene Chloride	ND	150		µg/L	50	4/24/2009 5:54:00 AM
n-Butylbenzene	190	50		µg/L	50	4/24/2009 5:54:00 AM
n-Propylbenzene	350	50		µg/L	50	4/24/2009 5:54:00 AM
sec-Butylbenzene	ND	50		µg/L	50	4/24/2009 5:54:00 AM
Styrene	ND	50		µg/L	50	4/24/2009 5:54:00 AM
tert-Butylbenzene	ND	50		µg/L	50	4/24/2009 5:54:00 AM
1,1,1,2-Tetrachloroethane	ND	50		µg/L	50	4/24/2009 5:54:00 AM
1,1,2,2-Tetrachloroethane	ND	100		µg/L	50	4/24/2009 5:54:00 AM
Tetrachloroethene (PCE)	ND	50		µg/L	50	4/24/2009 5:54:00 AM
trans-1,2-DCE	ND	50		µg/L	50	4/24/2009 5:54:00 AM
trans-1,3-Dichloropropene	ND	50		µg/L	50	4/24/2009 5:54:00 AM
1,2,3-Trichlorobenzene	ND	50		µg/L	50	4/24/2009 5:54:00 AM
1,2,4-Trichlorobenzene	ND	50		µg/L	50	4/24/2009 5:54:00 AM
1,1,1-Trichloroethane	ND	50		µg/L	50	4/24/2009 5:54:00 AM
1,1,2-Trichloroethane	ND	50		µg/L	50	4/24/2009 5:54:00 AM
Trichloroethene (TCE)	ND	50		µg/L	50	4/24/2009 5:54:00 AM
Trichlorofluoromethane	ND	50		µg/L	50	4/24/2009 5:54:00 AM
1,2,3-Trichloropropane	ND	100		µg/L	50	4/24/2009 5:54:00 AM
Vinyl chloride	ND	50		µg/L	50	4/24/2009 5:54:00 AM
Xylenes, Total	10000	75		µg/L	50	4/24/2009 5:54:00 AM
Surr: 1,2-Dichloroethane-d4	88.8	68.1-123		%REC	50	4/24/2009 5:54:00 AM
Surr: 4-Bromofluorobenzene	95.7	53.2-145		%REC	50	4/24/2009 5:54:00 AM
Surr: Dibromofluoromethane	79.4	68.5-119		%REC	200	4/24/2009 5:25:20 AM
Surr: Toluene-d8	96.5	64-131		%REC	50	4/24/2009 5:54:00 AM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *01-May-09*

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	Bz Stripper 1&2-OUT
Lab Order:	0904335	**Collection Date:**	4/20/2009 9:35:00 AM
Project:	Qtrly Method 8260B Air Quality Permit 0633-M	**Date Received:**	4/21/2009
Lab ID:	0904335-04	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Benzene	4700	50		µg/L	50	4/24/2009 6:22:45 AM
Toluene	12000	200		µg/L	200	4/28/2009 1:04:27 PM
Ethylbenzene	830	50		µg/L	50	4/24/2009 6:22:45 AM
Methyl tert-butyl ether (MTBE)	ND	50		µg/L	50	4/24/2009 6:22:45 AM
1,2,4-Trimethylbenzene	1200	50		µg/L	50	4/24/2009 6:22:45 AM
1,3,5-Trimethylbenzene	430	50		µg/L	50	4/24/2009 6:22:45 AM
1,2-Dichloroethane (EDC)	ND	50		µg/L	50	4/24/2009 6:22:45 AM
1,2-Dibromoethane (EDB)	ND	50		µg/L	50	4/24/2009 6:22:45 AM
Naphthalene	390	100		µg/L	50	4/24/2009 6:22:45 AM
1-Methylnaphthalene	280	200		µg/L	50	4/24/2009 6:22:45 AM
2-Methylnaphthalene	450	200		µg/L	50	4/24/2009 6:22:45 AM
Acetone	920	500		µg/L	50	4/24/2009 6:22:45 AM
Bromobenzene	ND	50		µg/L	50	4/24/2009 6:22:45 AM
Bromodichloromethane	ND	50		µg/L	50	4/24/2009 6:22:45 AM
Bromoform	ND	50		µg/L	50	4/24/2009 6:22:45 AM
Bromomethane	ND	50		µg/L	50	4/24/2009 6:22:45 AM
2-Butanone	ND	500		µg/L	50	4/24/2009 6:22:45 AM
Carbon disulfide	ND	500		µg/L	50	4/24/2009 6:22:45 AM
Carbon Tetrachloride	ND	50		µg/L	50	4/24/2009 6:22:45 AM
Chlorobenzene	ND	50		µg/L	50	4/24/2009 6:22:45 AM
Chloroethane	ND	100		µg/L	50	4/24/2009 6:22:45 AM
Chloroform	ND	50		µg/L	50	4/24/2009 6:22:45 AM
Chloromethane	ND	50		µg/L	50	4/24/2009 6:22:45 AM
2-Chlorotoluene	ND	50		µg/L	50	4/24/2009 6:22:45 AM
4-Chlorotoluene	ND	50		µg/L	50	4/24/2009 6:22:45 AM
cis-1,2-DCE	ND	50		µg/L	50	4/24/2009 6:22:45 AM
cis-1,3-Dichloropropene	ND	50		µg/L	50	4/24/2009 6:22:45 AM
1,2-Dibromo-3-chloropropane	ND	100		µg/L	50	4/24/2009 6:22:45 AM
Dibromochloromethane	ND	50		µg/L	50	4/24/2009 6:22:45 AM
Dibromomethane	ND	50		µg/L	50	4/24/2009 6:22:45 AM
1,2-Dichlorobenzene	ND	50		µg/L	50	4/24/2009 6:22:45 AM
1,3-Dichlorobenzene	ND	50		µg/L	50	4/24/2009 6:22:45 AM
1,4-Dichlorobenzene	ND	50		µg/L	50	4/24/2009 6:22:45 AM
Dichlorodifluoromethane	ND	50		µg/L	50	4/24/2009 6:22:45 AM
1,1-Dichloroethane	ND	50		µg/L	50	4/24/2009 6:22:45 AM
1,1-Dichloroethene	ND	50		µg/L	50	4/24/2009 6:22:45 AM
1,2-Dichloropropane	ND	50		µg/L	50	4/24/2009 6:22:45 AM
1,3-Dichloropropane	ND	50		µg/L	50	4/24/2009 6:22:45 AM
2,2-Dichloropropane	ND	100		µg/L	50	4/24/2009 6:22:45 AM
1,1-Dichloropropene	ND	50		µg/L	50	4/24/2009 6:22:45 AM
Hexachlorobutadiene	ND	50		µg/L	50	4/24/2009 6:22:45 AM
2-Hexanone	ND	500		µg/L	50	4/24/2009 6:22:45 AM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *01-May-09*

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	Bz Stripper 1&2-OUT
Lab Order:	0904335	**Collection Date:**	4/20/2009 9:35:00 AM
Project:	Qtrly Method 8260B Air Quality Permit 0633-M	**Date Received:**	4/21/2009
Lab ID:	0904335-04	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Isopropylbenzene	52	50		µg/L	50	4/24/2009 6:22:45 AM
4-Isopropyltoluene	ND	50		µg/L	50	4/24/2009 6:22:45 AM
4-Methyl-2-pentanone	ND	500		µg/L	50	4/24/2009 6:22:45 AM
Methylene Chloride	ND	150		µg/L	50	4/24/2009 6:22:45 AM
n-Butylbenzene	120	50		µg/L	50	4/24/2009 6:22:45 AM
n-Propylbenzene	200	50		µg/L	50	4/24/2009 6:22:45 AM
sec-Butylbenzene	ND	50		µg/L	50	4/24/2009 6:22:45 AM
Styrene	ND	50		µg/L	50	4/24/2009 6:22:45 AM
tert-Butylbenzene	ND	50		µg/L	50	4/24/2009 6:22:45 AM
1,1,1,2-Tetrachloroethane	ND	50		µg/L	50	4/24/2009 6:22:45 AM
1,1,2,2-Tetrachloroethane	ND	100		µg/L	50	4/24/2009 6:22:45 AM
Tetrachloroethene (PCE)	ND	50		µg/L	50	4/24/2009 6:22:45 AM
trans-1,2-DCE	ND	50		µg/L	50	4/24/2009 6:22:45 AM
trans-1,3-Dichloropropene	ND	50		µg/L	50	4/24/2009 6:22:45 AM
1,2,3-Trichlorobenzene	ND	50		µg/L	50	4/24/2009 6:22:45 AM
1,2,4-Trichlorobenzene	ND	50		µg/L	50	4/24/2009 6:22:45 AM
1,1,1-Trichloroethane	ND	50		µg/L	50	4/24/2009 6:22:45 AM
1,1,2-Trichloroethane	ND	50		µg/L	50	4/24/2009 6:22:45 AM
Trichloroethene (TCE)	ND	50		µg/L	50	4/24/2009 6:22:45 AM
Trichlorofluoromethane	ND	50		µg/L	50	4/24/2009 6:22:45 AM
1,2,3-Trichloropropane	ND	100		µg/L	50	4/24/2009 6:22:45 AM
Vinyl chloride	ND	50		µg/L	50	4/24/2009 6:22:45 AM
Xylenes, Total	5100	75		µg/L	50	4/24/2009 6:22:45 AM
Surr: 1,2-Dichloroethane-d4	84.2	68.1-123		%REC	50	4/24/2009 6:22:45 AM
Surr: 4-Bromofluorobenzene	94.7	53.2-145		%REC	50	4/24/2009 6:22:45 AM
Surr: Dibromofluoromethane	79.3	68.5-119		%REC	50	4/24/2009 6:22:45 AM
Surr: Toluene-d8	83.0	64-131		%REC	50	4/24/2009 6:22:45 AM

Qualifiers:

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

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Gallup
Project: Qtrly Method 8260B Air Quality Permit 0633-M **Work Order:** 0904335

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260B: VOLATILES									
Sample ID: 5ml rb		*MBLK*			**Batch ID: R33385**		**Analysis Date:**	4/23/2009 5:56:05 PM	
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						
1,2,4-Trimethylbenzene	ND	µg/L	1.0						
1,3,5-Trimethylbenzene	ND	µg/L	1.0						
1,2-Dichloroethane (EDC)	ND	µg/L	1.0						
1,2-Dibromoethane (EDB)	ND	µg/L	1.0						
Naphthalene	ND	µg/L	2.0						
1-Methylnaphthalene	ND	µg/L	4.0						
2-Methylnaphthalene	ND	µg/L	4.0						
Acetone	ND	µg/L	10						
Bromobenzene	ND	µg/L	1.0						
Bromodichloromethane	ND	µg/L	1.0						
Bromoform	ND	µg/L	1.0						
Bromomethane	ND	µg/L	1.0						
2-Butanone	ND	µg/L	10						
Carbon disulfide	ND	µg/L	10						
Carbon Tetrachloride	ND	µg/L	1.0						
Chlorobenzene	ND	µg/L	1.0						
Chloroethane	ND	µg/L	2.0						
Chloroform	ND	µg/L	1.0						
Chloromethane	ND	µg/L	1.0						
2-Chlorotoluene	ND	µg/L	1.0						
4-Chlorotoluene	ND	µg/L	1.0						
cis-1,2-DCE	ND	µg/L	1.0						
cis-1,3-Dichloropropene	ND	µg/L	1.0						
1,2-Dibromo-3-chloropropane	ND	µg/L	2.0						
Dibromochloromethane	ND	µg/L	1.0						
Dibromomethane	ND	µg/L	1.0						
1,2-Dichlorobenzene	ND	µg/L	1.0						
1,3-Dichlorobenzene	ND	µg/L	1.0						
1,4-Dichlorobenzene	ND	µg/L	1.0						
Dichlorodifluoromethane	ND	µg/L	1.0						
1,1-Dichloroethane	ND	µg/L	1.0						
1,1-Dichloroethene	ND	µg/L	1.0						
1,2-Dichloropropane	ND	µg/L	1.0						
1,3-Dichloropropane	ND	µg/L	1.0						
2,2-Dichloropropane	ND	µg/L	2.0						
1,1-Dichloropropene	ND	µg/L	1.0						
Hexachlorobutadiene	ND	µg/L	1.0						
2-Hexanone	ND	µg/L	10						
Isopropylbenzene	ND	µg/L	1.0						
4-Isopropyltoluene	ND	µg/L	1.0						

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

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Gallup
Project: Qtrly Method 8260B Air Quality Permit 0633-M **Work Order:** 0904335

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260B: VOLATILES									
Sample ID: 5ml rb		*MBLK*			Batch ID: **R33385**		Analysis Date:	4/23/2009 5:56:05 PM	
4-Methyl-2-pentanone	ND	µg/L	10						
Methylene Chloride	ND	µg/L	3.0						
n-Butylbenzene	ND	µg/L	1.0						
n-Propylbenzene	ND	µg/L	1.0						
sec-Butylbenzene	ND	µg/L	1.0						
Styrene	ND	µg/L	1.0						
tert-Butylbenzene	ND	µg/L	1.0						
1,1,1,2-Tetrachloroethane	ND	µg/L	1.0						
1,1,2,2-Tetrachloroethane	ND	µg/L	2.0						
Tetrachloroethene (PCE)	ND	µg/L	1.0						
trans-1,2-DCE	ND	µg/L	1.0						
trans-1,3-Dichloropropene	ND	µg/L	1.0						
1,2,3-Trichlorobenzene	ND	µg/L	1.0						
1,2,4-Trichlorobenzene	ND	µg/L	1.0						
1,1,1-Trichloroethane	ND	µg/L	1.0						
1,1,2-Trichloroethane	ND	µg/L	1.0						
Trichloroethene (TCE)	ND	µg/L	1.0						
Trichlorofluoromethane	ND	µg/L	1.0						
1,2,3-Trichloropropane	ND	µg/L	2.0						
Vinyl chloride	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	1.5						
Sample ID: 5ml rb		*MBLK*			Batch ID: **R33416**		Analysis Date:	4/24/2009 8:45:27 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						
1,2,4-Trimethylbenzene	ND	µg/L	1.0						
1,3,5-Trimethylbenzene	ND	µg/L	1.0						
1,2-Dichloroethane (EDC)	ND	µg/L	1.0						
1,2-Dibromoethane (EDB)	ND	µg/L	1.0						
Naphthalene	ND	µg/L	2.0						
1-Methylnaphthalene	ND	µg/L	4.0						
2-Methylnaphthalene	ND	µg/L	4.0						
Acetone	ND	µg/L	10						
Bromobenzene	ND	µg/L	1.0						
Bromodichloromethane	ND	µg/L	1.0						
Bromoform	ND	µg/L	1.0						
Bromomethane	ND	µg/L	1.0						
2-Butanone	ND	µg/L	10						
Carbon disulfide	ND	µg/L	10						
Carbon Tetrachloride	ND	µg/L	1.0						
Chlorobenzene	ND	µg/L	1.0						
Chloroethane	ND	µg/L	2.0						
Chloroform	ND	µg/L	1.0						

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

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Gallup
Project: Qtrly Method 8260B Air Quality Permit 0633-M **Work Order:** 0904335

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260B: VOLATILES									
Sample ID: 5ml rb		*MBLK*			Batch ID: **R33416**		Analysis Date:	4/24/2009 8:45:27 AM	
Chloromethane	ND	µg/L	1.0						
2-Chlorotoluene	ND	µg/L	1.0						
4-Chlorotoluene	ND	µg/L	1.0						
cis-1,2-DCE	ND	µg/L	1.0						
cis-1,3-Dichloropropene	ND	µg/L	1.0						
1,2-Dibromo-3-chloropropane	ND	µg/L	2.0						
Dibromochloromethane	ND	µg/L	1.0						
Dibromomethane	ND	µg/L	1.0						
1,2-Dichlorobenzene	ND	µg/L	1.0						
1,3-Dichlorobenzene	ND	µg/L	1.0						
1,4-Dichlorobenzene	ND	µg/L	1.0						
Dichlorodifluoromethane	ND	µg/L	1.0						
1,1-Dichloroethane	ND	µg/L	1.0						
1,1-Dichloroethene	ND	µg/L	1.0						
1,2-Dichloropropane	ND	µg/L	1.0						
1,3-Dichloropropane	ND	µg/L	1.0						
2,2-Dichloropropane	ND	µg/L	2.0						
1,1-Dichloropropene	ND	µg/L	1.0						
Hexachlorobutadiene	ND	µg/L	1.0						
2-Hexanone	ND	µg/L	10						
Isopropylbenzene	ND	µg/L	1.0						
4-Isopropyltoluene	ND	µg/L	1.0						
4-Methyl-2-pentanone	ND	µg/L	10						
Methylene Chloride	ND	µg/L	3.0						
n-Butylbenzene	ND	µg/L	1.0						
n-Propylbenzene	ND	µg/L	1.0						
sec-Butylbenzene	ND	µg/L	1.0						
Styrene	ND	µg/L	1.0						
tert-Butylbenzene	ND	µg/L	1.0						
1,1,1,2-Tetrachloroethane	ND	µg/L	1.0						
1,1,2,2-Tetrachloroethane	ND	µg/L	2.0						
Tetrachloroethene (PCE)	ND	µg/L	1.0						
trans-1,2-DCE	ND	µg/L	1.0						
trans-1,3-Dichloropropene	ND	µg/L	1.0						
1,2,3-Trichlorobenzene	ND	µg/L	1.0						
1,2,4-Trichlorobenzene	ND	µg/L	1.0						
1,1,1-Trichloroethane	ND	µg/L	1.0						
1,1,2-Trichloroethane	ND	µg/L	1.0						
Trichloroethene (TCE)	ND	µg/L	1.0						
Trichlorofluoromethane	ND	µg/L	1.0						
1,2,3-Trichloropropane	ND	µg/L	2.0						
Vinyl chloride	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	1.5						
Sample ID: 5ml rb		*MBLK*			Batch ID: **R33452**		Analysis Date:	4/28/2009 10:38:31 AM	

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: Qtrly Method 8260B Air Quality Permit 0633-M **Work Order:** 0904335

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260B: VOLATILES									
Sample ID: 5ml rb		*MBLK*			Batch ID: **R33452**		Analysis Date:	4/28/2009 10:38:31 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						
1,2,4-Trimethylbenzene	ND	µg/L	1.0						
1,3,5-Trimethylbenzene	ND	µg/L	1.0						
1,2-Dichloroethane (EDC)	ND	µg/L	1.0						
1,2-Dibromoethane (EDB)	ND	µg/L	1.0						
Naphthalene	ND	µg/L	2.0						
1-Methylnaphthalene	ND	µg/L	4.0						
2-Methylnaphthalene	ND	µg/L	4.0						
Acetone	ND	µg/L	10						
Bromobenzene	ND	µg/L	1.0						
Bromodichloromethane	ND	µg/L	1.0						
Bromoform	ND	µg/L	1.0						
Bromomethane	ND	µg/L	1.0						
2-Butanone	ND	µg/L	10						
Carbon disulfide	ND	µg/L	10						
Carbon Tetrachloride	ND	µg/L	1.0						
Chlorobenzene	ND	µg/L	1.0						
Chloroethane	ND	µg/L	2.0						
Chloroform	ND	µg/L	1.0						
Chloromethane	ND	µg/L	1.0						
2-Chlorotoluene	ND	µg/L	1.0						
4-Chlorotoluene	ND	µg/L	1.0						
cis-1,2-DCE	ND	µg/L	1.0						
cis-1,3-Dichloropropene	ND	µg/L	1.0						
1,2-Dibromo-3-chloropropane	ND	µg/L	2.0						
Dibromochloromethane	ND	µg/L	1.0						
Dibromomethane	ND	µg/L	1.0						
1,2-Dichlorobenzene	ND	µg/L	1.0						
1,3-Dichlorobenzene	ND	µg/L	1.0						
1,4-Dichlorobenzene	ND	µg/L	1.0						
Dichlorodifluoromethane	ND	µg/L	1.0						
1,1-Dichloroethane	ND	µg/L	1.0						
1,1-Dichloroethene	ND	µg/L	1.0						
1,2-Dichloropropane	ND	µg/L	1.0						
1,3-Dichloropropane	ND	µg/L	1.0						
2,2-Dichloropropane	ND	µg/L	2.0						
1,1-Dichloropropene	ND	µg/L	1.0						
Hexachlorobutadiene	ND	µg/L	1.0						
2-Hexanone	ND	µg/L	10						
Isopropylbenzene	ND	µg/L	1.0						
4-Isopropyltoluene	ND	µg/L	1.0						

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

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Gallup
Project: Qtrly Method 8260B Air Quality Permit 0633-M **Work Order:** 0904335

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260B: VOLATILES									
Sample ID: 5ml rb		*MBLK*			Batch ID:	**R33452**	Analysis Date:	4/28/2009 10:38:31 AM	
4-Methyl-2-pentanone	ND	µg/L	10						
Methylene Chloride	ND	µg/L	3.0						
n-Butylbenzene	ND	µg/L	1.0						
n-Propylbenzene	ND	µg/L	1.0						
sec-Butylbenzene	ND	µg/L	1.0						
Styrene	ND	µg/L	1.0						
tert-Butylbenzene	ND	µg/L	1.0						
1,1,1,2-Tetrachloroethane	ND	µg/L	1.0						
1,1,2,2-Tetrachloroethane	ND	µg/L	2.0						
Tetrachloroethene (PCE)	ND	µg/L	1.0						
trans-1,2-DCE	ND	µg/L	1.0						
trans-1,3-Dichloropropene	ND	µg/L	1.0						
1,2,3-Trichlorobenzene	ND	µg/L	1.0						
1,2,4-Trichlorobenzene	ND	µg/L	1.0						
1,1,1-Trichloroethane	ND	µg/L	1.0						
1,1,2-Trichloroethane	ND	µg/L	1.0						
Trichloroethene (TCE)	ND	µg/L	1.0						
Trichlorofluoromethane	ND	µg/L	1.0						
1,2,3-Trichloropropane	ND	µg/L	2.0						
Vinyl chloride	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	1.5						
Sample ID: b3		*MBLK*			Batch ID:	**R33452**	Analysis Date:	4/28/2009 11:15:44 PM	
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						
1,2,4-Trimethylbenzene	ND	µg/L	1.0						
1,3,5-Trimethylbenzene	ND	µg/L	1.0						
1,2-Dichloroethane (EDC)	ND	µg/L	1.0						
1,2-Dibromoethane (EDB)	ND	µg/L	1.0						
Naphthalene	ND	µg/L	2.0						
1-Methylnaphthalene	ND	µg/L	4.0						
2-Methylnaphthalene	ND	µg/L	4.0						
Acetone	ND	µg/L	10						
Bromobenzene	ND	µg/L	1.0						
Bromodichloromethane	ND	µg/L	1.0						
Bromoform	ND	µg/L	1.0						
Bromomethane	ND	µg/L	1.0						
2-Butanone	ND	µg/L	10						
Carbon disulfide	ND	µg/L	10						
Carbon Tetrachloride	ND	µg/L	1.0						
Chlorobenzene	ND	µg/L	1.0						
Chloroethane	ND	µg/L	2.0						
Chloroform	ND	µg/L	1.0						

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

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Gallup
Project: Qtrly Method 8260B Air Quality Permit 0633-M **Work Order:** 0904335

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260B: VOLATILES									
Sample ID: b3		*MBLK*			Batch ID: **R33452**		Analysis Date:	4/28/2009 11:15:44 PM	
Chloromethane	ND	µg/L	1.0						
2-Chlorotoluene	ND	µg/L	1.0						
4-Chlorotoluene	ND	µg/L	1.0						
cis-1,2-DCE	ND	µg/L	1.0						
cis-1,3-Dichloropropene	ND	µg/L	1.0						
1,2-Dibromo-3-chloropropane	ND	µg/L	2.0						
Dibromochloromethane	ND	µg/L	1.0						
Dibromomethane	ND	µg/L	1.0						
1,2-Dichlorobenzene	ND	µg/L	1.0						
1,3-Dichlorobenzene	ND	µg/L	1.0						
1,4-Dichlorobenzene	ND	µg/L	1.0						
Dichlorodifluoromethane	ND	µg/L	1.0						
1,1-Dichloroethane	ND	µg/L	1.0						
1,1-Dichloroethene	ND	µg/L	1.0						
1,2-Dichloropropane	ND	µg/L	1.0						
1,3-Dichloropropane	ND	µg/L	1.0						
2,2-Dichloropropane	ND	µg/L	2.0						
1,1-Dichloropropene	ND	µg/L	1.0						
Hexachlorobutadiene	ND	µg/L	1.0						
2-Hexanone	ND	µg/L	10						
Isopropylbenzene	ND	µg/L	1.0						
4-Isopropyltoluene	ND	µg/L	1.0						
4-Methyl-2-pentanone	ND	µg/L	10						
Methylene Chloride	ND	µg/L	3.0						
n-Butylbenzene	ND	µg/L	1.0						
n-Propylbenzene	ND	µg/L	1.0						
sec-Butylbenzene	ND	µg/L	1.0						
Styrene	ND	µg/L	1.0						
tert-Butylbenzene	ND	µg/L	1.0						
1,1,1,2-Tetrachloroethane	ND	µg/L	1.0						
1,1,2,2-Tetrachloroethane	ND	µg/L	2.0						
Tetrachloroethene (PCE)	ND	µg/L	1.0						
trans-1,2-DCE	ND	µg/L	1.0						
trans-1,3-Dichloropropene	ND	µg/L	1.0						
1,2,3-Trichlorobenzene	ND	µg/L	1.0						
1,2,4-Trichlorobenzene	ND	µg/L	1.0						
1,1,1-Trichloroethane	ND	µg/L	1.0						
1,1,2-Trichloroethane	ND	µg/L	1.0						
Trichloroethene (TCE)	ND	µg/L	1.0						
Trichlorofluoromethane	ND	µg/L	1.0						
1,2,3-Trichloropropane	ND	µg/L	2.0						
Vinyl chloride	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	1.5						
Sample ID: 100ng lcs		*LCS*			Batch ID: **R33385**		Analysis Date:	4/23/2009 7:22:17 PM	

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

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Gallup
Project: Qtrly Method 8260B Air Quality Permit 0633-M **Work Order:** 0904335

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260B: VOLATILES									
Sample ID: 100ng lcs		*LCS*			Batch ID:	**R33385**	Analysis Date:		4/23/2009 7:22:17 PM
Benzene	17.49	µg/L	1.0	87.5	88	116			S
Toluene	19.78	µg/L	1.0	98.9	82.9	112			
Chlorobenzene	22.22	µg/L	1.0	111	71.4	133			
1,1-Dichloroethene	20.92	µg/L	1.0	105	97.9	140			
Trichloroethene (TCE)	17.28	µg/L	1.0	86.4	90.5	112			S
Sample ID: 100ng lcs		*LCS*			Batch ID:	**R33416**	Analysis Date:		4/24/2009 9:42:54 AM
Benzene	17.18	µg/L	1.0	85.9	76.7	114			
Toluene	22.89	µg/L	1.0	114	78.4	117			
Chlorobenzene	22.91	µg/L	1.0	115	80.7	127			
1,1-Dichloroethene	21.70	µg/L	1.0	109	80.2	128			
Trichloroethene (TCE)	17.22	µg/L	1.0	86.1	77.4	115			
Sample ID: 100ng lcs		*LCS*			Batch ID:	**R33452**	Analysis Date:		4/28/2009 11:36:45 AM
Benzene	21.00	µg/L	1.0	105	76.7	114			
Toluene	20.22	µg/L	1.0	101	78.4	117			
Chlorobenzene	19.09	µg/L	1.0	95.4	80.7	127			
1,1-Dichloroethene	23.81	µg/L	1.0	119	80.2	128			
Trichloroethene (TCE)	21.80	µg/L	1.0	109	77.4	115			
Sample ID: 100ng lcs_b		*LCS*			Batch ID:	**R33452**	Analysis Date:		4/29/2009 12:43:24 AM
Benzene	21.44	µg/L	1.0	102	76.7	114			
Toluene	19.83	µg/L	1.0	95.0	78.4	117			
Chlorobenzene	18.75	µg/L	1.0	93.8	80.7	127			
1,1-Dichloroethene	23.68	µg/L	1.0	118	80.2	128			
Trichloroethene (TCE)	21.46	µg/L	1.0	107	77.4	115			

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: 4/21/2009

Work Order Number 0904335 Received by: AT

Checklist completed by: _____ 4/21/09 Sample ID labels checked by: _____

Signature Date Initials

Matrix: Carrier name: Client drop-off

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☐	Not Shipped ☑
Custody seals intact on sample bottles?	Yes ☑	No ☐	N/A ☐	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace? No VOA vials submitted ☐		Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	2°	<6° C Acceptable 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 #: 505 722 3833
email or Fax#: 505 722 0210
QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)
☐ Other
☐ EDD (Type)

Turn-Around Time:
☐ Standard ☐ Rush
Project Name: QUARTERLY METHOD 8260B AIRQUALITY PERMIT 0633-M7
Project #:
Project Manager: GAURAV, RAJEN
Sampler: ALVIN DORSEY
On Ice: X Yes ☐ No
Sample Temperature: 2

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 0904335
4-20-09	0815	AIR	3rd B2 STRIPPER-IN	3-40 ML		1
4-20-09	0830		3rd B2 STRIPPER-OUT	3-40 ML		2
4-20-09	0925		B2 STRIPPER 12 IN	3-40 ML		3
4-20-09	0935	↓	B2 STRIPPER 12 OUT	3-40 ML		4

Analysis Request

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) 8011 VOC	8270 (Semi-VOA)					Air Bubbles (Y or N)
									X						
									X						
									X						
									X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
4-21-09				4/21/09	1610
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

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

COVER LETTER

Friday, May 15, 2009

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

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

RE: BZ Strippers

Order No.: 0905027

Dear Gaurav Rajen:

Hall Environmental Analysis Laboratory, Inc. received 4 sample(s) on 5/4/2009 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 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,

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

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

Hall Environmental Analysis Laboratory, Inc.

Date: *15-May-09*

CLIENT: Western Refining Southwest, Gallup
Project: BZ Strippers
Lab Order: 0905027

Lab ID: 0905027-01 **Collection Date:** 4/30/2009 9:30:00 AM
Client Sample ID: 3RD BZ Stripper-IN **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Methyl tert-butyl ether (MTBE)	ND	2500		µg/L	1000	5/12/2009 4:18:41 PM
Benzene	33000	1000		µg/L	1000	5/12/2009 4:18:41 PM
Toluene	33000	1000		µg/L	1000	5/12/2009 4:18:41 PM
Ethylbenzene	1200	1000		µg/L	1000	5/12/2009 4:18:41 PM
Xylenes, Total	8000	2000		µg/L	1000	5/12/2009 4:18:41 PM
Surr: 4-Bromofluorobenzene	90.4	65.9-130		%REC	1000	5/12/2009 4:18:41 PM

Lab ID: 0905027-02 **Collection Date:** 4/30/2009 9:40:00 AM
Client Sample ID: 3RD BZ Stripper-OUT **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Methyl tert-butyl ether (MTBE)	ND	25		µg/L	10	5/13/2009 3:18:29 PM
Benzene	130	10		µg/L	10	5/13/2009 3:18:29 PM
Toluene	250	10		µg/L	10	5/13/2009 3:18:29 PM
Ethylbenzene	22	10		µg/L	10	5/13/2009 3:18:29 PM
Xylenes, Total	180	20		µg/L	10	5/13/2009 3:18:29 PM
Surr: 4-Bromofluorobenzene	97.4	65.9-130		%REC	10	5/13/2009 3:18:29 PM

Lab ID: 0905027-03 **Collection Date:** 4/30/2009 10:00:00 AM
Client Sample ID: BZ Stripper 1&2 IN **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Methyl tert-butyl ether (MTBE)	ND	1300		µg/L	500	5/12/2009 3:58:12 AM
Benzene	7300	500		µg/L	500	5/12/2009 3:58:12 AM
Toluene	19000	500		µg/L	500	5/12/2009 3:58:12 AM
Ethylbenzene	1200	500		µg/L	500	5/12/2009 3:58:12 AM
Xylenes, Total	8100	1000		µg/L	500	5/12/2009 3:58:12 AM
Surr: 4-Bromofluorobenzene	83.4	65.9-130		%REC	500	5/12/2009 3:58:12 AM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *15-May-09*

CLIENT: Western Refining Southwest, Gallup
Project: BZ Strippers
Lab Order: 0905027

Lab ID: 0905027-04
Collection Date: 4/30/2009 10:15:00 AM
Client Sample ID: BZ Stripper 1&2 OUT
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	630		µg/L	250	5/12/2009 4:28:42 AM
Benzene	1300	250		µg/L	250	5/12/2009 4:28:42 AM
Toluene	4700	250		µg/L	250	5/12/2009 4:28:42 AM
Ethylbenzene	480	250		µg/L	250	5/12/2009 4:28:42 AM
Xylenes, Total	3400	500		µg/L	250	5/12/2009 4:28:42 AM
Surr: 4-Bromofluorobenzene	80.2	65.9-130		%REC	250	5/12/2009 4:28:42 AM

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

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Gallup
Project: BZ Strippers **Work Order:** 0905027

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles									
Sample ID: 5ML RB		*MBLK*			Batch ID:	**R33615**	Analysis Date:		5/11/2009 9:37:07 AM
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						
Sample ID: 100NG BTEX LCS		*LCS*			Batch ID:	**R33615**	Analysis Date:		5/11/2009 7:18:02 PM
Methyl tert-butyl ether (MTBE)	22.18	µg/L	2.5	111	51.2	138			
Benzene	19.72	µg/L	1.0	98.6	85.9	113			
Toluene	21.49	µg/L	1.0	107	86.4	113			
Ethylbenzene	21.00	µg/L	1.0	105	83.5	118			
Xylenes, Total	64.64	µg/L	2.0	108	83.4	122			
Sample ID: 100NG BTEX LCSD		*LCSD*			Batch ID:	**R33615**	Analysis Date:		5/11/2009 7:48:31 PM
Methyl tert-butyl ether (MTBE)	22.21	µg/L	2.5	111	51.2	138	0.144	28	
Benzene	19.51	µg/L	1.0	97.6	85.9	113	1.08	27	
Toluene	20.61	µg/L	1.0	103	86.4	113	4.17	19	
Ethylbenzene	20.31	µg/L	1.0	102	83.5	118	3.33	10	
Xylenes, Total	62.03	µg/L	2.0	103	83.4	122	4.12	13	

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: 5/4/2009

Work Order Number 0905027 | Received by: AMF

Checklist completed by: _____ Signature 5/4/09 Date | Sample ID labels checked by: _____ Initials

Matrix: | Carrier name: Client drop-off

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☐	Not Shipped ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	6°	<6° C *Acceptable* 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 #: 505 722 3833
email or Fax#: 505 722 0210

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)
☐ Other _____
☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☐ Rush _____

Project Name: BZ STRIPPERS
Project #:

Project Manager: GAURAV, RAJEN
Sampler: ALVIN DORSEY
On Ice: ☒ Yes ☐ No
Sample Temperature: 6

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 0905087
04-30-09	0930	Air	3rd BZ STRIPPER-IN	3-40ML	HCl	1
04-30-09	0940		3rd BZ STRIPPER-OUT	3-40ML	HCl	2
04-30-09	1000		BZ STRIPPER 12 IN	3-40ML	HCl	3
04-30-09	1015	✓	BZ STRIPPER 12 OUT	3-40ML	HCl	4

Analysis Request

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 BETEX - MTBE				Air Bubbles (Y or N)
											X				
											X				
											X				
											X				

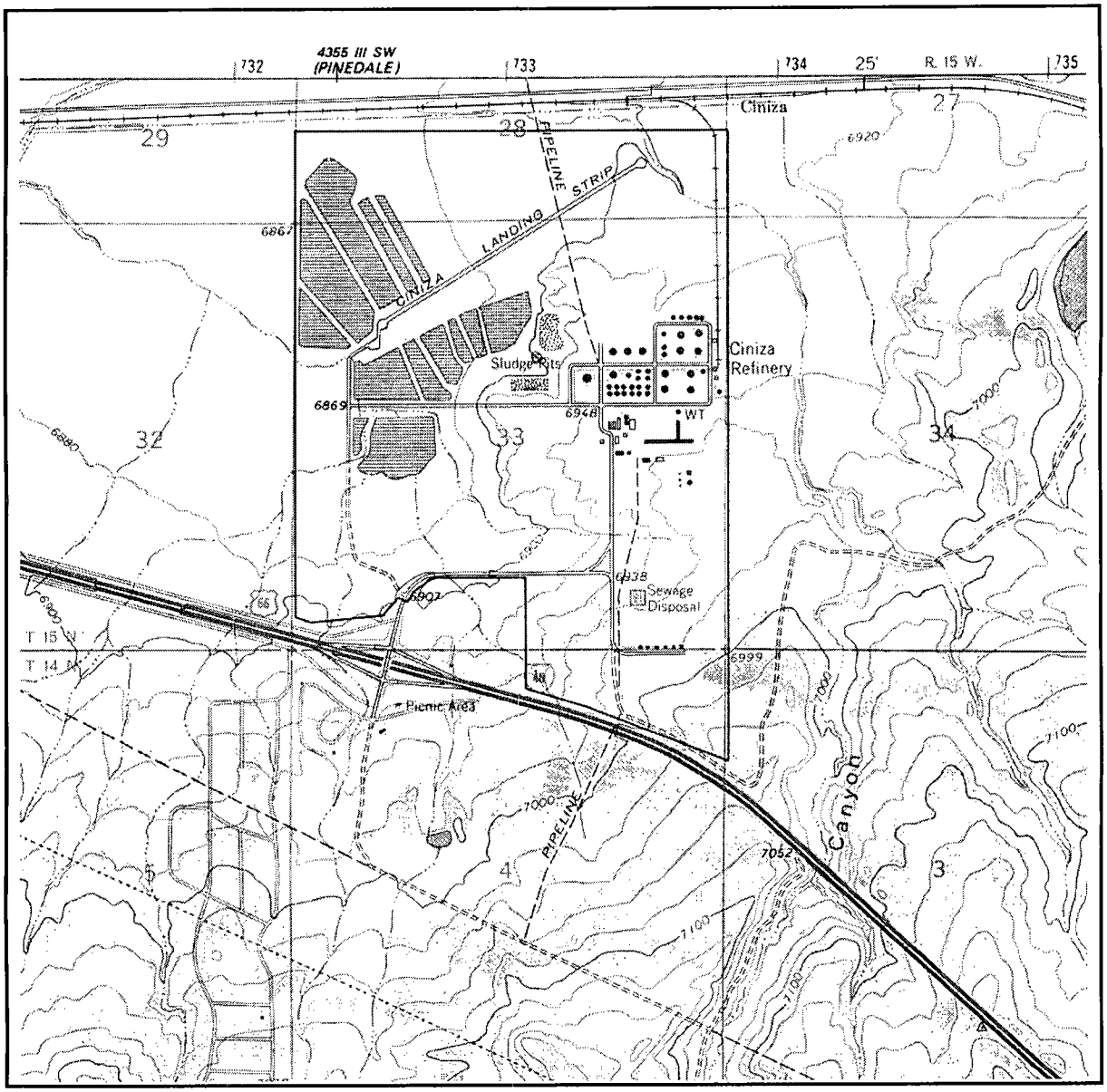
Date	Time	Relinquished by:	Received by:	Date	Time
05-01-09	1200			5/1/09	4:30
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

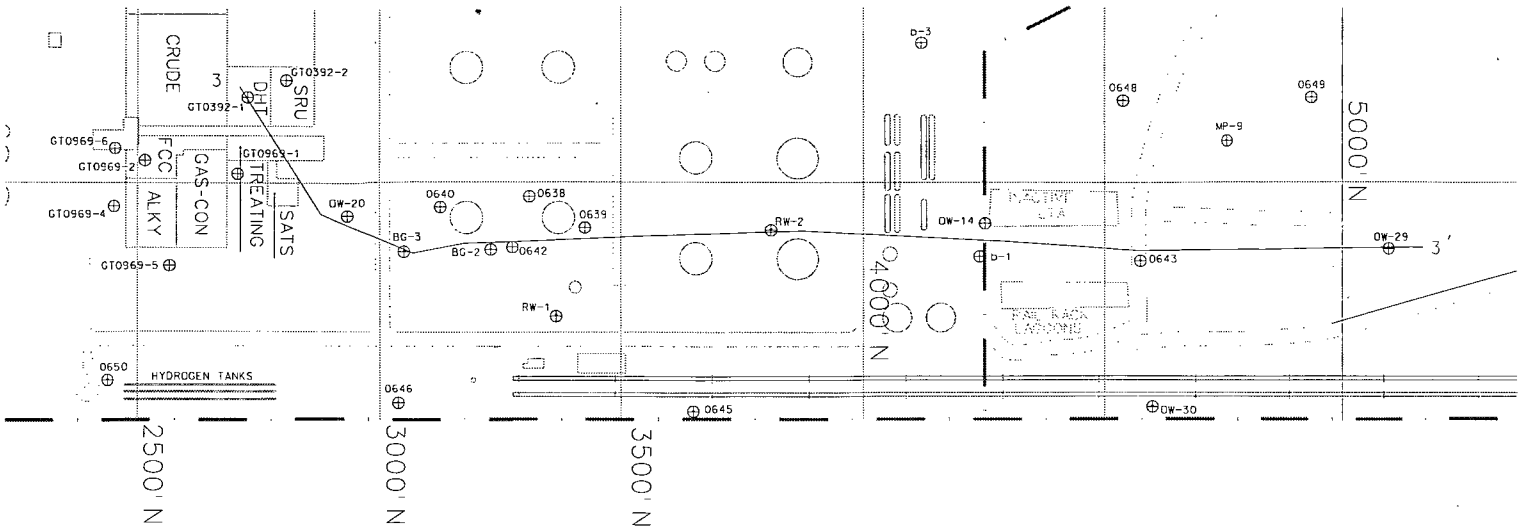
If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

The refinery is situated on an 810 acre irregular shaped tract of land that is substantially located within the lower one quarter of Section 28 and throughout Section 33 of Township 15 North, Range 15 West of the New Mexico Prime Meridian. A small component of the property lies within the northeastern one quarter of Section 4 of Township 14 North, Range 15 West.

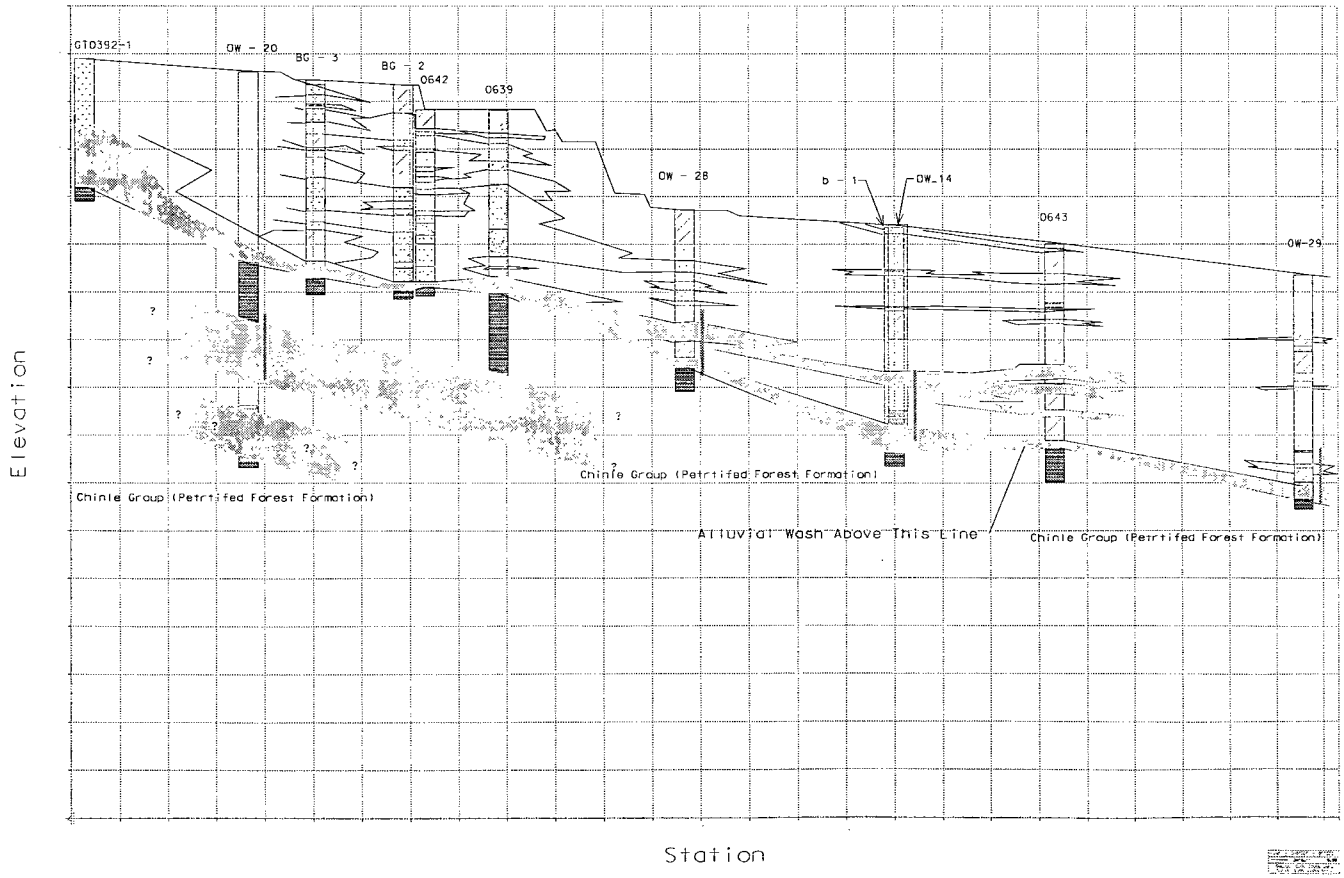
Locality Map
USGS Topographical Map - Ciniza Quadrangle (Revised 1980)



A detailed map of the plant site is also included with this application as Appendix A. This map is large format and measures 34 inches wide by 22 inches high.



Profile 3 - 3'



PRECISION ENGINEERING, INC.

- Clay
- Gravel and Sand
- Silt
- Sandy Clay or Clayey Sand
- Sand
- Shale
- Shaley Sandstone or Sandy Shale
- Sandstone
- Water Bearing Sands or Gravels
- Screen Length + Sanded Interval Above Screen

Chavez, Carl J, EMNRD

From: Riege, Ed [Ed.Riege@wnr.com]
Sent: Monday, January 12, 2009 5:18 PM
To: Bearzi, James, NMENV
Cc: Monzeglio, Hope, NMENV; Chavez, Carl J, EMNRD
Subject: Response to Letter of December 19, 2008
Attachments: Gallup Refinery letter to Bearzi.pdf

Mr. Bearzi,
The response to your letter of December 19, 2008 is attached. The original signed hard copy was placed into the mail.

Thanks,

Ed Riege

Ed Riege
Environmental Manager

Western Refining
Gallup Refinery
Route 3 Box 7
Gallup, NM 87301
(505) 722-0217
ed.riege@wnr.com

January 12, 2009

Mr. James P. Bearzi
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

Dear Mr. Bearzi:

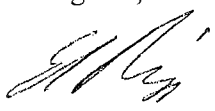
This letter is a response to your letter dated December 19, 2009 re: Revision of the Part A Permit Application and Additional Facility requirement pertaining to the Wastewater Treatment System, Western Refining Southwest Inc., Gallup Refinery, EPA ID# NMD000333211, HWB-GRCC-MISC. We are responding in a timely manner to those requests with a deadline of January 12, 2009, recognizing that some items have a later deadline, and others have already been submitted in our December 23rd transmittal to Ms. Hope Monzeglio of your staff.

We are responding here on a point-by-point basis to your December 19, 2009, letter:

a. Starting the week of January 5, 2009 the API Separator's overflow pipes to the lagoons were removed from service and overflows are now routed to a semi-permanent/temporary tank .
b. Western Refining will respond by February 13, 2008 as requested.
c. Samples are being collected as specified and the results of the first set of laboratory analyses have been submitted to Hope Monzeglio of the NMED's Hazardous Waste Bureau and to Carl Chavez of the Oil Conservation Division within the timelines as specified by you.
d. Samples are being collected as specified and the results of the first set of laboratory analyses have been submitted to Hope Monzeglio of the NMED's Hazardous Waste Bureau and to Carl Chavez of the Oil Conservation Division within the timelines as specified by you.
e. Flow into the new API separator and to the third benzene stripper is not currently monitored.
f. The requested dates and estimated amounts are being compiled, and we will send the available data and estimates by January 16 as requested.
g. The requested data has been compiled and submitted on December 23, 2008
h. The requested laboratory analytical data on the influent and effluent to and from the Benzene Stripper 3 has been compiled and submitted on December 23, 2008. The sources of wastewater to Benzene Stripper 3 are – 1) North and South Desalters; 2) Low Pressure Receiver Water Boot; 3) High Pressure Receiver Water Boot; 4) Straight Run Water Wash Tower.
i. The requested air quality permit has been submitted

Please do not hesitate to contact me at 505-722-3833 if you (or your staff) have any further questions.

Best regards,



Ed Riege
Environmental Manager

January 12, 2009

Mr. James P. Bearzi
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

Dear Mr. Bearzi:

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We are responding here on a point-by-point basis to your December 19, 2009, letter:

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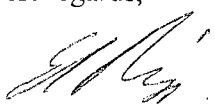

Ed Riege
Environmental Manager

Western Refining

GALLUP REFINERY

WNR LISTED NYSE

RECEIVED

2008 NOV 10 PM 2 58

Certified Mail 7005 1820 0001 6456 3158

November 6, 2008

Mr. Carl Chavez
Oil Conservation Division
Environmental Bureau
1220 S. St. Francis Dr.
Santa Fe, NM 87505

Re: OCD Discharge Permit GW-032 Condition 9

Dear Mr. Chavez:

This letter is in response to our conference call of October 23, 2008 in which we discussed Western Refining Gallup's letter dated October 1, 2008 regarding OCD Permit Condition 9. Carl thank you for your suggestions to make the Gallup Refinery Storage Tank Table a tool that can be used to track Gallup's progress in meeting Condition 9. The following changes were made to the attached table:

- A statement was added near the bottom of the table which indicates that the refinery will update the Gallup Refinery Storage Tank Table annually with the update due to OCD by January 31 of each year.
- A statement was added near the bottom of the table which indicates that the privately owned tanks (such as Nalco and additive tanks) will be required to implement the 5 year external and 10 year internal inspection schedule for their tanks. Western Refining will contact the owners notifying them of this requirement.
- Columns have been added to the table which allow for indicating the actual completion dates for change in containment style completion, soil compaction completion and tank gauge installation completion.
- A note was added to the column heading "Compacting of Soils" indicating by 10/1/2009.
- A couple of the inspection dates were corrected such as T-5 which had indicated a next external inspection date of October 1999.

Your review and approval of this submittal are appreciated. Please contact Ed Riege at (505) 722-0217 if you have any comments or questions regarding this submittal.

Sincerely,

Mark B. Turri
General Manager

C: Ms. Hope Monzeglio
Ed Riege
Don Riley
Guarav Rajen

Western Refining

GALLUP REFINERY STORAGE TANK TABLE

Count #	TANK NUMBER or DESCRIPTION	YEAR BUILT	APPROX.CAPACITY (BBLS)	PRODUCT	NEXT EXTERNAL INSPEC.	NEXT INTERNAL INSPEC.	TANK STYLE	FLOOR STYLE		CONTAINMENT STYLE	Compacting of Soils or Concrete Containment by 10/1/09 IF Action is Required			Auto Tank Guaging System (>10,000 gallons) if Hydrocarbon or Chemical Storage		
								as of 9/08	Double Floor Installed mo/yr	As of 9/8	Is Action Required?	Date Soil Compaction Completed	Date Concrete Completed	Required To Install (yes/no)	Estimated date for Completion	Actual date completed
1	P-V19A	1957	668.7 ft^3	HYDROGEN GAS	2008	2008	Bullet	Elevated	n/a	Soil/Gravel	No	n/a	n/a	NO	n/a	n/a
2	P-V19B	1957	668.7 ft^3	HYDROGEN GAS	2008	2008	Bullet	Elevated	n/a	Soil/Gravel	No	n/a	n/a	NO	n/a	n/a
3	P-V19C	1957	668.7 ft^3	HYDROGEN GAS	2008	2008	Bullet	Elevated	n/a	Soil/Gravel	No	n/a	n/a	NO	n/a	n/a
4	TK-115	1957	5,000	DHT PRODUCT	2008	2008	Cone	Double	Mar-08	Soil/Gravel	Yes		n/a	YES	1Q'09	
5	TK-2	1965	4,000	UNLEADED PREMUM	2008	2008	Cone	Single		Soil/Gravel	Yes		n/a	YES	Dec-08	
6	TK-228	1957	5,000	K-1	2008	2008	Cone	Single		Soil/Gravel	Yes		n/a	YES	1Q'09	
7	TK-343	1957	5,000	ETHANOL	2008	2008	Cone	Single		Soil/Gravel	Yes		n/a	YES	1Q'10	
8	TK-4	1970	3,800	83.0 OCTANE	2008	2008	Cone	Single		Soil/Gravel	Yes		n/a	YES	Dec-08	
9	TK-446	1945	700	OLEFINS/ISO BUTANE	2008	2008	Bullet	Elevated	n/a	Soil/Gravel	Yes		n/a	YES	1Q'09	
10	TK-447	1957	1,373	ISO-BUTANE	2008	2008	Bullet	Elevated	n/a	Soil/Gravel	Yes		n/a	YES	Dec-08	
11	TK-555	1974	2,073	ISO-BUTANE	2008	2008	Bullet	Elevated	n/a	Soil/Gravel	Yes		n/a	YES	1Q'09	
12	TK-556	1957	718	PROPANE	2008	2008	Bullet	Elevated	n/a	Soil/Gravel	Yes		n/a	YES	Dec-08	
13	TK-560	1957	2,300	BUTANE	2008	2008	Bullet	Elevated	n/a	Soil/Gravel	Yes		n/a	YES	1Q'09	
14	TK-564	1957	5,000	NAT.GASOLINE/ISOMERATE	2008	2008	Elyps.	Single		Soil/Gravel	Yes		n/a	YES	Dec-08	
15	TK-565	1957	5,000	ISOM/NAT GASO/TOL	2008	2008	Elyps.	Single		Soil/Gravel	Yes		n/a	YES	1Q'09	
16	TK-575	1957	10,000	JET-A/K1	2008	2008	Cone	Single		Soil/Gravel	Yes		n/a	YES	1Q'09	
17	TK-102	1991	80,000	CRUDE	2009	2009	Cone	Single		Soil/Gravel	Yes		n/a	YES	2009	
18	TK-106	1957	5,000	TRANSMIX	2009	2009	Cone	Single		Soil/Gravel	Yes		n/a	YES	2009	
19	TK-18570		54	NALCO 7359	2009	2009	Cone	Single		Soil/Gravel	Yes	n/a		NO	n/a	n/a
20	TK-18571		54	NALCO 7359	2009	2009	Cone	Single		Soil/Gravel	Yes	n/a		NO	n/a	n/a
21	TK-5	1963	1,800	ETHANOL	2009	2009	Cone	Single		Soil/Gravel	Yes		n/a	YES	2009	
22	TK-563	1986	20,000	NAT. GASOLINE	2009	2009	Elyps.	Single		Soil/Gravel	Yes		n/a	YES	2009	
23	TK-7	1946	330	ISOMERATE	2009	2009	Bullet	Elevated	n/a	Concrete	No	n/a	n/a	YES	2009	
24	TK-703	1963	25,000	RESIDUE/FCC FEED	2009	2009	Cone	Single		Soil/Gravel	Yes		n/a	YES	2009	
25	TK-704	1963	10,000	FUEL OIL	2009	2009	Cone	Single		Soil/Gravel	Yes		n/a	YES	2009	
26	TK-912		188	Add. Gasoline (6331)	2009	2009	Hor. Cyl.	Elevated	n/a	Concrete	No	n/a	n/a	NO	n/a	n/a
27	TK-913		206	Add. Gasoline (NAP 96)	2009	2009	Hor. Cyl.	Elevated	n/a	Concrete	No	n/a	n/a	NO	n/a	n/a
28	Z81-T1	1998	1,000	TREATED WATER	2009	2009	Cone	Single		Concrete	No	n/a	n/a	No	n/a	n/a
29	Z81-T9		60	DIESEL	2009	2009	Hor. Cyl.	Elevated	n/a	Concrete	No	n/a	n/a	NO	n/a	n/a
30	Q-T2	1956	112	CAUSTIC	2010	2010	Cone	Single		Concrete	No	n/a	n/a	NO	n/a	n/a
31	Q-T8	1963	226	CAUSTIC	2010	2010	Cone	Single		Concrete	No	n/a	n/a	NO	n/a	n/a
32	TK-1001		72	DIESEL TANK	2010	2010	Hor. Cyl.	Elevated	n/a	Concrete	No	n/a	n/a	NO	n/a	n/a
33	TK-1002		72	GASOLINE TANK	2010	2010	Hor. Cyl.	Elevated	n/a	Concrete	No	n/a	n/a	NO	n/a	n/a
34	TK-1003		57	DIESEL POUR POINT ADDITIVE	2010	2010	Hor. Cyl.	Elevated	n/a	Concrete	No	n/a	n/a	NO	n/a	n/a
35	TK-1004		112	DIESEL LUBRICITY ADDITIVE	2010	2010	Hor. Cyl.	Elevated	n/a	Concrete	No	n/a	n/a	NO	n/a	n/a
36	TK-235	1957	5,000	TRANSMIX	2010	2010	Cone	Single		Soil/Gravel	Yes		n/a	YES	2010	
37	TK-337	1977	20,000	ETHANOL	2010	2010	Cone	Single		Soil/Gravel	Yes		n/a	YES	2010	
38	TK-345	1977	20,000	REFORMATE/ETOH	2010	2010	Cone	Single		Soil/Gravel	Yes		n/a	YES	2010	
39	TK-448	1957	1,373	ISO-BUTANE	2010	2010	Bullet	Elevated	n/a	Soil/Gravel	Yes		n/a	YES	2010	
40	TK-570	1957	25,000	87.0 UNLD REG.	2010	2010	Cone	Single		Soil/Gravel	Yes		n/a	YES	2010	
41	TK-576	1968	40,000	PREMUM BASE	2010	2010	Cone	Single		Soil/Gravel	Yes		n/a	YES	2010	
42	TK-108	1957	5,000	ALKLATE	2011	2011	Cone	Single		Soil/Gravel	Yes		n/a	YES	2011	
43	TK-342	1957	5,000	ETHANOL	2011	2011	Cone	Single		Soil/Gravel	Yes		n/a	YES	2011	
45	TK-706	1963	10,000	FUEL OIL	2011	2011	Cone	Single		Soil/Gravel	Yes		n/a	YES	2011	
46	TK-707	1963	1,000	SLOP OIL	2011	2011	Cone	Single		Soil/Gravel	Yes		n/a	YES	2011	

Count #	TANK NUMBER or DESCRIPTION	YEAR BUILT	APPROX.CAPACITY (BBLS)	PRODUCT	NEXT EXTERNAL INSPEC.	NEXT INTERNAL INSPEC.	TANK STYLE	FLOOR STYLE		CONTAINMENT STYLE	Compacting of Soils or Concrete Containment by 10/1/09 IF Action is Required			Auto Tank Guaging System (>10,000 gallons) if Hydrocarbon or Chemical Storage		
								as of 9/08	Double Floor Installed mo/yr	As of 9/8	Is Action Required?	Date Soil Compaction Completed	Date Concrete Completed	Required To Install (yes/no)	Estimated date for Completion	Actual date completed
47	TK-714	1969	30,000	FCC FEED	2011	2011	Cone	Single		Soil/Gravel	Yes		n/a	YES	2011	
48	Z81-T10	1957	63	CAUSTIC	2011	2011	Cone	Single		Concrete	No	n/a	n/a	NO	n/a	n/a
49	Z81-T6	1962	880	DOMESTIC WATER	2011	2011	Cone	Single		Concrete	No	n/a	n/a	YES	2011	
73	TK-705	1963	10,000	FUEL OIL	2011	2011	Cone	Single		Soil/Gravel	Yes		n/a	YES	2012	
51	A-V61.1		140	Caustic	2011	2011	Cone	Single		Concrete	No	n/a	n/a	NO	n/a	n/a
50	TK-701	1963	37,000	FCC FEED	2012	2012	Cone	Single		Soil/Gravel	Yes		n/a	YES	2011	
52	Q-T6		29,800	DRAIN HOLDING TK	2012	2012	Cone	Single		Concrete	No	n/a	n/a	NO	n/a	n/a
53	TK-557	1957	718	PROPANE	2012	2012	Bullet	Elevated	n/a	Soil/Gravel	Yes		n/a	YES	2012	
54	TK-702	1963	25,000	FCC FEED	2012	2012	Cone	Single		Soil/Gravel	Yes		n/a	YES	2012	
55	TK-709	1963	1,000	RESIDUE	2012	2012	Cone	Single		Soil/Gravel	Yes		n/a	YES	2012	
56	Z81-T15		80	DIESEL	2012	2012	Hor. Cyl.	Elevated	n/a	Concrete	No	n/a	n/a	NO	n/a	n/a
57	Z84-T105	2001	400	SLOP OIL	2012	2012	Cone	Single		Soil/Gravel	Yes	Yes	n/a	YES	2012	
58	Z86-T1	1966	5,000	RAW WATER	2012	2012	Cone	Single		Soil/Gravel	No	n/a	n/a	NO	n/a	n/a
59	Z86-T2	2002	10,832	RAW WATER	2012	2012	Cone	Single		Concrete	No	n/a	n/a	NO	n/a	n/a
60	Foam Tk		10	Fire Fighting Foam Concentrate	2012	2012	Hor. Cyl.	Elevated	n/a	Concrete	No	n/a	n/a	NO	n/a	n/a
61	SR-T10		20	CA-299 SETTLING AGENT	2012	2012	Cone	Single		Concrete	No	n/a	n/a	NO	n/a	n/a
62	TK-581	1957	25,000	LCO	2012	2012	Cone	Single		Soil/Gravel	Yes		n/a	YES	2013	
63	SR-T4	1992	106	IRON CHELATE SOLUTION	2013	2013	Cone	Single		Concrete	No	n/a	n/a	NO	n/a	n/a
64	SR-T5	1992	76	IC-110 IRON CHELATE	2013	2013	Cone	Single		Concrete	No	n/a	n/a	NO	n/a	n/a
65	SR-T6	1992	76	IC-210 FREE CHELATE	2013	2013	Cone	Single		Concrete	No	n/a	n/a	NO	n/a	n/a
66	SR-T7	1993	3	Caustic	2013	2013	Cone	Single		Concrete	No	n/a	n/a	NO	n/a	n/a
67	SR-T8	1993	20	CA-100 DEGRADATION INHIBITOR	2013	2013	Cone	Single		Concrete	No	n/a	n/a	NO	n/a	n/a
68	SR-T9	1993	20	CA-2102 SETTLING AGENT	2013	2013	Cone	Single		Concrete	No	n/a	n/a	NO	n/a	n/a
69	TK-231	1957	5,000	TRANSMIX	2013	2013	Cone	Single		Soil/Gravel	Yes		n/a	YES	2013	
70	TK-232	1957	5,000	TRANSMIX	2013	2013	Cone	Single		Soil/Gravel	Yes		n/a	YES	2013	
71	TK-338	1964	25,000	SWEET NAPHTHA	2013	2013	Cone	Single		Soil/Gravel	Yes		n/a	YES	2013	
72	TK-571	1957	25,000	87.0 UNLD REG.	2013	2013	Cone	Single		Soil/Gravel	Yes		n/a	YES	2013	
44	TK-344	1977	20,000	REFORMATE	2009	2014	Cone	Single		Soil/Gravel	Yes		n/a	YES	2011	
74	TK-107	1957	5,000	SLOP OIL	2009	2014	Cone	Single		Soil/Gravel	Yes		n/a	YES	2014	
75	TK-227	1957	5,000	K-1	2009	2014	Cone	Single		Soil/Gravel	Yes		n/a	YES	2014	
76	TK-561	1957	2,300	BUTANE	2009	2014	Bullet	Elevated	n/a	Soil/Gravel	Yes		n/a	YES	2014	
77	TK-572	1957	25,000	87.0 UNLD REG.	2009	2014	Cone	Single		Soil/Gravel	Yes		n/a	YES	2014	
78	Z81-T20		22	TRI-ACT® 1820	2009	2014	Hor. Cyl.	Elevated	n/a	Concrete	No	n/a	n/a	NO	n/a	n/a
79	Z81-V11		63	CAUSTIC	2009	2014	Cone	Single		Concrete	No	n/a	n/a	NO	n/a	n/a
80	FW Pp Fuel		12	Diesel for Fire Water Pump	2010	2015	Cone	Single		Concrete	No	n/a	n/a	NO	n/a	n/a
81	Mercaptan		12	Mercaptan	2010	2015	Hor. Cyl.	Elevated	n/a	Concrete	No	n/a	n/a	NO	n/a	n/a
82	TK-3	1965	4,000	87.0 OCTANE	2010	2015	Cone	Single		Soil/Gravel	Yes		n/a	YES	2015	
83	TK-554	1974	2,073	BUTANE/PROPANE	2010	2015	Bullet	Elevated	n/a	Soil/Gravel	Yes		n/a	YES	2015	
84	TK-574	1968	40,000	ST.RUN	2010	2015	Cone	Single		Soil/Gravel	Yes		n/a	YES	2015	
85	TK-902		237	Additive Tk. (Western)	2010	2015	Cone	Single		Concrete	No	n/a	n/a	NO	n/a	n/a
102	TK-909		5	Power Service	2010	2015	Hor. Cyl.	Elevated	n/a	Concrete	No	n/a	n/a	NO	n/a	n/a
86	Z71-V2	1987	453	ANHYDROUS AMMONIA	2010	2015	Bullet	Elevated	n/a	Soil/Gravel	Yes		n/a	NO	n/a	n/a
87	Z75-V2	1998	168	HYDROCARBON VAPORS	2010	2015	Cone	Single		Concrete	No	n/a	n/a	NO	n/a	n/a
88	Z81-T7	1998	920	BRINE WATER	2010	2015	Cone	Single		Concrete	No	n/a	n/a	YES	2015	
89	Z88-V16	2000	55	RO WATER	2010	2015	Cone	Elevated	n/a	Concrete	No	n/a	n/a	NO	n/a	n/a
90	Z88-V17	2000	55	RO WATER	2010	2015	Cone	Elevated	n/a	Concrete	No	n/a	n/a	NO	n/a	n/a
91	SWS-TK1	2006	1,000	SOUR WATER	2011	2016	Cone	Single		Soil/Gravel	Yes		n/a	NO	n/a	n/a
92	TK-1	1965	3,000	DIESEL	2011	2016	Cone	Single		Soil/Gravel	Yes		n/a	YES	2016	
93	TK-101	1957	80,000	CRUDE	2011	2016	Cone	Single		Soil/Gravel	Yes		n/a	YES	2016	
94	TK-111	1957	5,000	DHT PRODUCT	2011	2016	Cone	Single		Soil/Gravel	Yes		n/a	YES	2016	

Count #	TANK NUMBER or DESCRIPTION	YEAR BUILT	APPROX.CAPACITY (BBLS)	PRODUCT	NEXT EXTERNAL INSPEC.	NEXT INTERNAL INSPEC.	TANK STYLE	FLOOR STYLE		CONTAINMENT STYLE	Compacting of Soils or Concrete Containment by 10/1/09 IF Action is Required			Auto Tank Guaging System (>10,000 gallons) if Hydrocarbon or Chemical Storage		
								as of 9/08	Double Floor Installed mo/yr	As of 9/8	Is Action Required?	Date Soil Compaction Completed	Date Concrete Completed	Required To Install (yes/no)	Estimated date for Completion	Actual date completed
95	TK-112	1957	5,000	DHT PRODUCT	2011	2016	Cone	Single		Soil/Gravel	Yes		n/a	YES	2016	
96	TK-116	1957	5,000	DHT PRODUCT	2011	2016	Cone	Single		Soil/Gravel	Yes		n/a	YES	2016	
97	TK-225	1957	25,000	DISTILLATE	2011	2016	Cone	Double	Jul-06	Soil/Gravel	Yes		n/a	YES	2016	
98	TK-226	1957	25,000	KERSOSENE	2011	2016	Cone	Double	May-06	Soil/Gravel	Yes		n/a	YES	2016	
99	TK-339	1957	25,000	SOUR NAPHTHA	2011	2016	Cone	Single		Soil/Gravel	Yes		n/a	YES	2016	
100	TK-567	1969	20,000	83.O UNLD. REG.	2011	2016	Cone	Single		Soil/Gravel	Yes		n/a	YES	2016	
101	TK-568	1998	2,000	AMMONIUM THIOSULFATE	2011	2016	Cone	Single		Soil/Gravel	Yes		n/a	NO	n/a	n/a
102	TK-577	1957	10,000	DIESEL	2011	2016	Cone	Double	Aug-08	Soil/Gravel	Yes		n/a	YES	2016	
103	TK-579	1957	20,000	DIESEL	2011	2016	Cone	Single		Soil/Gravel	Yes		n/a	YES	2016	
104	TK-582	1957	25,000	UNLEADED PREMUM	2011	2016	Cone	Single		Soil/Gravel	Yes		n/a	YES	2016	
105	TK-708	1963	1,000	Residue	2011	2016	Cone	Single		Soil/Gravel	Yes		n/a	NO	n/a	n/a
106	Z71-TK-716	2006	997	AMMONIUM THIOSULFATE	2011	2016	Cone	Single		Soil/Gravel	Yes		n/a	NO	n/a	n/a
107	A-V59	1958	164	Baume/Caustic	2012	2017	Hor. Cyl.	Elevated	n/a	Concrete	No	n/a	n/a	NO	n/a	n/a
108	TK-562	1986	20,000	ISOMERATE	2012	2017	Cone	Single		Soil/Gravel	Yes		n/a	YES	2017	
109	TK-569	1957	25,000	83.O UNLD. REG.	2012	2017	Cone	Single		Soil/Gravel	Yes		n/a	YES	2017	
110	TK-583	1996	55,000	DIESEL	2012	2017	Cone	Sec.		Soil/Gravel	Yes		n/a	YES	2017	
111	TK-6	1963	1,800	LT STRAIGHT RUN	2012	2017	Cone	Single		Soil/Gravel	Yes		n/a	YES	2017	
112	TK-910		13	Red Dye (Western)	2012	2017	Hor. Cyl.	Elevated	n/a	Concrete	No	n/a	n/a	NO	n/a	n/a
113	Tk-915		50	Diesel-Gasoline Blend	2012	2017	Hor. Cyl.	Elevated	n/a	Soil/Gravel	Yes	n/a		NO	n/a	n/a
114	Z75-V1	1998	168	HYDROCARBON VAPORS	2012	2017	Cone	Single		Concrete	No	n/a	n/a	NO	n/a	n/a
115	Z81-T14		9	DIESEL	2012	2017	Cone	Single		Concrete	No	n/a	n/a	NO	n/a	n/a
116	Z81-T5	1979	5,000	TREATED WATER	2012	2017	Cone	Single		Concrete	No	n/a	n/a	YES	2017	
117	Z83-TK-3		161	Sulfuric Acid	2012	2017	Cone	Single		Soil/Gravel	Yes	n/a		NO	n/a	n/a
118	TK-27	1979	5,000	STORM WATER (Future)	2012	2017	Cone	Single		Soil/Gravel	Yes	Future	n/a	NO	n/a	n/a
119	TK-28	1979	5,000	STORM WATER (Future)	2012	2017	Cone	Single		Soil/Gravel	Yes	Future	n/a	NO	n/a	n/a
120	Z81-T16	1953	69	STARTING AIR	2012	2017	Hor. Cyl.	Elevated	n/a	Concrete	No	n/a	n/a	NO	n/a	n/a
122	TK-901	3Pty	237	Additive Tk. (Chevron)		3Pty	Cone	Single		Concrete	No	n/a	n/a	NO	n/a	n/a
123	TK-903	3Pty	48	Additive Tk. (Texaco)		3Pty	Hor. Cyl.	Elevated	n/a	Concrete	No	n/a	n/a	NO	n/a	n/a
124	TK-906	3Pty	143	Additive Tk. (Exxon)		3Pty	Hor. Cyl.	Elevated	n/a	Concrete	No	n/a	n/a	NO	n/a	n/a
125	TK-911	3Pty	191	Add. Tk.(Conoco)		3Pty	Hor. Cyl.	Elevated	n/a	Concrete	No	n/a	n/a	NO	n/a	n/a
126	TK-914	3Pty	191	Add. Tk. (Shell)		3Pty	Hor. Cyl.	Elevated	n/a	Concrete	No	n/a	n/a	NO	n/a	n/a
39	TK-117	1983	250	OUT OF SERVICE (De-Icer)		OOS	Cone	Double		Soil/Gravel	OOS	n/a	n/a	OOS	n/a	n/a
10	Q-T3		671	OUT OF SERVICE (Caustic)	DEC-'08	OOS	Cone	Single		Concrete	OOS	n/a	n/a	OOS	n/a	n/a
131	Z81-T17		161	OUT OF SERVICE (Water Softner)		OOS	Cone	Single		Concrete	OOS	n/a	n/a	OOS	n/a	n/a
124	Z81-T8		250	OUT OF SERVICE (Fuel Oil)		OOS	Cone	Single		Concrete	OOS	n/a	n/a	OOS	n/a	n/a
57	TK-451	1957	1,000	OUT OF SERVICE		OOS	Cone	Single		Soil/Gravel	OOS	n/a	n/a	OOS	n/a	n/a
58	TK-452	1957	1,000	OUT OF SERVICE		OOS	Cone	Single		Soil/Gravel	OOS	n/a	n/a	OOS	n/a	n/a
59	TK-453	1957	5,000	OUT OF SERVICE		OOS	Cone	Single		Soil/Gravel	OOS	n/a	n/a	OOS	n/a	n/a
76	TK-573	1957	250	OUT OF SERVICE (Kerosene)		OOS	Cone	Single		Soil/Gravel	OOS	n/a	n/a	OOS	n/a	n/a
94	TK-713		1,000	OUT OF SERVICE		OOS	Cone	Single		Soil/Gravel	OOS	n/a	n/a	OOS	n/a	n/a
99	TK-905		232	Add. Tk (Empty-Unocal)		OOS	Hor. Cyl.	Elevated	n/a	Concrete	OOS	n/a	n/a	OOS	n/a	n/a
101	TK-907		25	EMPTY TANK		OOS	Hor. Cyl.	Elevated	n/a	Concrete	OOS	n/a	n/a	OOS	n/a	n/a
121	TK-7135		16	EMPTY TANK (UNICHEM 7376)		OOS	Cone	Single		Concrete	OOS	n/a	n/a	OOS	n/a	n/a
127	Z81-T11		161	EMPTY TANK		OOS	Cone	Single		Soil/Gravel	OOS	n/a	n/a	OOS	n/a	n/a

Count #	TANK NUMBER or DESCRIPTION	YEAR BUILT	APPROX.CAPACITY (BBLS)	PRODUCT	NEXT EXTERNAL INSPEC.	NEXT INTERNAL INSPEC.	TANK STYLE	FLOOR STYLE		CONTAINMENT STYLE	Compacting of Soils or Concrete Containment by 10/1/09 IF Action is Required			Auto Tank Guaging System (>10,000 gallons) if Hydrocarbon or Chemical Storage		
								as of 9/08	Double Floor Installed mo/yr	As of 9/8	Is Action Required?	Date Soil Compaction Completed	Date Concrete Completed	Required To Install (yes/no)	Estimated date for Completion	Actual date completed

TANK
Hor. Cyl. : Not Pressure Rated, mounted above grade, any leak is readily visible
Bullet: Pressure Rated Vessel - Horiz. Cylinder, above grade, leaks are readily visible
Cone Roof: API 650 Style, (could be various roof styles)
Elypsoidal: Low pressure (<8psig design), single floor

FLOOR STYLES:
Single: Single floor, various styles of support underneath the tank.
Secondary - a secondary liner without a sand bottom or leak detection piping, any leak would come out from underneath the tank and not go down under the tank.
Double: Double floor w/leak detection piping
Elevated: Supported Above grade so any leak is readily visible

CONTAINMENT STYLE EXISTING:
Dirt/Gravel
Concrete

Tank Ownership -
Some of the tanks on this listing are owned and maintained by 3rd parties rather than Western Refining. These are indicated by 3Pty in the Year Built Column and the next inspection date columns. As we receive the requested information from the 3rd parties, we will drop that information into the appropriate columns. It is the intent of Western to monitor the 3rd party owner's inspection of the tanks that reside here at the Gallup Refinery.

Update Listing
Western will update this listing at least annually in January and provide the updated listing to NMOCD by the end of January each year. This is to show prior year progress in containments and in tank gauging upgrades. If tank schedules are shuffled; this update will be the notification to NMOCD of those changes. Western will progress the appropriate number of tanks to meet the 10 year API Inspection cycle but does retain the option of swapping tanks between years due to our business needs.

Chavez, Carl J, EMNRD

From: Rajen, Gaurav [Gaurav.Rajen@wnr.com]
Sent: Friday, September 12, 2008 1:15 PM
To: Chavez, Carl J, EMNRD
Cc: Monzeglio, Hope, NMENV; Riege, Ed
Subject: Revisions to our sampling schedule and sampling requirements - GW-032
Attachments: SAMPLE SCHEDULE 2008-revised 9-3-08.xls

Carl Chavez, OCD
New Mexico Energy Minerals and Natural Resources Department
Santa Fe, NM

RE: Western Refining – Gallup Refinery (GW-032)

Dear Mr. Chavez:

It is a pleasure to write to you and confirm our acceptance of the requested modifications to our OCD Discharge Plan Permit GW-032 regarding sampling requirements and sampling schedules as specified in the letter of August 18, 2008 sent via certified mail by John E. Kietling of the Hazardous Waste Bureau (HWB)/ NMED to Mr. Ed Riege at Western Refining.

We have attached a Table providing the modified sampling schedule with modified sampling requirements and also changed certain groundwater monitoring well names from NAPIS -1, NAPIS-2, and NAPIS-3 to KA-1R, KA-2R, and KA-3R, respectively. These wells have been installed and renamed since the original schedule was accepted and approved by the OCD. In the interests of time, we are sending you the revised schedule as an attachment to this e-mail. We will send you a paper copy of the schedule and this letter via certified mail next week.

As requested by the HWB/NMED, we will submit copies of all our laboratory analytical results from the sampling of wells KA-1R, KA-2R and KA-3R to the NMED and OCD within 45 days after all associated quarterly sampling work is completed at these wells. We will also report these data in our Annual Groundwater Monitoring Report.

If you have any further questions regarding this please contact me at 505-722-0227 or, Mr. Ed Riege, at 505-722-0217.

Sincerely,

Gaurav Rajen, Ph.D.
Western Refining Gallup Refinery
Mailing Address: Route 3, Box 7, Gallup, NM 87301
Physical Address: I-40, Exit 39, Jamestown, NM 87343
Telephone: (Main) 505-722-3833
Telephone: (Desk) 505-722-0227
Telephone: (Cell) 505-514-9918
Fax: 505-722-0210
E-mail: Gaurav.Rajen@wnr.com

SAMPLING REQUIREMENTS PER DISCHARGE PERMIT (GW-032) 8/23/07

LOCATION	FREQUENCY	TEST METHOD	ANALYSIS REQUEST														
			8021 (BTEX, MTBE)	8015B TPH(GRO/DRO) EXTENDED	Ph	ANIONS (Cl)	8270 (SEMI-VOA)	8270 PHENOL	8260B (VOA)	BOD- (48 hr)	COD (28 DAYS)	GEN CHEM (Cations, Anions,pH, Conductivity)	E-COLI BACTERIA (24 hr)	METALS WQCC TOTALS	RCRA 8 TOTALS & DISSOLVED	CYANIDES	NITRATES
	Quarterly																
Pond 1		Gen Chem, VOC, WQCC Metals, BOD, COD, E-coli Bacteria)							X	X	X	X	X	X			
Pond 2		Same as above							X	X	X	X	X	X			
Pond 3		Same as above							X	X	X	X	X	X			
Pond 4		Same as above							X	X	X	X	X	X			
Pond 5		Same as above							X	X	X	X	X	X			
Pond 6		Same as above							X	X	X	X	X	X			
Pond 7		Same as above							X	X	X	X	X	X			
Pond 8		Same as above							X	X	X	X	X	X			
Al-2 to EP-1		8260, 8015B include C6-C10, C10-C36, RCRA 8 Metals total		X					X					X			
Pilot Effluent		VOC/DRO Extended, GRO, BOD, COD, WQCC METALS		X					X	X	X			X			
NAPIS Effluent		GEN CHEM, VOC, SVOC (PHENOL), DRO Extended GRO, WQCC METALS		X			X		X			X		X			
AL-1 Inlet	Monthly until 4/08 start quarterly (or more frequently)	BOD, COD, PHENOL						X		X	X						
AL-2 Inlet		Same as above						X		X	X						
EP-1 Inlet		Same as above						X		X	X						
Evap Pond 1	monthly until 12/08 then change to qtrly	VOC, BOD, COD, Cl, DRO/GRO, MTBE, Ph, PHENOL		X	X	X		X	X	X	X						
KA-1R	Sample qtrly from September 08	8021B (BTEX/MTBE), 8310 (Semi-VOCs), 8015B (DRO extended, GRO), RCRA metals, and GEN CHEM	X	X	X							X			X		
KA-2R	Sample qtrly from September 08	Same as above										X					
KA-3R	Sample qtrly from September 08																

SAMPLING REQUIREMENTS PER DISCHARGE PERMIT (GW-032) 8/23/07

LOCATION	FREQUENCY	TEST METHOD	ANALYSIS REQUEST: 8021 (BTEX, MTBE)	8015B TPH(GRO/DRO) EXTENDED	Ph	ANIONS (Cl)	8270 (SEMI-VOA)	8270 PHENOL	8260B (VOA)	BOD- (48 hr)	COD (28 DAYS)	GEN CHEM (Cations, Anions,pH, Conductivity)	E-COLI BACTERIA (24 hr)	METALS WQCC TOTALS	RCRA 8 TOTALS & DISSOLVED	CYANIDES	NITRATES
NAPIS 2ndary Containment		8021, 8015B EXTENDED, METALS WQCC TOTALS	X	X										X			
	Semi-Annual																
OW-14 (HIGH-BENZENE)		VOC/MTBE							X								
Pond 1 Inlet (EPI-IN)		GenChem, VOC, SVOC Including Phenol, DRO extended/GRO, WQCC Metals		X			X		X			X		X			
Boiler Water inlet to EP-2		Gen Chem										X					
	ANNUAL																
BW-1A		Gen Chem, VOC, SVOC, MTBE, WQCC Metals					X		X			X		X		X	
BW-1B		Same as above					X		X			X		X		X	
BW-1C		Same as above					X		X			X		X		X	
BW-2A		Same as above					X		X			X		X		X	
BW-2B		Same as above					X		X			X		X		X	
BW-2C		Same as above					X		X			X		X		X	
BW-3A		Same as above					X		X			X		X		X	
BW-3B		Same as above					X		X			X		X		X	
BW-3C		Same as above					X		X			X		X		X	
MW-1		Gen Chem / RCRA List Constituents		X			X		X			X			X	X	
MW-4		Gen Chem / RCRA List Constituents. Modified skinner list metals & organics.		X			X		X			X			X	X	
MW-5		Gen Chem / RCRA List Constituents. Modified skinner list metals & organics.		X			X		X			X			X	X	
OW-11		Gen Chem, VOC, SVOC, MTBE, WQCC Metals					X		X			X		X			
OW-12		VOC/MTBE							X								

SAMPLING REQUIREMENTS PER DISCHARGE PERMIT (GW-032) 8/23/07

LOCATION	FREQUENCY	TEST METHOD	ANALYSIS REQUEST															
			8021 (BTEX, MTBE)	8015B TPH(GRO/DRO) EXTENDED	Ph	ANIONS (CI)	8270 (SEMI-VOA)	8270 PHENOL	8260B (VOA)	BOD- (48 hr)	COD (28 DAYS)	GEN CHEM (Cations, Anions,pH, Conductivity)	E-COLI BACTERIA (24 hr)	METALS WQCC TOTALS	RCRA 8 TOTALS & DISSOLVED	CYANIDES	NITRATES
OW-13	ANNUAL	VOC/MTBE							X								
OW-29 HIGH-MTBE		VOC/MTBE							X								
OW-30 HIGH -MTBE		VOC/MTBE							X								
SMW-2		Gen Chem / RCRA List Constituents. Modified skinner list metals & organics.		X			X		X			X			X	x	
SMW-4		Gen Chem / RCRA List Constituents. Modified skinner list metals & organics.		X			X		X			X			X	x	
EP2-INLET		VOC/MTBE, DRO extended/GRO, BOD, COD, TDS		X					X	X	X						
GWM-1 HIGH-BENZENE		Gen Chem, VOC, SVOC, MTBE, WQCC Metals					X		X			X		X			
PW-2	Every 3 yrs starting with 2008	VOC, SVOC, WQCC METALS, CYANIDE, NITRATES					X		X					X		X	X
PW-3	Every 3 yrs starting with 2008	Same as above					X		X					X		X	X
PW-4	Every 3 yrs starting with 2007	Same as above					X		X					X		X	X

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD

Sent: Tuesday, September 02, 2008 4:59 PM

To: 'Riege, Ed'

Cc: Turri, Mark; Rajen, Gaurav; Monzeglio, Hope, NMENV; Price, Wayne, EMNRD

Subject: RE: Western Refining Southwest- Gallup Refinery Proposal Regarding OCD Permit Condtion 9 (GW-032)

Mr. Riege, et. al:

Re: Western Refining Southwest (WRSW)- Gallup Refinery (GW-032) New Mexico Oil Conservation Division Disc Permit Condition 9

The New Mexico Oil Conservation Division (NMOCD) has completed its review of Mr. Mark Turri's letter (letter) wit attachments dated June
30, 2008. The NMOCD did not specify a 10 year schedule coincident with API inspections during the meeting, but WRSW to
provide a schedule that the NMOCD could approve. Currently, WRSW seems to rely on a 10 year API schedule tl acceptable to
the NMOCD. The letter is intended to address "Condition 9" of the discharge permit. The following revisions and/c responses to NMOCD comments
or requirements below are required:

Item 1:

1) A denotation on the attached table for tanks greater than 10,000 gallons is required to show where the installati automatic tank
gauging systems will be installed.

Item 2:

1) The NMOCD is concerned about the use of the term "significant floor problems," since the implication by WRS\ time of the
meeting was that secondary bottoms would be installed with leak detection at all tanks undergoing the API inspect Consequently the
above language is not acceptable.

2) An engineering design diagram(s) of the double bottom tank installation w/ leak detection is required with speci the liner type,
mil thickness, type of thermal seaming w/ non-destructive pressure testing, footages, etc. Perhaps the engineerin submitted for
Tanks T-225, T-226, etc., could be submitted that will satisfy the above.

Item 3:

1) WRSW should not wait to compact soil in earthen secondary containments at the time of tank inspection and re must denote on the
tank inspection table all of the locations where clay will be compacted to comply with secondary containment requi the discharge
permit and by a date that is more practical than waiting for the 10 year API inspection. This should not interfere or WRSW from
conducting future API inspections and facilitate the intent of secondary containment in the event of a release prece inspection.

Item 4:

1) Same as Item 3 above.

Storage Tank Inspection Chart:

1) The term "Chart" in the above table should be changed to "Table", since the inspection information is in a table.

2) An updated aerial or plot map to scale is required displaying all of the tanks listed in the table and any forgotten NMOCD is unsure
of whether all tanks are accounted for in the attached tank inspection chart? Please confirm that all tanks containi chemicals are accounted
for in the table or revise to include forgotten ones. The OCD is unable to locate all tanks on any one existing map

The above revisions are requested within 30 days from receipt of this message or by a date approved by the NMO Please contact me if you
have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

-----Original Message-----
From: Riege, Ed [mailto:Ed.Riege@wnr.com]
Sent: Friday, August 22, 2008 9:56 AM
To: Chavez, Carl J, EMNRD
Cc: Turri, Mark; Rajen, Gaurav
Subject: Proposal Regarding OCD Permit Condtion 9

<<_0822094129_001.pdf>>
Hi Carl,

Western was wondering whether you had a chance to review our June 30, 2008 letter (attached) regarding Gallup's proposal of the alternate to OCD Permit Condition 9, the above ground tanks impermeable secondary containment requirement. Look forward to hearing from you.

Thanks

Ed

Ed Riege
Environmental Superintendent

Western Refining
Gallup Refinery
Route 3 Box 7
Gallup, NM 87301
(505) 722-0217
ed.riege@wnr.com

Chavez, Carl J, EMNRD

From: Riege, Ed [Ed.Riege@wnr.com]
Sent: Friday, August 22, 2008 9:56 AM
To: Chavez, Carl J, EMNRD
Cc: Turri, Mark; Rajen, Gaurav
Subject: Proposal Regarding OCD Permit Condtion 9

Attachments: _0822094129_001.pdf

_0822094129_001.pdf (403 KB)

<<_0822094129_001.pdf>>

Hi Carl,

Western was wondering whether you had a chance to review our June 30, 2008 letter (attached) regarding Gallup's proposal of the alternate to OCD Permit Condition 9, the above ground tanks impermeable secondary containment requirement. Look forward to hearing from you.

Thanks

Ed

Ed Riege
Environmental Superintendent

Western Refining
Gallup Refinery
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Western Refining

GALLUP REFINERY

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Certified Mail 7007 0220 0001 6547 2630

June 30, 2008

Mr. Carl Chavez
Oil Conservation Division
Environmental Bureau
1220 S. St. Francis Dr.
Santa Fe, NM 87505

Re: OCD Discharge Permit GW-032 Condition 9

Dear Mr. Chavez:

This letter is in response to your letter of March 12, 2008 and follow-up to our meeting held in Santa Fe on May 15. Western Refining Gallup Refinery summarizes the alternative to OCD Permit Condition 9, Above Ground Tanks Impermeable Secondary Containment Requirement that was discussed during the May meeting:

1. Install an automatic tank gauging system in all of its large (> 10,000 gallons) liquid storage tanks in the tank farm. The gauges will be installed initially in the highest priority liquid storage tanks and all new large tanks.
2. Install secondary bottoms with leak detection on tanks with significant floor problems found during the API 653 inspections scheduled for every 10 years and all new tanks. At least 10 percent of the tanks will be inspected each year. The anticipated schedule can be found in the attached tank list. A thick HDPE or FRP liner is laid over the failed steel tank bottom and fusion sealed along the side of the tank. Sand is spread and compacted over the liner with a leak detection network of perforated piping constructed on the sand and then covered with additional sand. A new steel floor is then installed on top of the sand. Please note the following tanks have recently had secondary bottoms with leak detection installed, T-225, T-226, T-577 and T-115.
3. Compact soil in earthen secondary containments at the time of tank inspection and repair.
4. Line the earthen secondary containments of the smaller sized storage tanks less than 10,000 gallons.

Attached is an inventory of all the refinery tanks as required by Item 1) in the OCD letter dated March 12, 2008. This list includes tank contents, capacity, dimensions, next external inspection date and the next internal inspection date (this is also the date where the tank will be considered for a secondary bottom with leak detection) and floor style. Please note on tank inspection dates, Western Refining

reserves the right to switch tanks due to logistics as long as 10 percent of tank inspections are conducted each year.

Your review and approval of this submittal are appreciated. Please contact Ed Riege at (505) 722-0217 if you have any comments or questions regarding this submittal.

Sincerely,

Mark B. Turri
General Manager

C: Ms. Hope Monzeglio
Ed Riege
Don Riley
Guarav Rajen

GALLUP REFINERY STORAGE TANK INSPECTION CHART

Cnt	TANK NUMBER	YEAR BUILT	APPROX. CAPACITY (BBLS)	TANK DIAMETER	TANK HEIGHT/ LENGTH	NORMAL PRODUCT	NEXT EXTERNAL INSP. DATE	NEXT INTERNAL INSP. DATE	FLOOR STYLE (ABG =Above ground)
1	MKT-TK-2	1965	4,000	30'-0"	32'-0"	UNLEADED PREMIUM	2008	2008	ABG-gravel
2	MKT-TK-4	1970	3,800	30'-5"	32'-0"	83.0 OCTANE	2008	2008	ABG-gravel
3	P-V19A	1957	668.7 ft^3	30'	LTH-147'-5"	HYDROGEN	2008	2008	Bullet
4	P-V19B	1957	668.7 ft^3	30'	LTH-147'-5"	HYDROGEN	2008	2008	Bullet
5	P-V19C	1957	668.7 ft^3	30'	LTH-147'-5"	HYDROGEN	2008	2008	Bullet
6	TK-343	1957	5,000	33'-6"	32'-0"	ETHANOL	2008	2008	ABG-gravel
7	TK-446	1945	712	9'-2 3/4 "	LTH-53'-10"	OLEFINS/ISO BUTANE	2008	2008	Bullet
8	TK-447	1957	1,502	11'-9"	LTH-45'-0"	ISO-BUTANE	2008	2008	Bullet
9	TK-555	1974	2,142	11'-0"	LTH-69'-11"	ISO-BUTANE	2008	2008	Bullet
10	TK-556	1957	718	9'-2 3/4 "	LTH-53'-10"	PROPANE	2008	2008	Bullet
11	TK-560	1957	2,336	11'-9"	LTH-69'-11"	BUTANE	2008	2008	Bullet
12	TK-563	1986	20,000	60'-0"	46'-6"	NAT. GAS.	2008	2008	ELLIPSOID
13	TK-564	1957	5,000	30'-0"	40'-0"	NAT.GAS/ISOM.	2008	2008	HEMISPHERE
14	TK-575	1957	10,000	42'-6"	40'-0"	SWET JET-A/K1	2008	2008	ABG-gravel
15	MKT-TK-5	1963	1,800	25'-0"	24'-0"	ETHANOL	2009	2009	ABG-gravel
16	MKT-TK-7	1946	330	9'-0"	LTH-66'-0"	ISOMERATE	2009	2009	Bullet
17	TK-106	1957	5,000	33'-6"	32'-0"	TRANSMIX	2009	2009	ABG-gravel
18	TK-18570	NO DATA	NO DATA	8'-0"	6'-0"	NALCO 7359	2009	2009	ABG-concrete
19	TK-228	1957	5,000	33'-6"	32'-0"	K-1	2009	2009	ABG-gravel
20	TK-27	1979	5,000	33'-5"	32'-0"	SLOP OIL	2009	2009	ABG-concrete
21	TK-28	1979	5,000	33'-5"	32'-0"	SLOP OIL	2009	2009	ABG-concrete
22	TK-338	1964	25,000	67'-0"	40'-0"	SWEET NAPHTHA	2009	2009	ABG-gravel
23	TK-562	1986	20,000	60'-0"	46'-6"	ISOMERATE	2009	2009	ELLIPSOID
24	TK-573	1957	250	10'-0"	18'-0"	KEROSENE (N.I.S)	2009	2009	ABG-gravel
25	1001	NO DATA	NO DATA	5'-4"	18'-0"	DIESEL TANK	2010	2010	ABG-concrete
26	1002	NO DATA	NO DATA	5'-4"	18'-0"	GASOLINE TANK	2010	2010	ABG-concrete
27	1003	NO DATA	NO DATA	5'-9"	12'-3 1/2"	UNICHEM 7547	2010	2010	ABG-concrete
28	1004	NO DATA	NO DATA	7'-5"	14'-7 1/2"	DSL POURPT ADDIT.	2010	2010	ABG-concrete
29	Q-T2	1956	350 BBL	10'-0"	8'-0"	CAUSTIC	2010	2010	ABG-concrete
30	Q-T8	1963	226	11'-9"	11'-8"	CAUSTIC	2010	2010	ABG-concrete
31	TK-117	1983	250	10'-0"	17'-9"	DE-ICER (DEAD TK)	2010	2010	ABG-gravel
32	TK-157	2001	400	12'-0"	20'-0"	SLOP OIL	2010	2010	ABG-gravel
33	TK-235	1957	5,000	33'-6"	32'-0"	TRANSMIX	2010	2010	ABG-gravel
34	TK-337	1977	20,000	60'-0"	42'-0"	ETHANOL	2010	2010	ABG-gravel
35	Q-T3	NO DATA	NO DATA	20'-0"	12'-0"	CAUSTIC (N.I.S)	2011	2011	ABG-concrete
36	SWS-TK1	2006	NO DATA	15'5"	30'-0"	SOUR WATER	2011	2011	ABG-concrete
37	TK-108	1957	5,000	33'-6"	32'-0"	ALKLATE	2011	2011	ABG-concrete
38	TK-342	1957	5,000	33'-6"	32'-0"	ETHANOL	2011	2011	ABG-gravel

Cnt	TANK NUMBER	YEAR BUILT	APPROX. CAPACITY (BBLS)	TANK DIAMETER	TANK HEIGHT/ LENGTH	NORMAL PRODUCT	NEXT EXTERNAL INSP. DATE	NEXT INTERNAL INSP. DATE	FLOOR STYLE (ABG =Above ground)
39	TK-344	1977	20,000	60'-0"	42'-0"	REFORMATE	2011	2011	ABG-gravel
40	TK-345	1977	20,000	60'-0"	42'-0"	REFORMATE/ETOH	2011	2011	ABG-gravel
41	TK-701	1963	37,000	88'-6"	33'-10"	FCC FEED	2011	2011	ABG-tar
42	TK-706	1963	10,000	47'-5"	32'-1"	FUEL OIL	2011	2011	ABG-tar
43	TK-707	1963	1,000	26'-6"	17'-7"	SLOP OIL	2011	2011	ABG-tar
44	TK-714	1969	30,000	73'-4"	40'-0"	FCC FEED	2011	2011	ABG-tar
45	TK-557	1957	718	9'-2 3/4 "	LTH-53'-10"	PROPANE	2012	2012	Bullet
46	TK-568	1998	2,000	25'-0"	24'-0"	AMMONIUM THIOSULFATE	2012	2012	ABG-gravel
47	TK-577	1957	10,000	42'-6"	40'-0"	DIESEL	2012	2012	ABG-gravel
48	TK-579	1957	20,000	60'-0"	40'-0"	DIESEL	2012	2012	ABG-gravel
49	TK-582	1957	25,000	67'-0"	40'-0"	UNLEADED PREMIUM	2012	2012	ABG-gravel
50	TK-709	1963	1,000	22'-6"	14'-9"	RESIDUE	2012	2012	ABG-tar
51	Z-71-TK-716	2006	NO DATA	15'5"	30'-0"	AMMONIUM THIOSULFATE	2012	2012	ABG-concrete
52	Z-81-T10	1957	NO DATA	11'-0"	18'-0"	CAUSTIC	2012	2012	ABG-tar
53	Z-81-T15	NO DATA	UNKNOWN	5'-7.75'	18'-0"	DIESEL	2012	2012	ABG-concrete
54	Z-86-T2	2002	444,000 GW	44'-0"	40'-0"	WATER	2012	2012	ABG-concrete
55	TK-102	1991	80,000	110'-0"	48'-0"	CRUDE	2013	2013	ABG-tar
56	TK-107	1957	5,000	33'-6"	32'-0"	SLOP OIL	2013	2013	ABG-gravel
57	TK-232	1957	5,000	33'-6"	32'-0"	TRANSMIX	2013	2013	ABG-gravel
58	TK-571	1957	25,000	67'-0"	40'-0"	87.0 UNLD REG.	2013	2013	ABG-gravel
59	TK-581	1957	25,000	67'-0"	40'-0"	LCO	2013	2013	ABG-gravel
60	TK-702	1963	25,000	67'-0"	40'-5"	FCC FEED	2013	2013	ABG-gravel
61	TK-704	1963	10,000	47'-4"	32'-2"	FUEL OIL	2013	2013	ABG-tar
62	TK-708	1963	1,000	22'-6"	14'-11"	RESIDUE	2013	2013	ABG-tar
63	TK-912	NO DATA	NO DATA	8'-0"	21'-0"	GASOLINE ADDITIVE	2013	2013	ABG-concrete
64	Z-81-T1	1998	1,000	21'-3"	16'-0"	TREATED WATER	2013	2013	ABG-concrete
65	TK-227	1957	5,000	33'-6"	32'-0"	K-1	2009	2014	ABG-gravel
66	TK-231	1957	5,000	33'-6"	32'-0"	TRANSMIX	2009	2014	ABG-gravel
67	TK-561	1957	2,336	131.875'	LTH-133.4"	BUTANE	2009	2014	Bullet
68	TK-565	1957	5,000	30'-0"	40'-0"	ISOM/NAT GAS/TOL	2009	2014	HEMISPHERE
69	TK-570	1957	25,000	67'-0"	40'-0"	87.0 UNLD REG.	2009	2014	ABG-gravel
70	TK-572	1957	25,000	67'-0"	40'-0"	87.0 UNLD REG.	2009	2014	ABG-gravel
71	TK-574	1968	40,000	85'-0"	40'-0"	ST.RUN	2009	2014	ABG-gravel
72	TK-576	1968	40,000	85'0"	40'-0"	PREMIUM BASE	2009	2014	ABG-gravel
73	TK-703	1963	25,000	67'-0"	39'-8"	RESIDUE/FCC FEED	2009	2014	ABG-tar
74	TK-705	1963	10,000	47'-4"	31'-1"	FUEL OIL	2009	2014	ABG-tar
75	MKT-TK-1	1965	3,000	30'-0"	24'-0"	DIESEL	2010	2015	ABG-gravel
76	MKT-TK-3	1965	4,000	30'-0"	32'-0"	87.0 OCTANE	2010	2015	ABG-gravel
77	TK-101	1957	80,000	110'-0"	48'-0"	CRUDE	2010	2015	ABG-concrete
78	TK-111	1957	5,000	33'-6"	32'-0"	DHT PRODUCT	2010	2015	ABG-gravel
79	TK-448	1957	1,502	11'-9"	LTH-45'-0"	ISO-BUTANE	2010	2015	Bullet
80	TK-554	1974	2,142	131.875"	LTH-133.4"	BUTANE/PROPANE	2010	2015	Bullet
81	TK-567	1969	20,000	60'-0"	40'-0"	83.O UNLD. REG.	2010	2015	ABG-gravel
82	Z-71-V2	1987	NO DATA	94.4375"	LTH-52'-.25"	ANHYDROUS AMMONIA	2010	2015	Bullet
83	Z-81-T7	1998	920	20'-5"	15'-8"	BRINE WATER	2010	2015	ABG-concrete

Cnt	TANK NUMBER	YEAR BUILT	APPROX. CAPACITY (BBLS)	TANK DIAMETER	TANK HEIGHT/ LENGTH	NORMAL PRODUCT	NEXT EXTERNAL INSP. DATE	NEXT INTERNAL INSP. DATE	FLOOR STYLE (ABG =Above ground)
84	Z-86-T1	1966	5,000	30'-0"	40'-0"	FIREWATER	2010	2015	ABG-concrete
85	MKT-TK-6	1963	1,800	28'-0"	27'-11"	EMPTY TANK	2011	2016	ABG-gravel
86	TK-112	1957	5,000	33'-6"	32'-0"	DHT PRODUCT	2011	2016	ABG-gravel
87	TK-115	1957	5,000	33'-6"	32'-0"	DHT PRODUCT (N.I.S)	2011	2016	ABG-gravel
88	TK-116	1957	5,000	33'-6"	32'-0"	DHT PRODUCT	2011	2016	ABG-concrete
89	TK-18571	NO DATA	NO DATA	8'-0"	6'-0"	NALCO 7359	2011	2016	ABG-concrete
90	TK-225	1957	25,000	67'0"	40'-0"	DISTILLATE	2011	2016	ABG-gravel
91	TK-226	1957	25,000	67'-0"	40'-0"	KEROSENE	2011	2016	ABG-gravel
92	TK-339	1957	25,000	67'-0"	40'-0"	SOUR NAPHTHA	2011	2016	ABG-gravel
93	TK-569	1957	25,000	67'-0"	40'-0"	83.O UNLD. REG.	2011	2016	ABG-gravel
94	Z-81-T6	1962	880	20'-6"	17'-6"	DOMESTIC WATER	2011	2016	ABG-tar
95	Q-T6	NO DATA	NO DATA	63'-5"	53'-0"	DRAIN HOLDING TK	2012	2017	ABG-concrete
96	TK-583	1996	55,000	100'-0"	40'-0"	DIESEL	2012	2017	ABG-concrete
97	TK-913	NO DATA	NO DATA	9'-11"	15'-0"	GASOLINE ADDITIVE	2012	2017	ABG-concrete
98	Z-81-T13	NO DATA	UNKNOWN	4'-0"	4'-0"	DIESEL	2012	2017	ABG-gravel
99	Z-81-T16	1953	UNKNOWN	5'-7.75'	15'-8"	STARTING AIR	2012	2017	ABG-concrete
100	Z-81-T17	NO DATA	NO DATA	8'9"	15'-0"	WATER SOFTENER (N.I.S)	2012	2017	ABG-gravel
101	Z-81-T5	1979	5,000	33'-5"	32'-0"	TREATED WATER	2012	2017	ABG-concrete
102	Z-81-T8	NO DATA	250	11'-0"	15'-0"	FUEL OIL (N.I.S)	2012	2017	ABG-concrete
103	Z-81-T9	NO DATA	UNKNOWN	6'-0"	12'-0"	DIESEL	2012	2017	ABG-ped
104	TK-451	1957	1,000	21'-3"	16'-0"	OUT OF SERVICE	n/a	n/a	ABG-gravel
105	TK-452	1957	1,000	21'-3"	16'-0"	OUT OF SERVICE	n/a	n/a	ABG-gravel
106	TK-453	1957	5,000	33'-6"	32'-0"	OUT OF SERVICE	n/a	n/a	ABG-gravel
107	TK-713	NO DATA	NO DATA	NO DATA	NO DATA	NOT IN SERVICE	n/a	n/a	ABG-tar

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, August 01, 2008 9:29 AM
To: 'Schmaltz, Randy'; Hurtado, Cindy; 'Riege, Ed'
Cc: Price, Wayne, EMNRD; 'Moore, Darrell'; 'Lackey, Johnny'; Monzeglio, Hope, NMENV
Subject: FW: OCD/Praxair Mtg

Randy, Ed and Cindy:

I am writing to invite some representatives (i.e., engineers, scientists...) to an upcoming presentation by Praxair on alternative methods for tank testing that the Navajo Refinery is interested in implementing at its refineries to address OCD required tank testing and alternative approvals on testing. I believe Western Refining SW faces similar challenges at its refineries and the OCD is willing to consider feasible alternative technologies for addressing its requirements. Please come and join Navajo Refining and the OCD at the upcoming presentation here at the Wendell Chino Building (OCD 3rd Floor Conference Room). Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Lackey, Johnny [mailto:Johnny.Lackey@hollycorp.com]
Sent: Tuesday, July 15, 2008 12:23 PM
To: Resinger, Jim; Moore, Darrell; Douglas_Wilson@Praxair.com; Chavez, Carl J, EMNRD
Subject: OCD/Praxair Mtg

When: Thursday, August 07, 2008 10:00 AM-12:00 PM (GMT-07:00) Mountain Time (US & Canada).
Where: Santa Fe

~~*~*~*~*~*~*~*~*~*

Meet with the New Mexico OCD to present Praxair's leak detection technology for Above Ground Storage Tanks.

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, July 15, 2008 11:08 AM
To: 'Riege, Ed'
Cc: Ed Cote; Rajen, Gaurav; Monzeglio, Hope, NMENV
Subject: RE: Western Refining SW- Gallup Refinery (GW-032) Engineering & Design of the Sanitary Wastewater Lift Station

Mr. Riege:

The Agencies hereby conclude that the engineering design drawings are satisfactory to fulfill the OCD Letter of March 12, 2008, and OCD Discharge Permit (GW-032) Item 5 (Condition 24A & B).

Please be advised that NMOCD approval of this plan does not relieve Western Refining Southwest- Gallup Refinery of responsibility should their operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve Western Refining Southwest- Gallup Refinery of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Riege, Ed [mailto:Ed.Riege@wnr.com]
Sent: Tuesday, July 15, 2008 10:32 AM
To: Chavez, Carl J, EMNRD
Cc: Ed Cote; Rajen, Gaurav; Monzeglio, Hope, NMENV
Subject: RE: Western Refining SW- Gallup Refinery (GW-032) Engineering & Design of the Sanitary Wastewater Lift Station

Dear Carl:

Many thanks for your review of our engineering and design drawings of the Sanitary Wastewater Lift Station.

In response to your questions:

1) The emergency storage tanks will be placed directly on top of the 12 inches of native excavated soil which will be underlain by a Geosynthetic Clay Liner (GCL; specifications discussed below) according to the manufacturer's guidelines and specifications. The 12 inches of excavated native soil will be replaced, graded, and re-compacted to 90 percent density (minimum). All pipe penetrations, collars and seals through the GCL will be per the manufacturer's details and sealed with Bentonite.
2) The GCL is manufactured by CETCO and is the CETCO Bentomat SDN. The attached file provides details of the GCL and its specifications as well as certified properties. A brief description of the GCL as described by the manufacturer is provided below.
3) The secondary containment area will be designed and constructed to hold 1 + 1/3 the volume of the

largest tank and/or the volume of all interconnected tanks within the bermed secondary containment area.

Please do not hesitate to contact me with further questions if you need any more clarifications.
With my best regards,
Ed Riege

Manufacturer description of GCL (more detailed technical specifications in the attached file)

Bentomat® Geosynthetic Clay Liners

CETCO is the world leader in the production of geosynthetic clay liners. The Bentomat® geosynthetic clay liners (GCLs) are high performance environmental liners manufactured with durable high-strength geotextiles and a uniform layer of low-permeability granular Volclay® sodium bentonite. The Bentomat patented manufacturing process utilizes a needle punched technique which encapsulates the sodium bentonite between two layers of geotextile, inhibiting migration of the clay in its dry or hydrated state. The geotextiles offer a long lasting resistance to physical and chemical break-down in harsh environments. The bentonite's high swelling capacity and low permeability provide an effective hydraulic seal. With a total thickness of less than one inch, CETCO GCLs provide better hydraulic performance than several feet of compacted clay.

Ed Riege
Environmental Superintendent

Western Refining
Gallup Refinery
Route 3 Box 7
Gallup, NM 87301
(505) 722-0217
riege.ed@wnr.com

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Wednesday, July 09, 2008 2:30 PM
To: Riege, Ed
Cc: Turri, Mark; Riley, Don; Monzeglio, Hope, NMENV; Price, Wayne, EMNRD
Subject: Western Refining SW- Gallup Refinery (GW-032) Engineering & Design of the Sanitary Wastewater Lift Station

Mr. Riege:

The New Mexico (NM) Oil Conservation Division (OCD) in consultation with the NM Environment Department-Hazardous Waste Bureau (Agencies) have complete our review of the Diagrams: C-1; A-1; S-1; P-1; P-2; E-1 thru E-3; and I-1 thru I-9 completed by Hubbell, Roth & Clark, Inc. and signed by Edward L. Cote, P.E.

DePauli Engineering & Surveying, LLC. was contacted today to verify the survey date (12/10/07) with conversion of vertical elevation to the NVGD29 System.

There are a few questions or clarifications related to drawings C-1 and P-1, which reference geosynthetic liner system and geosynthetic clay liner (GCL) w/ 12 inch of soil cover respectively within the bermed area of the emergency storage tank area. Please verify that the emergency tanks will be placed directly on top of the 12 inches of native excavated soil, which will be underlain by GCL (mil spec & type?) in a cement secondary containment area? Will the secondary containment area be constructed to hold 1 + 1/3 the volume of the largest tank and/or the volume of all interconnected tanks within the bermed secondary containment area?

Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

CETCO LINING TECHNOLOGIES

Certified Properties

BENTOMAT® SDN CERTIFIED PROPERTIES

MATERIAL PROPERTY	TEST METHOD	TEST FREQUENCY $ft^2(m^2)$	REQUIRED VALUES
Bentonite Swell Index[1]	ASTM D 5890	1 per 50 tonnes	24 mL/2g min.
Bentonite Fluid Loss[1]	ASTM D 5891	1 per 50 tonnes	18 mL max.
Bentonite Mass/Area[2]	ASTM D 5993	40,000 ft^2 (4,000 m^2)	0.75 lb/ft^2 (3.6 kg/m^2) min
GCL Grab Strength[3]	ASTM D 6768	200,000 ft^2 (20,000 m^2)	30 lbs/in (53 N/cm) MARV
GCL Peel Strength[3]	ASTM D 6496	40,000 ft^2 (4,000 m^2)	2.5 lbs/in (4.4 N/cm) min
GCL Index Flux[4]	ASTM D 5887	Weekly	1×10^{-8} m^3/m^2/sec max
GCL Hydraulic Conductivity[4]	ASTM D 5887	Weekly	5×10^{-9} cm/sec max
GCL Hydrated Internal Shear Strength[5]	ASTM D 5321 ASTM D 6243	Periodic	500 psf (24 kPa) typ @ 200 psf

Bentomat SDN is a reinforced GCL consisting of a layer of sodium bentonite between two nonwoven geotextiles, which are needlepunched together.

Notes

[1] Bentonite property tests performed at a bentonite processing facility before shipment to CETCO's GCL production facilities.

[2] Bentonite mass/area reported at 0 percent moisture content.

[3] All tensile strength testing is performed in the machine direction using ASTM D 6768. All peel strength testing is performed using ASTM D 6496. Upon request, tensile and peel results can be reported per modified ASTM D 4632 using 4 inch grips.

[4] Index flux and permeability testing with deaired distilled/deionized water at 80 psi (551kPa) cell pressure, 77 psi (531 kPa) headwater pressure and 75 psi (517 kPa) tailwater pressure. Reported value is equivalent to 925 gal/acre/day. This flux value is equivalent to a permeability of 5×10^{-9} cm/sec for typical GCL thickness. Actual flux values vary with field condition pressures. The last 20 weekly values prior the end of the production date of the supplied GCL may be provided.

[5] Peak values measured at 200 psf (10 kPa) normal stress for a specimen hydrated for 48 hours. Site-specific materials, GCL products, and test conditions must be used to verify internal and interface strength of the proposed design.

CETCO has developed an edge enhancement system that eliminates the need to use additional granular sodium bentonite within the overlap area of the seams. We call this edge enhancement, SuperGroove™, and it comes standard on both longitudinal edges of Bentomat® SDN. It should be noted that SuperGroove™ does not appear on the end-of-roll overlaps and recommend the continued use of supplemental bentonite for all end-of-roll seams.

CETCO® LINING TECHNOLOGIES

1500 W. Shure Drive Arlington Heights, IL 60004 USA 800.527.9948 Fax 847.577.5571
For the most up-to-date information please visit our website, www.cetco.com
A wholly owned subsidiary of AMCOL International

Revised 05/07
TR 401-BMSDN

Chavez, Carl J, EMNRD

From: Monzeglio, Hope, NMENV
Sent: Tuesday, July 15, 2008 10:46 AM
To: Chavez, Carl J, EMNRD
Cc: Cobrain, Dave, NMENV
Subject: FW: Proposed Navajo Upgradient Well Locations

Attachments: GoogleEarth_Image.jpg

GoogleEarth_Image .jpg (159 KB)...

Carl

I forgot to cc you on this. The locations of the upgradient wells at Navajo have been moved. See attachment. Let me know if you have any questions.

Hope

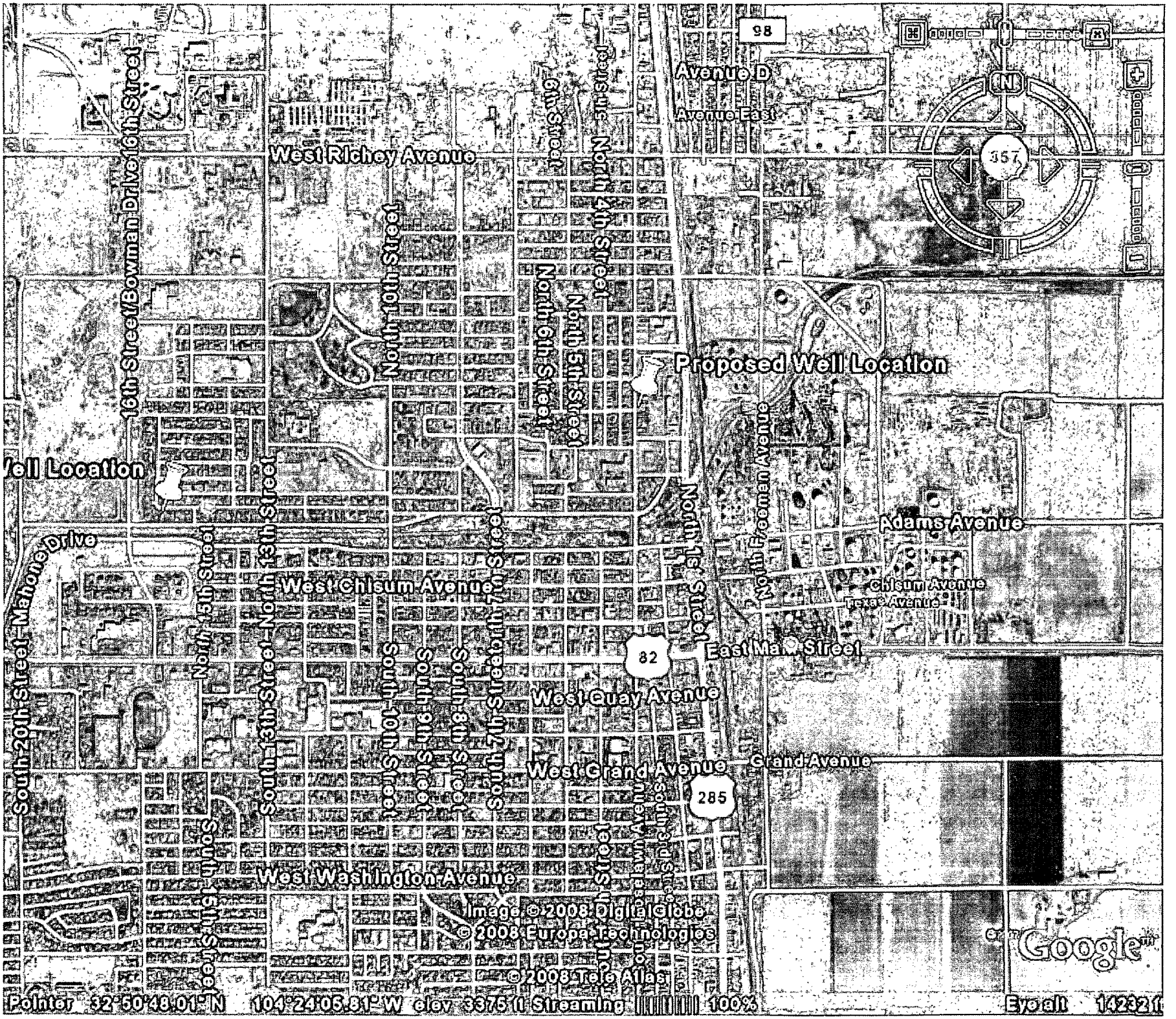
-----Original Message-----
From: Hall, Sharon [mailto:Sharon.Hall@arcadis-us.com]
Sent: Tuesday, July 15, 2008 9:16 AM
To: Monzeglio, Hope, NMENV
Cc: Moore, Darrell; Hall, Sharon
Subject: Proposed Navajo Upgradient Well Locations

Hope, thank you for consideration of these revised proposed well locations. The locations shown on the map are those we discussed. One location will be drilled on the East side of Roselawn. Most likely it will be drilled in the location shown on the attached figure. If access conditions are better along the east side of Roselawn at another location between West Lolita and West James Avenues the well may be placed in an alternate location between those streets. Thank you for your flexibility within those two blocks- it will give Darrell some alternatives for the City.

The second location is proposed south of Yucca Ave near the curve north to what looks like 16th St. If access conditions are not suitable in this location the well will be drilled on the south side of Yucca between 15th and 16th Streets, as near to 16th Street as possible.

With your approval Darrell will propose that the request to drill at these locations be put on the agenda for July 22, 2008 City Council Meeting. Please let Darrell or I know if you have any questions or need additional information.

Thank you,
Sharon


Avenue D
Avenue East
West Richey Avenue
16th Street/Bowman Drive
North 10th Street
North 6th Street
North 4th Street
North 1st Street
Proposed Well Location
Well Location
Mahone Drive
South 20th Street
North 15th Street
South 13th Street
North 13th Street
West Chisum Avenue
South 10th Street
South 8th Street
South 7th Street
North Freeman Avenue
Adams Avenue
Chisum Avenue
Texas Avenue
East Main Street
West Quay Avenue
West Grand Avenue
Grand Avenue
West Washington Avenue
Image © 2008 DigitalGlobe
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© 2008 Tele Atlas
Pointer 32°50'48.01" N 104°24'05.81" W elev 3375 ft Streaming 100%
Eye alt 142321
Google

May 27, 2008

Hope Monzeglio
Environmental Specialist
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico, 87505-6303

Re: **Response to Approval with Direction**
Summary of Drilling and Sampling Activities
Western Refining Southwest Inc., Gallup refinery
NMED ID # NMD000333211
HWB-GRCC-08-002

Dear Ms. Monzeglio:

It is a pleasure to submit our response to the letter of May 23, 2008 by Mr. John Kieling granting Approval with Direction to our report on Summary of Drilling and Sampling Activities, Western Refining (WNR) Southwest Inc., Gallup refinery. In this response we have provided explanations to all of the comments the letter has detailed that direct us to provide clarifications.

Comment 1
No response required. We will correct the date as mentioned in all future correspondence.

Comment 2

a. In this response, we first explain why the original sample analysis did not include tests for volatile organic compounds (VOCs). Eventually, however, we did test the cutting soils for hydrocarbons. Originally, the soils were destined for WNR's land farm. The land farm operated by WNR is in accordance with established guidelines of the New Mexico Oil Conservation Division (OCD). Sampling and analysis of the soils prior to treatment of the soils was to verify that the soils were not characteristic RCRA hazardous wastes as such wastes are not permitted by the OCD to be treated at WNR's land farm. Soils contaminated with volatile organic compounds (VOCs) are allowed to be treated at the land farm which has an ongoing sampling and analysis program according to OCD requirements. Sampling for VOCs of soils emplaced in the land farm occurs as a part of ongoing land farm operations, including sampling to verify no migration from the land farm. Hence, we did not sample the soils for VOCs, even though the groundwater in the area does contain trace levels of VOCs. As one of the drums containing well bore cuttings was damaged, these soils were re-packaged into a new drum

with good integrity. Eventually, due to a lack of availability of treatment space at WNR's land farm, a decision was made to dispose off these soils at an appropriate landfill. A composite sample of soils was taken from all the drums containing soil cuttings and analyzed for Total Petroleum Hydrocarbons using EPA Method 8015B (Gas/Diesel) and Toxicity Characteristic Leachate Procedure (TCLP) tests for RCRA 8 metals, Volatile Organic Aromatics (VOA), and Semi-VOA, as well as reactivity, corrosivity and ignitability tests. An attachment presents details of the tests requested and the laboratory analytical results. The tests allowed the soil cuttings to be designated non-hazardous, and the drums were disposed off at a certified non-hazardous landfill with appropriate documentation and shipping manifests on file at WNR.

b. Soils from the damaged drum containing cuttings from KA-1 were re-drummed and disposed off as described in response (a).

c. WNR has an operating permit from the OCD and all soils treated at this facility are monitored in accordance with this permit's conditions. For this project, no soils cuttings were treated at the WNR land farm.

Comment 3

In future we will use the EPA Region 6's Medium-Specific Screening Level of 11 micro-g/L as the standard for comparison of groundwater MTBE levels at this site.

Comment 4

The depth to water (DTW) measurements for well KA-3 were different on different days and slowly increasing as the shallow groundwater flow in this area is through a series of non-continuous layers of sand and clay that are of varying permeability. The flow of groundwater into well KA-3 is known to be at very low velocities with high variations in the flow rates. Future sampling will occur in well KA-3R, and well KA-3 has been closed and is not proposed to be a part of future sampling efforts (as agreed to by NMED). Since installation, we have proceeded with a DTW monitoring program (data have been shared with NMED) at well KA-3R. This well (KA-3R) has been found to recharge at less than a foot a day after being bailed dry.

Thank you for giving us this opportunity to respond to your approval with direction of our report. Please do not hesitate to contact me with further questions at 505-722-0227 if I can provide any further clarifications.

Sincerely,

Gaurav Rajen, Ph.D.
Environmental Engineer

Cc: John E. Kieling, Program Manager, Permits Management Program, Hazardous Waste Bureau, 2905 Rodeo Park Drive East, Building 1, Santa Fe, New Mexico, 87505-6303
Carl J. Chavez, CHMM, NM Energy, Minerals & Natural Resources Department, Oil Conservation Division, Environmental Bureau, 1220 South St. Francis Drive, Santa Fe, NM 87505
Ed Riege, Environmental Superintendent, WNR
Thurman B. Larsen, Environmental Engineer, WNR
Cheryl Johnson, Environmental Specialist, WNR
/File

CHAIN-OF-CUSTODY RECORD

QA/QC Package: Std ☒ Level 4 ☐
Other:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

Client: Western Refinery Gallup Refinery
Address: Rt 3 Box 7 Gallup, NM 87301
cheryl.johnson@wnr.com
gaurav.rajen@wnr.com
Phone #: 505-722-3833
Fax #: 505-722-0210

Project Name: 90 DAY Soil Samples
Project #:
Project Manager: Gaurav Rajen
Sampler: C Johnson & A. Dorsey
Sample Temperature: on ice 4°

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	HEAL No. 0804213
4-16-08	11:00	Soil	BZ. Strip Clean-up	1 Qt			-1
	11:15	"	NAPIS Well Casing	"			-2
	11:30	"	OAPIS clean-up	"			-3
	11:45	Sludge	Vactrk-Lagoon	"			-4
	1245	Soil	MK4 Clean up	"			-5
	1300	Soil	T232 Clean up	"			-6
	1330	Sludge	Pipeline wax/crude	"			-7
	1400	Sludge	Slop Tank Sludge	"			-8
4-17-08	1030	Soil	ASO Sandblast Media	"			-9

ANALYSIS REQUEST

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals TCLP	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA) TCLP	8270 (Semi-VOA) TCLP	RCI				Air Bubbles or Headspace (Y or N)
		X					X			X	X	X				

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
04/17/08	13:20		4/17/08 1320
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks:
Rush Analysis please.

(9)

Hall Environmental Analysis Laboratory, Inc.

Date: *30-Apr-08*

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	NAPIS Well Casing Composite
Lab Order:	0804213	**Collection Date:**	4/16/2008 11:15:00 AM
Project:	90 Day Soil Samples	**Date Received:**	4/17/2008
Lab ID:	0804213-02	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/23/2008 11:03:23 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/23/2008 11:03:23 PM
Surr: DNOP	107	61.7-135		%REC	1	4/23/2008 11:03:23 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/23/2008 7:37:10 PM
Surr: BFB	101	84-138		%REC	1	4/23/2008 7:37:10 PM
MERCURY, TCLP						Analyst: **SNV**
Mercury	ND	0.020		mg/L	1	4/22/2008 2:54:36 PM
EPA METHOD 6010B: TCLP METALS						Analyst: **NMO**
Arsenic	ND	5.0		mg/L	1	4/28/2008 12:50:57 PM
Barium	ND	100		mg/L	1	4/28/2008 12:50:57 PM
Cadmium	ND	1.0		mg/L	1	4/28/2008 12:50:57 PM
Chromium	ND	5.0		mg/L	1	4/28/2008 12:50:57 PM
Lead	ND	5.0		mg/L	1	4/28/2008 12:50:57 PM
Selenium	ND	1.0		mg/L	1	4/28/2008 12:50:57 PM
Silver	ND	5.0		mg/L	1	4/28/2008 12:50:57 PM
EPA METHOD 8270C TCLP						Analyst: **JDC**
2,4-Dinitrotoluene	ND	0.13		mg/L	1	4/23/2008
Hexachlorobenzene	ND	0.13		mg/L	1	4/23/2008
Hexachlorobutadiene	ND	0.50		mg/L	1	4/23/2008
Hexachloroethane	ND	3.0		mg/L	1	4/23/2008
Nitrobenzene	ND	2.0		mg/L	1	4/23/2008
Pentachlorophenol	ND	100		mg/L	1	4/23/2008
Pyridine	ND	5.0		mg/L	1	4/23/2008
2,4,5-Trichlorophenol	ND	400		mg/L	1	4/23/2008
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	4/23/2008
Cresols, Total	ND	200		mg/L	1	4/23/2008
Surr: 2,4,6-Tribromophenol	54.9	20.9-128		%REC	1	4/23/2008
Surr: 2-Fluorobiphenyl	56.7	18.3-119		%REC	1	4/23/2008
Surr: 2-Fluorophenol	39.4	16.6-101		%REC	1	4/23/2008
Surr: 4-Terphenyl-d14	51.4	32.3-135		%REC	1	4/23/2008
Surr: Nitrobenzene-d5	58.0	22.6-117		%REC	1	4/23/2008
Surr: Phenol-d5	22.4	8-77.9		%REC	1	4/23/2008
VOLATILES BY 8260B/1311						Analyst: **BDH**
Benzene	ND	0.50		mg/L	1	4/26/2008 11:32:53 PM
2-Butanone	ND	10		mg/L	1	4/26/2008 11:32:53 PM
Carbon Tetrachloride	ND	0.50		mg/L	1	4/26/2008 11:32:53 PM

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	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *30-Apr-08*

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	NAPIS Well Casing
Lab Order:	0804213	**Collection Date:**	4/16/2008 11:15:00 AM
Project:	90 Day Soil Samples	**Date Received:**	4/17/2008
Lab ID:	0804213-02	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
VOLATILES BY 8260B/1311						Analyst: BDH
Chlorobenzene	ND	100		mg/L	1	4/26/2008 11:32:53 PM
Chloroform	ND	6.0		mg/L	1	4/26/2008 11:32:53 PM
1,4-Dichlorobenzene	ND	7.5		mg/L	1	4/26/2008 11:32:53 PM
1,2-Dichloroethane (EDC)	ND	0.50		mg/L	1	4/26/2008 11:32:53 PM
1,1-Dichloroethene	ND	0.70		mg/L	1	4/26/2008 11:32:53 PM
Hexachlorobutadiene	ND	0.50		mg/L	1	4/26/2008 11:32:53 PM
Tetrachloroethene (PCE)	ND	0.70		mg/L	1	4/26/2008 11:32:53 PM
Trichloroethene (TCE)	ND	0.50		mg/L	1	4/26/2008 11:32:53 PM
Vinyl chloride	ND	0.20		mg/L	1	4/26/2008 11:32:53 PM
Surr: 1,2-Dichloroethane-d4	104	69.9-130		%REC	1	4/26/2008 11:32:53 PM
Surr: 4-Bromofluorobenzene	103	71.2-123		%REC	1	4/26/2008 11:32:53 PM
Surr: Dibromofluoromethane	95.3	73.9-134		%REC	1	4/26/2008 11:32:53 PM
Surr: Toluene-d8	110	81.9-122		%REC	1	4/26/2008 11:32:53 PM

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	MCL	Maximum Contaminant Level
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike recovery outside accepted recovery limits		

ENERGY LABORATORIES, INC. • P.O. Box 30916 • 1120 South 27th Street • Billings, MT 59107-0916
800-735-4489 • 406-252-6325 • 406-252-6069 fax • eli@energylab.com

LABORATORY ANALYTICAL REPORT

Client:	Hall Environmental	**Report Date:**	04/30/08
Project:	B0804213	**Collection Date:**	04/16/08 11:15
Lab ID:	B08042275-002	**DateReceived:**	04/22/08
Client Sample ID:	0804213-02B, NAPIS Well Casing	**Matrix:**	Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
IGNITABILITY							
Flash Point (Ignitability)	>200	°F		30.0		SW1010M	04/28/08 15:38 / mgs
CORROSIVITY							
pH of Soil and Waste	8.49	s.u.		0.10		SW9045D	04/24/08 14:33 / mgs
REACTIVITY							
Cyanide, Reactive	ND	mg/kg		0.05	250	SW846 Ch 7	04/30/08 10:44 / kjp
Sulfide, Reactive	ND	mg/kg		20	500	SW846 Ch 7	04/29/08 07:00 / pwc

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

NEW MEXICO
ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Phone (505) 476-6000 Fax (505) 476-6030
www.nmenv.state.nm.us

BILL RICHARDSON
Governor

DIANE DENISH
Lieutenant Governor

RON CURRY
Secretary

JON GOLDSTEIN
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

May 23, 2008

Mr. Ed Riege
Environmental Superintendent
Western Refining Gallup Refinery
Route 3, Box 7
Gallup, New Mexico 87301

RE: APPROVAL WITH DIRECTION
SUMMARY OF DRILLING AND SAMPLING ACTIVITIES
WESTERN REFINING SOUTHWEST, INC., GALLUP REFINERY
NMED ID # NMD000333211
HWB-GRCC-08-002

Dear Mr. Riege:

The New Mexico Environment Department (NMED) has received Western Refining Southwest, Inc., Gallup Refinery's (Permittee) *Summary of Drilling and Sampling Activities* (Report) dated April 14, 2008. The Report describes the installation of the replacement monitoring wells in the vicinity of the New API separator (NAPIS). NMED hereby issues this Approval with Direction and provides the following comments.

Comment 1
The Permittee states on the cover page and on page 2 that the well installation and sampling was performed in accordance with NMED's December 20, 2007 approval letter.

The December 20, 2007 letter was an approval of the Permittee's extension request to install the monitoring wells at a later date and not an approval of the installation and sampling activities. The well installation and sampling requirements were established in NMED's letter dated October 15, 2007. No revision is necessary.

Comment 2
The Permittee states on page 4, bullet three that "[a] composite soil sample was collected from the cuttings from existing monitoring wells KA-2 and KA-3, as well as from replacement monitoring wells KA-1R, KA-2R, and KA-3R, following installation. The sample was collected for classification in order to dispose of the cuttings in Western's on-site landfarm. Cuttings from the existing monitoring well KA-1 could not be sampled due to damage to the drum. The composite sample was analyzed for anions per EPA Method 9056A, mercury per EPA Method 7471, and for total metals per EPA Method 6010B. The sample was also to be analyzed for free liquid, ignitability, corrosivity, and reactivity; and..."

NMED has the following comments:

a. The Permittee must explain why a discrete sample was not collected and analyzed for volatile organic compounds (VOCs) using EPA Method 8260, since VOCs are present in the groundwater in this area.

b. The Permittee must explain how the drum containing cuttings from KA-1 was managed since it was not sampled.

c. The Permittee must obtain permission from the Oil Conservation Division (OCD) to dispose of the cuttings at the on-site landfarm and test the soils as required by OCD.

Comment 3
The Permittee states on page 5 (Groundwater Analytical Results) that "[m]ethyl tert-butyl ether was detected at 260 µg/L, which is above the NMWQCC standard of 100 µg/L."

There is no Water Quality Control Commission (WQCC) numerical standard for methyl tert-butyl ether (MTBE). In the future, the Permittee must apply the EPA Region 6 Human Health Medium- Specific Screening Levels, residential water standard for MTBE, which is currently 11 µg/L.

Comment 4
The Permittee provides a summary of fluid level measurements in Table 1. The depth to water (DTW) measurements for KA-3 were 12.50 feet below ground surface (bgs) on 6/12/07, 8.50 feet bgs on 6/21/07, and 8.61 feet bgs on 3/20/08.

There appears to be a significant difference between the DTW measurement collected on June 12, 2007 and the measurements collected on June 21, 2007 and the March 20, 2008. The Permittee must explain this significant difference in the water level measurements.

The Permittee must submit a response to this Approval with Direction addressing all comments requiring a response to NMED on or before July 7, 2008.

If you have any questions regarding this letter please call Hope Monzeglio of my staff at (505) 476-6045.

Sincerely,

John E. Kieling
Program Manager
Permits Management Program
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
C. Frischkorn, NMED HWB
H. Monzeglio, NMED HWB
W. Price, OCD
C. Chavez, OCD
B. Powell, OCD Aztec Office
G. Ragen, Western Gallup
File: Reading and GRCC 2008
HWB-GRCC-08-002

Western Refining
GALLUP REFINERY

WNR
LISTED
NYSE

May 12, 2008

Hope Monzeglio
New Mexico Environment Dept.
Hazardous Waste Bureau
2905 Rodeo Park
Drive East, BLDG B
Santa Fe, NM 87505-6303

Dear Ms. Monzeglio:

It is a pleasure to submit our excavation and remediation plan for the Fan-out Area SWMU at the Gallup Refinery of Western Refining Southwest Inc.

As you will notice from the attached report and figure, we have carried out a series of sampling events to determine the area and depth of soils to be excavated, and have used extremely conservative estimation procedures in this determination.

For example, in areas in which the sampled materials had no detectable levels of contaminants at 3 feet, we plan to excavate to depths of 5 feet. Similarly in the few areas at which there is contamination at greater depths, we plan to excavate to far greater depths than at which we found no detectable levels of contaminants. Similarly, you will notice that at point L1 we found no detectable levels of contamination; yet, on a conservative basis, we plan to excavate an areal extent far more extensive than the clean point L1 would indicate.

You will notice that at point A we collected samples from a depth of 9 feet and did find some contamination. We were unable to sample at a greater depth than 9 feet at point A as this area had been previously excavated and our sampling drill rig could not locate itself directly on top of point A. At point B, a foot away, we found no detectable levels of contamination at depths much less than 13 feet. At these locations, marked in pink in our figure, we plan to excavate to depths of 13 feet which is far greater than the depths at which any detectable levels of contaminants were found.

We look forward to your review and comments of our excavation plan, and to the expeditious conclusion of our planned remedial actions.

Please do not hesitate to contact me if I can offer any further clarifications at 505-722-0227.

Sincerely,

Gaurav Ragen
Environmental Engineer

Cc Carl Chavez

Western Refining

GALLUP REFINERY

WNR LISTED NYSE

RECEIVED
2008 MAY 15 PM 1 38

May 12, 2008

Hope Monzeglio
Environmental Specialist
New Mexico Environmental Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Re: Gallup Refinery Groundwater Confirmation Monitoring Report

Dear Hope:

Please find enclosed the Gallup Refinery Groundwater Confirmation Monitoring Report, Monitoring Wells OW-14 and OW-30 prepared by Gannett Fleming. Please contact me at 505-722-0217 if you have any questions regarding this report.

Sincerely,

Ed Riege

Environmental Superintendent
Western Refining
Gallup Refinery

C: Carl Chavez OCD

Gaurav Rajen Western Refining

Trihydro
CORPORATION

May 2, 2008

Mr. Ed Riege
Environmental Superintendent
Western Refining Company, L.P.
Route 3 Box 7
Gallup, NM 87301

RE: Railroad Rack Lagoon Fan-out Area Excavation Work Plan

Dear Mr. Reige:

Western Refining and Trihydro have been working together to delineate soil contamination in the Railroad Rack Overflow Ditch and Fan-out Area (Fan-out Area) at the Gallup Refinery (Gallup). The New Mexico Environmental Department (NMED) has requested an Excavation Plan (Plan). This Plan has been prepared to assist in the excavation and disposal of soil in the Fan-out Area that exceed diesel range organics (DRO) concentrations of 890 mg/kg. NMED and Gallup agreed that the Industrial Direct Exposure level for #3 and # 6 Fuel Oil of 890 mg/kg would be used as the DRO clean-up standard (verbal agreement with Hope Monzeglio, Dave Cobrain, and Jim Lieb).

COMPLETED FIELD WORK

Trihydro was contracted to collect samples to determine the presence or absence of residual contamination at the Overflow Ditch and Fan-out Area locations. The initial field work for this project was conducted in October 2006 and a report was submitted to Gallup and NMED, titled *Railroad Rack Lagoon Overflow Ditch and Fan-out Area, SWMU #8 Subsurface Investigation* dated February 8, 2007. The results of this investigation prompted NMED to request that Gallup excavate soil contaminated DRO in the vicinity of the two test pit locations, "B-8" and "B-9". Trihydro was onsite and completed the initial sampling and excavation of soil from these test pits during the week of May 21, 2007.

The soil sample concentrations from "B-9" were below the DRO clean-up standard (890 mg/kg). However, the soil sample results from the southeast corner of test pit "B-8" was reported at concentrations higher than the clean-up standard for DRO. Gallup then requested that Trihydro collect additional samples from the contaminated area around "B-8" and delineate the impacted soil that would need to be excavated to meet the objectives of the project. The additional samples were collected during the week of August 20, 2007. One of the objectives of the August sampling event was to minimize the amount of soil that would potentially need to be excavated. It was anticipated that the August 2007 soil sample results would be below the DRO clean up standard approved by NMED. However, the August data collection showed several samples results above the DRO clean up standard.

Therefore, after conversations with Gallup personnel, it was decided to delineate the contamination by using a larger step-out distance to meet project objectives. Field work utilizing this method commenced on December 17, 2007. The soil samples collected during this event effectively delineated the horizontal and vertical extent of DRO contamination associated with "B-8". The December 17 field event and results are described below.

DECEMBER 207 FIELD EVENT

Horizontal Delineation

Soil samples were collected extending outward in a radial pattern at 20, 40 and 60 feet away from existing boreholes K, G, I and M at depths of 3, 8, and 13 feet below ground surface (ft-bgs). As shown on Figure 1, boreholes K, G, I, and M were the outermost DRO contaminated soil sample locations based on the August event. The proposed step-out distances of 20, 40, and 60 feet are designated as 1, 2, and 3, respectively on Figure 1. The 20 foot step-out locations are designated as M-1, I-1, G-1, and K-1. Boreholes M-1, I-1, G-1, and K-1 were installed on December 17, 2007 using a CME 75 drill rig. A 6 ¾ inch hollow stem auger was advanced to 1 foot above the discrete sampling depth. A split-spoon sampling device was then advanced from 1 foot above to 1 foot below the discrete sampling depth. Samples were taken directly from the split spoon sampling device at depths of 3, 8, and 13 ft-bgs. Samples were submitted to the Laboratory for 24-hour analysis on the same day. No visual contamination or odor was noted at any of these boreholes during sampling. Borehole logs were recorded for each location and a photograph was taken of each split spoon. Field documentation will be provided as needed as part of Trihydro's Railroad Rack Lagoon Fan-out Area Final Report upon completion of the excavation of DRO contaminated soils.

On December 18th, while waiting for laboratory results of the December 17th sampling, boreholes K-2, K-3, G-2, G-3, I-2, and M-2 were installed and sampled in the same manner described above. The remaining proposed boreholes, M-3 and I-3, were installed on December 19, 2007. These locations were sampled in the event the 20-foot step-out interval samples (M-1, I-1, G-1, and K-1) were not below the clean-up standard.

Vertical Delineation

Existing borehole B (B8-NEW-SE-S1) was drilled to a depth of 23 ft-bgs to vertically delineate the extent of DRO contamination. This borehole was selected for vertical delineation because the previous sampling event showed that this borehole had a DRO exceedance of 2,600 mg/kg at 7 ft-bgs. Samples were collected on December 17 at 8, 13, 18, and 23 ft-bgs using the same methods described above. These samples were submitted to the Laboratory for 24 hour DRO analysis on the same day that they were collected.

Results

Samples were submitted to Hall Environmental in Albuquerque, NM for analysis. The laboratory analyzed the samples using USEPA Method 8015B. The results for samples collected from new boreholes M-1, I-1, G-1, and K-1 at depths of 3, 8, and 13 ft-bgs and existing borehole B (B8-NEW-SE-S1) at 8, 13, 18, and 23 ft-bgs were non-detect for DRO. Trihydro believes that this new data effectively delineates both the horizontal and vertical extent of DRO contamination associated with test pit B-8. These results are illustrated on Figure 1. Laboratory reports will be provided as part of the final report after the completion of the excavation. Because samples from the above locations met the project objectives, samples from boreholes, M-3 and I-3 were not analyzed.

EXCAVATION PLANS

Trihydro proposes to excavate soil horizontally and vertically to the extents that have been determined to be above clean-up standards based on laboratory analysis. These extents of soil impacts are illustrated on Figure 1. The DRO contaminated zone has been divided into three areas that will be excavated to different depths to remove DRO contaminated soil. The green area on Figure 1 will be excavated to a depth of 3 ft-bgs. The blue and pink areas will be excavated to 5 and 13 ft-bgs, respectively. Based on calculations generated from the areas shown on Figure 1, the total volume of soil that requires excavation is approximated to be 145 cubic yards. The anticipated final volume of soils requiring excavation would be approximately 240 cubic yards due to a 1.5 expansion factor and a 10 percent contingency.

PROCEDURES

Staking the Boundaries:

The areas that will require excavation were staked by Trihydro personnel on April 11, 2008. A photograph illustrating the staked locations is presented as Figure 2. Sampling locations from previous events had been staked and labeled at the time of sample collection and these stakes currently remain in the ground as illustrated on Figure 2. These locations were used as reference points when the excavation boundary stakes were installed on April 11. The boundaries of the area to be excavated to 3 ft-bgs illustrated in green on Figure 1 have been marked with green ribbon (Figure 2). The boundaries of the areas to be excavated to 5 and 13 ft-bgs (blue and pink areas on Figure 1, respectively) have been marked with orange and pink ribbon, respectively (Figure 2). These boundaries will be estimated in the field during the excavation and documented in the final report.

Excavation

Excavation will be performed by or under the supervision of Trihydro personnel. A clean, decontaminated backhoe will be used to complete the excavation. The staked boundaries will be excavated to the corresponding depths illustrated on Figure 1. Excavated soil will either be immediately transported to Gallup's Northeast OCD Land Farm or temporarily stock piled on plastic sheeting within a

bermed area until it can be transported to the Land Farm. This volume will be more than adequate for the excavated soil from the Fan-out Area. Upon completion of the excavation, the area will be immediately backfilled with clean native material obtained from soil from within the Refinery boundary.

Reporting

As requested in a letter from NMED dated March 14, 2007, an investigation report will be submitted to NMED within 90 days of completion of the excavation. This report will be similar in style and format to Gallup Refinery's *Railroad Rack Lagoon Overflow Ditch and Fan-out Area, SWMU #8 Subsurface Investigation* (Report) dated February 8, 2007. It will include appropriate field forms, photos, and analytical data obtained from each field event, including photos of the excavation itself, not described in the February 8, 2007 report.

FIELD DOCUMENTATION AND LOGGING

Field observations are critical to the verification of appropriate excavation procedures. Field observations made during the excavation will be recorded in a field log book by Trihydro personnel. The following information will be recorded, in indelible ink, where appropriate:

- Date and name of observer.
- Names and affiliations of excavation team members.
- Names and affiliations of others present at the excavation site.
- Weather conditions.
- Health and safety measures implemented.
- Excavation site condition upon arrival.
- Deviations from or clarifications of excavation procedures.
- Miscellaneous conditions which the excavation team finds noteworthy.
- Backhoe make and model
- Odor qualities (sweet, sulfurous, strong, etc.) will also be recorded if casually noticed; however, field personnel will be cautioned against unnecessary exposure to volatile constituents.

PHOTOGRAPHS

Photographs will be used to substantiate and augment the field notes. Photo-documentation will be utilized to show that the staked boundaries have been excavated to the appropriate depths. Each photograph will be numbered and recorded on a photograph log.

INVESTIGATIVE DERIVED WASTE

Wastes associated with the excavation, other than the excavated soil itself, are expected to be minimal. Disposable personal protective equipment (PPE) and plastic sheeting used for stock piling, if used, will be managed by Gallup according to appropriate regulations.

EQUIPMENT DECONTAMINATION PROCEDURES

The only piece of equipment that will come in contact with DRO contaminated soil is the backhoe that will be used for excavation. The shovel of backhoe will be cleaned and decontaminated prior to the excavation and again after the excavation is complete. The cleaning pad located at the Gallup Refinery will be utilized for decontamination.

HEALTH AND SAFETY PROCEDURES

Personnel operating the backhoe will be properly trained. The Trihydro site specific Health and Training Plan will be followed. An excavation permit for the area will be obtained from Gallup by Trihydro personnel.

Trihydro is ready to implement this work plan at a mutually convenient date upon NMED approval. If you have any questions, please feel free to contact us at (307) 745-7474.

Sincerely,
Trihydro Corporation

Eric Worden
Client Manager

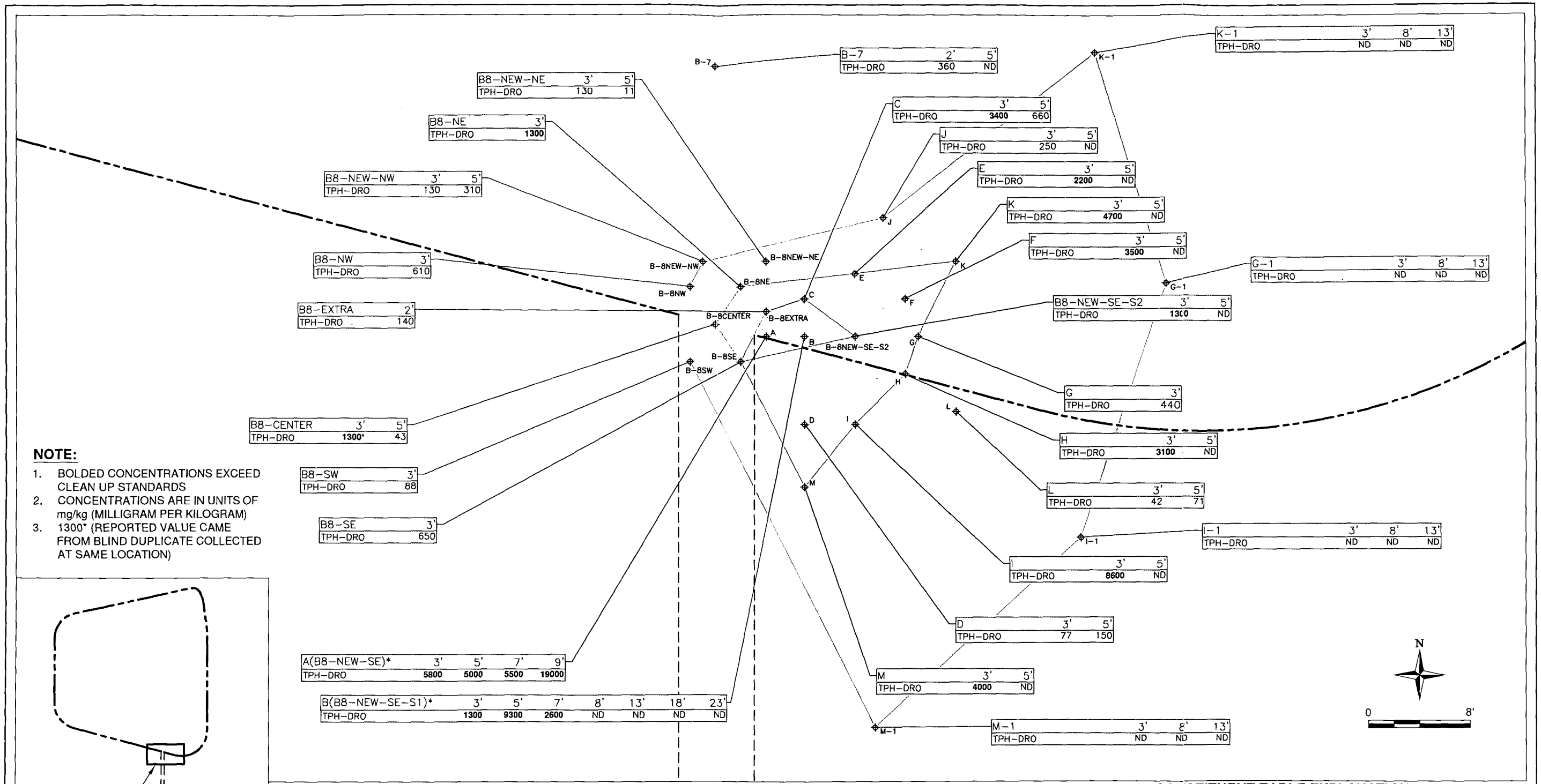
Regina Allen
Project Manager

072-013-001

cc: Jim Lieb, Giant Refining

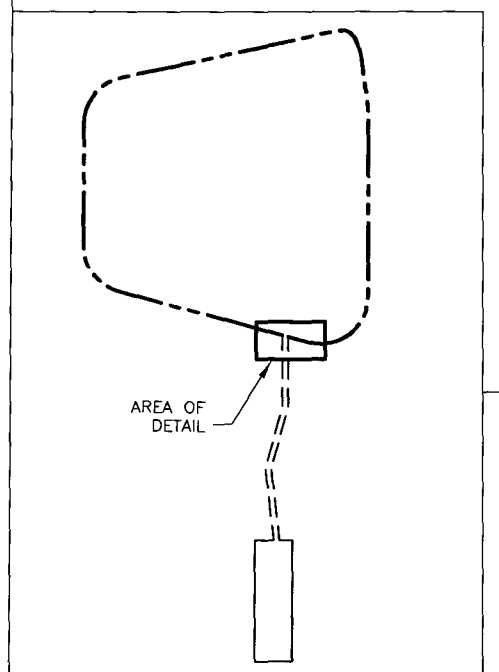
Attachment

FIGURES



NOTE:

1. BOLDED CONCENTRATIONS EXCEED CLEAN UP STANDARDS
2. CONCENTRATIONS ARE IN UNITS OF mg/kg (MILLIGRAM PER KILOGRAM)
3. 1300* (REPORTED VALUE CAME FROM BLIND DUPLICATE COLLECTED AT SAME LOCATION)



KEY MAP 0 200'

EXPLANATION

- OUTFLOW DITCH
- FAN-OUT AREA
- RAILROAD RACK LAGOON
- PREVIOUSLY EXCAVATED AREA
- EXCAVATE TO 3 FEET
- EXCAVATE TO 5 FEET
- EXCAVATE TO 13 FEET

M-1 SOIL SAMPLE LOCATION AND DESIGNATION

ND NON DETECT

* A(B8-NEW-SE) = MAY EVENT(AUGUST EVENT)
B(B8-NEW-SE-S1) = MAY EVENT(AUGUST EVENT)

CONSTITUENT TABLE EXPLANATION

WELL DESIGNATION → M-1 3' 8' 13' ← SAMPLE DEPTH
TOTAL PETROLEUM HYDROCARBONS AS DIESEL RANGE ORGANICS → TPH-DRO ND ND ND ← CONCENTRATION SHOWN HERE IN MAXIMUM VALUE

Trihydro CORPORATION
1252 Commerce Drive
Laramie, Wyoming 82070
www.trihydro.com
(P) 307/745.7474 (F) 307/745.7729

FIGURE 1
RAILROAD RACK LAGOON OVERFLOW DITCH AND FAN-OUT AREA SOIL SAMPLE LOCATIONS AND RESULTS
WESTERN REFINING, LLC GALLUP REFINERY GALLUP, NEW MEXICO

Drawn By: RES	Checked By: GP	Scale: 1" = 8'	Date: 4/18/08	File: 072SOILSAMPAREA200804

Gannett Fleming

Gannett Fleming West, Inc.
2155 Louisiana Boulevard, NE
Suite 7000
Albuquerque, New Mexico
87110

Office (505) 265-8468
Facsimile (505) 881-2513

May 2, 2008

Mr. Ed Riege
Western Gallup Refinery
Rt. 3 Box 7
Gallup, NM 87301

Re: Gallup Refinery Groundwater Confirmation Monitoring Report,
Monitoring Wells OW-14 and OW-30

Dear Mr. Riege:

Gannett Fleming, Inc. West (GFW) has prepared this Groundwater Monitoring Report for the groundwater sampling activities recently completed at the Western Refinery located near Gallup, New Mexico. The activities were completed in accordance with the our proposal, dated February 7, 2008, in order to verify the results of a recent groundwater sampling event performed by Western Refining Company (Western). Western has detected Methy Tertiary Butyl Ether (MTBE) above New Mexico Water Quality Control Commission (WQCC) standards in two groundwater monitoring wells, and requested third-party confirmation of the detection. This letter report has been prepared in response to that request.

BACKGROUND

The Western Refinery is located near Gallup, New Mexico as shown on Figure 1. The refinery has been performing annual groundwater monitoring in several wells at the facility. The monitoring has analyzed groundwater samples for Volatile Organic Compounds (VOCs) by EPA Method 8260B. In the groundwater sampling events performed by Western on December 28, 2007 and January 2, 2008, MTBE was detected in two groundwater monitor wells, OW-14 and OW-30, above the WQCC standard of 100 µg/l, and benzene was detected above the standard of 10 µg/ in OW-14. These well locations are shown on Figure 2. These two monitor wells are generally down gradient from Tank 568, the former MTBE storage tank at the refinery. However, these two wells are also in the vicinity of SWMU #8 and SWMU #9, and near the rail spur at the east side of the refinery. It is our understanding that MTBE had been delivered to the refinery on that rail spur in the past. GFW was told the integrity of Tank 568 was tested and confirmed in 2006. Although there is no documentation of a release, other than the MTBE detection in these two wells, refinery personnel have said MTBE could have been released near the Tank 568 location. GFW was also told that Tank 568 is located over a gasoline product plume that is being remediated by a pump and treat system. The trend of MTBE concentrations, measured by Western in the annual monitoring events for this two wells, is shown on Table 1.

Table 1. Recent MTBE Concentrations (µg/l)		
Date	OW-14	OW-30
12/8/2004	65	2.5
9/27/2005	77	< 2.5
10/27/2006	16	18
12/28/2006	180	18
12/28/2007	NA	290
1/2/2008	920	NA

According to refinery personnel, the use of MTBE at this refinery was discontinued on March 31, 2006. All MTBE was removed from the refinery in the third quarter of 2006. MTBE was stored in Tank 568 until January 11, 2006, and blended into the gasoline in the product trucks prior to delivery to the various retail distributors. No product/MTBE mixture was stored in Tank 568. MTBE was also stored in Marketing Tank #6 directly north of the tanker loading rack, but this tank is located a considerable distance away from the area in which MTBE has been detected.

The monitoring well boring logs and well completion diagrams for OW-14 and OW-30 show that the wells are completed to depths, respectively, of 45.0 and 48.1 feet below the ground surface (bgs) (Appendix A). According to these boring logs, the wells are completed in the Triassic Chinle Formation, comprised of reddish brown silty, sandy clay; with interbeds of silt and very fine sands. The wells are screened in the sandy zones, which are the water-bearing zones within the Chinle Formation. Based on the geologic cross sections constructed from drilling logs at the refinery (Appendix A), these zones are intermittent, somewhat discontinuous, and vary in thickness, being about 15 feet thick in OW-14. This cross section shows the zone encountered in OW-14 to be continuous with the area beneath Tank 568, but ending just north of OW-30.

Historic ground water levels provided to GFW by Western show water levels in OW-30 fluctuating between 21 and 26 feet bgs, but water level in OW-14 fairly constant at about 27 to 27.5 feet bgs. Based on a 2004 contour map provided by Western, groundwater gradient is to the north at this location, at about 0.01 ft/ft (Appendix A). Just north of OW-14, however, gradient decreases to about 0.0042 ft/ft, which may be a result of pinching out the water-bearing zone of OW-14 and OW-30, and monitoring points farther downgradient measuring water levels in a different zone. However, water level data for 2005 shows this flow direction reversed from that shown for 2004 and 2006.

WELL INSPECTION AND FIELD MONITORING

Western contracted with GFW to perform one round of independent confirmation sampling of monitor wells OW-14 and OW-30 to check for the presence of MTBE in those two wells. The wells were inspected and sampled by GFW on February 25, 2008. GFW's field sampler visually verified the well conditions to ensure their integrity has been maintained and the MTBE detections were not a result of surface infiltration due to a deterioration of the well construction. For both OW-14 and OW-30, the well casing protection and surface completion were verified to be in good condition, the rubber sealing gasket on OW-30 and threaded PVC cap on OW-14 were undamaged, and there was no free water in the protective casing and the interior of the well. Both wells were unlocked by Western personnel.

The water levels measured by GFW on February 25, 2008 were 25.4 feet bgs for OW-14 and 23.6 feet bgs for OW-30. Based on the ground surface elevations at the well locations reported on the well logs, the groundwater elevations are approximately 6897.6 at OW-14 and 6898.1 at OW-30. These elevations mean the flow direction would be opposite that shown on the groundwater contour map in Appendix A (i.e., flow from OW-30 to OW-14). The well measurements made during GFW's groundwater sampling are summarized in Table 2 (attached). Since only two monitoring points were measured for this study, a groundwater contour map could not be constructed, and GFW has relied on the historic contour map and gradient, although that data is inconsistent with the groundwater elevations determined as part of this study.

The reason for the discrepancy in groundwater flow directions is not apparent from the available information. It is possible that the water-bearing zones are discontinuous between monitoring points, or the flow direction has been reversed due to groundwater extraction near OW-14 in conjunction with the reported pump and treat of the product plume. Further determination of the groundwater situation was beyond the scope of this project.

LABORATORY ANALYTICAL RESULTS

GFW measured the depth to groundwater in both of the wells using an electronic water/PSH interface probe. No phase-separated hydrocarbons (PSH) were detected in either well. Three casing volumes of water were then purged from each well prior to collecting groundwater samples. Temperature, pH, and conductance were measured for stabilization during the purging. Purging and sampling were performed using dedicated polyethylene bailers, and the field parameters were recorded on field logs.

Groundwater samples were then collected by transferring directly into clean sample containers provided by the analytical laboratory. Because the analyses were for VOCs, GFW carefully filled the vials and checked them to make sure no bubbles appeared within the vials. The sample containers were labeled and the chain-of-custody was completed. The samples were then placed on ice and stored in the laboratory-provided sample coolers. The samples were delivered to Hall Environmental Analysis Laboratory (HEAL) upon completion of the sampling. Table 3 at the end of this report is a summary of the analytical laboratory results from this round of sampling and the historical results provided by Western. The complete laboratory package from HEAL, including the completed chain-of-custody form, is included in Appendix B.

The laboratory results from GFW's sampling event showed that both OW-14 and OW-30 contained MTBE at concentrations higher than the WQCC standards for groundwater. In addition, benzene was detected over the WQCC standard in OW-14. Minor amounts of xylene and EDC were also detected, although the concentrations are well below the WQCC standard.

SOURCE EVALUATION

The results of this groundwater sampling confirm that MTBE is present in the groundwater at the locations of OW-14 and OW-30. The trends shown on Table 3 show an increase in MTBE over time in both wells, although the latest sampling showed a decrease in MTBE in OW-14 between January and February 2008. However, the benzene concentration continued to increase.

Based on our understanding of the activities and infrastructure around these two well locations, as reported to GFW by refinery employees, possible sources of the MTBE might be:

- an historic release from MTBE unloading operations at the rail spur;
- MTBE from Solid Waste Management Unit (SWMU) #8 and #9;
- MTBE release from Tank 568; or
- a release from mixing operations (MTBE and product) in or around the tank farm.

GFW understands that MTBE was delivered to the refinery using the rail spur near the east property boundary. If MTBE were released along the rail spur near Tank 568, it could be the source of the current MTBE detections in OW-14 and OW-30. Based on the groundwater gradient discussed earlier, the migration route would be from Tank 568 to OW-14 to OW-30, and that could explain the MTBE detection first in OW-14 and then in OW-30.

SWMU #8 was the railroad rack lagoon, overflow ditch and fan out area, and SWMU #9 was sludge pits. It is our understanding that SWMU #9 underwent voluntary bioremediation and capping, and a No Further Action (NFA) finding was obtained for that SWMU. The chemical analyses for samples taken by Western from SWMU #8 have not detected MTBE. Because of this, and because both SWMUs are between OW-14 and OW-30, and downgradient of OW-14, it appears unlikely that these SWMUs are the source of the MTBE.

It was reported by Western that Tank 568 was used to store MTBE in the past, but is no longer. In addition GFW was told that the integrity of Tank 568 was recently verified. Because that tank is upgradient of OW-14 where MTBE concentrations were first detected, this appears to be a likely source of the MTBE. GFW was told Tank 568 contained only MTBE, and the MTBE was mixed with product in the product tanker trucks, so the tank itself should not be the source of benzene also detected in OW-14. However, GFW was told the tank sits over a product plume that is being remediated. Although GFW does not know the details of that remediation, it is possible that the benzene is coming from the product plume and MTBE from the former MTBE tank. If the tank was the source of MTBE in OW-14, and the decrease in MTBE concentration in OW-14 is the beginning of a downward trend, the MTBE may be a small plume migrating to the north. In that case, the MTBE concentrations may continue to decrease over time since MTBE is no longer used at the refinery and the source has been removed.

The final apparent source is from releases during mixing operations of gasoline with MTBE that may have occurred in and around the MTBE tank. Further research into the use of MTBE at the refinery would need to be conducted in order to verify this as a source. Releases from such mixing operations could also explain the benzene detection in OW-14. Typically, in soil contaminated with gasoline containing MTBE additive, the MTBE is the first contaminant to be detected due to its higher solubility, higher vapor pressure, and lower soil adsorption potential as compared to benzene, toluene, ethylbenzene, and xylenes (BTEX) compounds, other gasoline constituents commonly found with MTBE. Since benzene has also been detected above the WQCC standard in OW-14, gasoline treated with MTBE could be a source of the detected MTBE.

POTENTIAL RECEPTORS

Based on GFW's search of the NM Office of the State Engineers iWaters database, the closest water supply wells are approximately 2,800 and 4,000 feet away from the MTBE contaminate plume. The NMDOT has two wells for construction of public works approximately 2,800 feet west of the contaminated area, and Chindi Peavy has a non-domestic livestock well approximately 4,000 feet north of the plume. Using the hydraulic gradient of the groundwater between OW-30 and these locations (0.0042 ft/ft) and an assumed average hydraulic conductivity of for sandstone (1.0×10^{-5} cm/sec), the calculated groundwater movement rate is approximately 2.1 feet/year. Assuming groundwater is flowing directly to the wells, we estimate it would take 1,300 years for the MTBE to reach the NMDOT wells and 1,900 years to reach the Chindi Peavy well. These calculations assume the water-bearing zone in OW-14 and OW-30 is continuous to these supply wells, which is unlikely given the discontinuous nature of the sandstone layers, and the fact that most of the water for this area is supplied by wells from deeper aquifers. Therefore, it appears that there are no receptors that are immediately threatened by the MTBE in OW-14 and OW-30. It should also be noted that the historic water level data shows the groundwater elevations in those two wells to be nearly the same, with the gradient sometimes to the north and sometimes to the south.

RECOMMENDATION

The regulations of the NM Oil Conservation Division (OCD) require abatement of contaminants present in groundwater above WQCC standards. There are exceptions to this if the water has a Total Dissolved Solids (TDS) of greater than 10,000 mg/l, if no present or reasonably foreseeable beneficial use would be impaired by contamination, or if the contamination is being addressed under another regulatory program, such as the Resource Conservation and Recovery Act (RCRA). If abatement is required, the first step is submission to OCD of a Stage 1 abatement plan in accordance with 19.15.1.19 NMAC.

The MTBE detected in OW-14 and OW-30 appears to be migrating generally to the north (downgradient), but does not appear to be threatening any receptors at this time. Because MTBE is reportedly no longer used or stored at the refinery, the MTBE source appears to have been removed and is no longer contributing MTBE to the groundwater. However, MTBE is present in these two wells above the WQCC standard. In addition, benzene is present in OW-14 above WQCC the standard. Because the source has been removed, no receptors are immediately threatened, and the MTBE concentration in OW-14 appears to be decreasing, GFW recommends continued monitoring of OW-14 and OW-30 to assess the trend of the contaminants and evaluate the need for a Stage 1 Abatement Plan.

GFW recommends quarterly monitoring in OW-13, OW-14, OW-30, and OW-29 to monitor the contaminant plume and evaluate the need for abatement of the MTBE. If the source has been removed, the contaminant concentration in OW-14 should be expected to continue declining, and the concentration in OW-30 should increase slightly as the plume passes, and then also decrease. OW-29 is downgradient from OW-14 and OW-30, and can be used as a sentinel well to monitor the MTBE before it migrates off the refinery boundary. The analytical report for the groundwater sampling conducted on January 2, 2008 shows MTBE in OW-13 and OW-29, although both are below the WQCC standard. MTBE in OW-29 was at a concentration of 4.3 µg/l, whereas the standard is 100 µg/l. The MTBE detections in OW-13 and OW-29 may indicate a larger area of MTBE in groundwater than just the area around OW-14. And although 1-2 Dichloroethane (EDC)

was below WQCC standard, it was detected in OW-14, and should be monitored since it is a compound commonly associated with gasoline.

Should the concentrations of MTBE increase in any of these four wells, the need for more active groundwater abatement should be considered. If the benzene concentration increases or other BTEX compounds appear, the situation should also be re-evaluated. To monitor natural attenuation of the MTBE, Western could consider also monitoring for Tertiary Butyl Alcohol (TBA), which is a degradation product of MTBE.

CLOSING

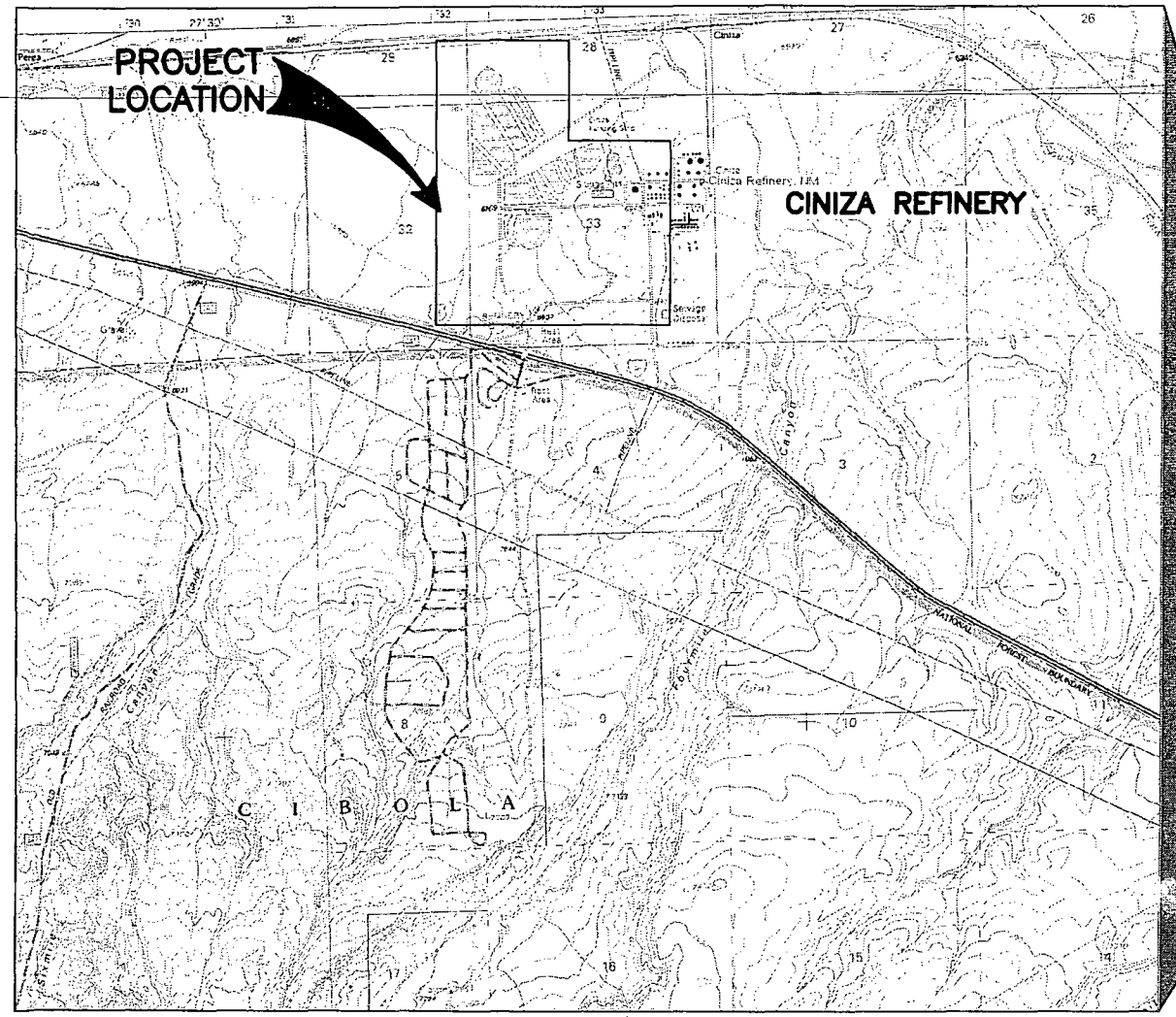
If you have any questions regarding this monitoring report, please call me at (505) 265-8468 or email me at mbrazie@gfnet.com.

Sincerely,
GANNETT FLEMING WEST, INC.

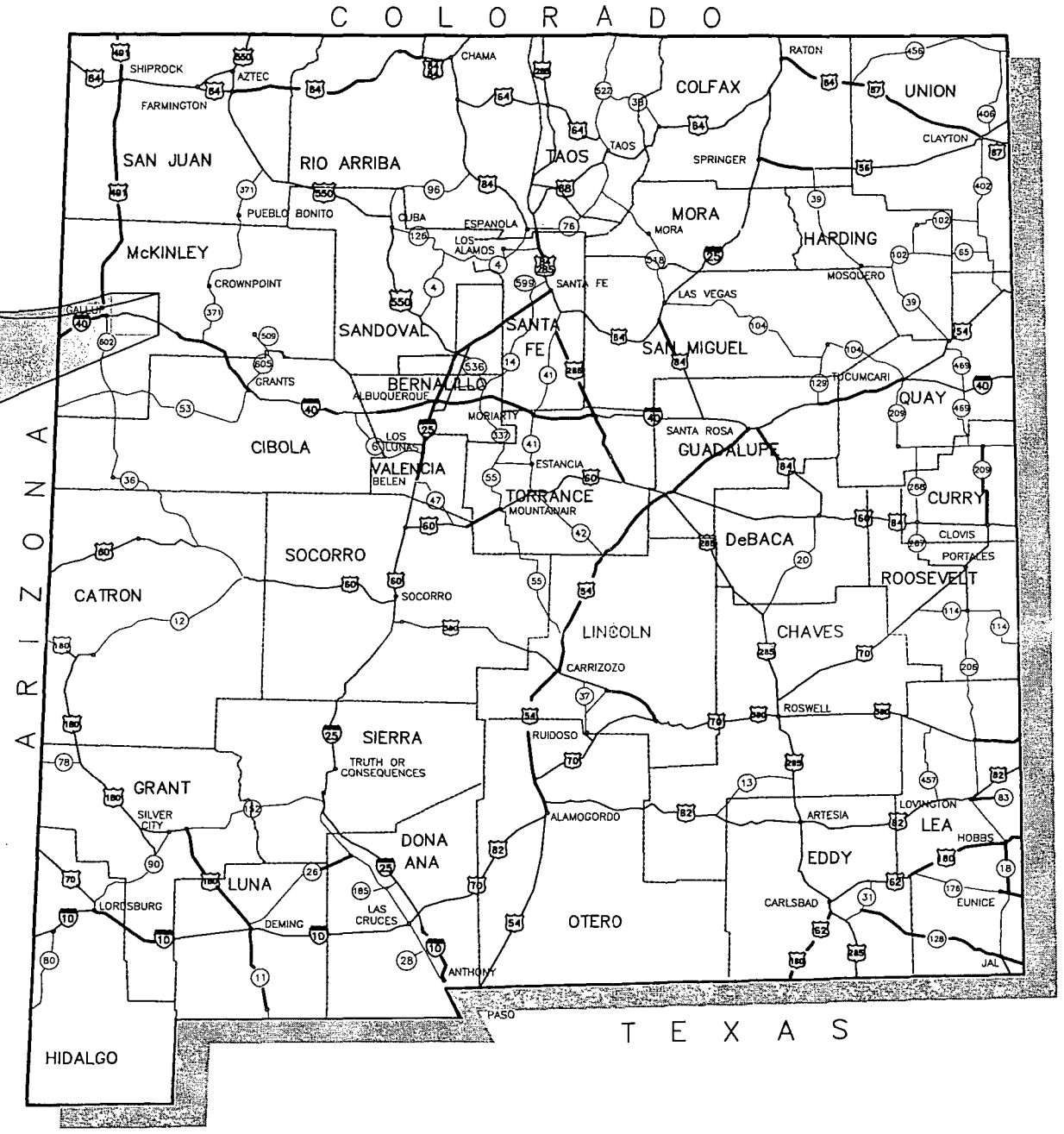
Mike E. Brazie, P.E.
Vice President

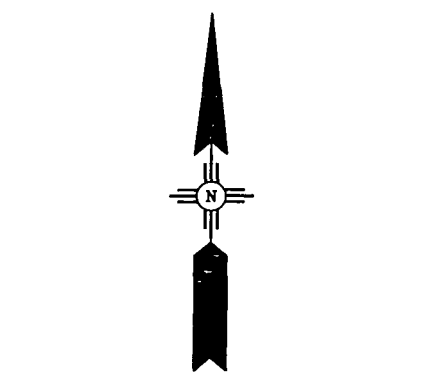
cc: Mr. Allen Hains, Western Refining Company

Attached:
Figure 1 – Location Map
Figure 2 – Site Plan Layout
Table 2 – Well Construction Details and Groundwater Elevations
Table 3 – Summary of Groundwater Analytical Results
Appendix A – Historical Background Data
Appendix B – Laboratory Analytical Report



MAP REFERENCE
A PORTION OF USGS 7.5' QUADRANGLE
CINIZA, NM, 1995
DMA 4354IV NW – SERIES V881





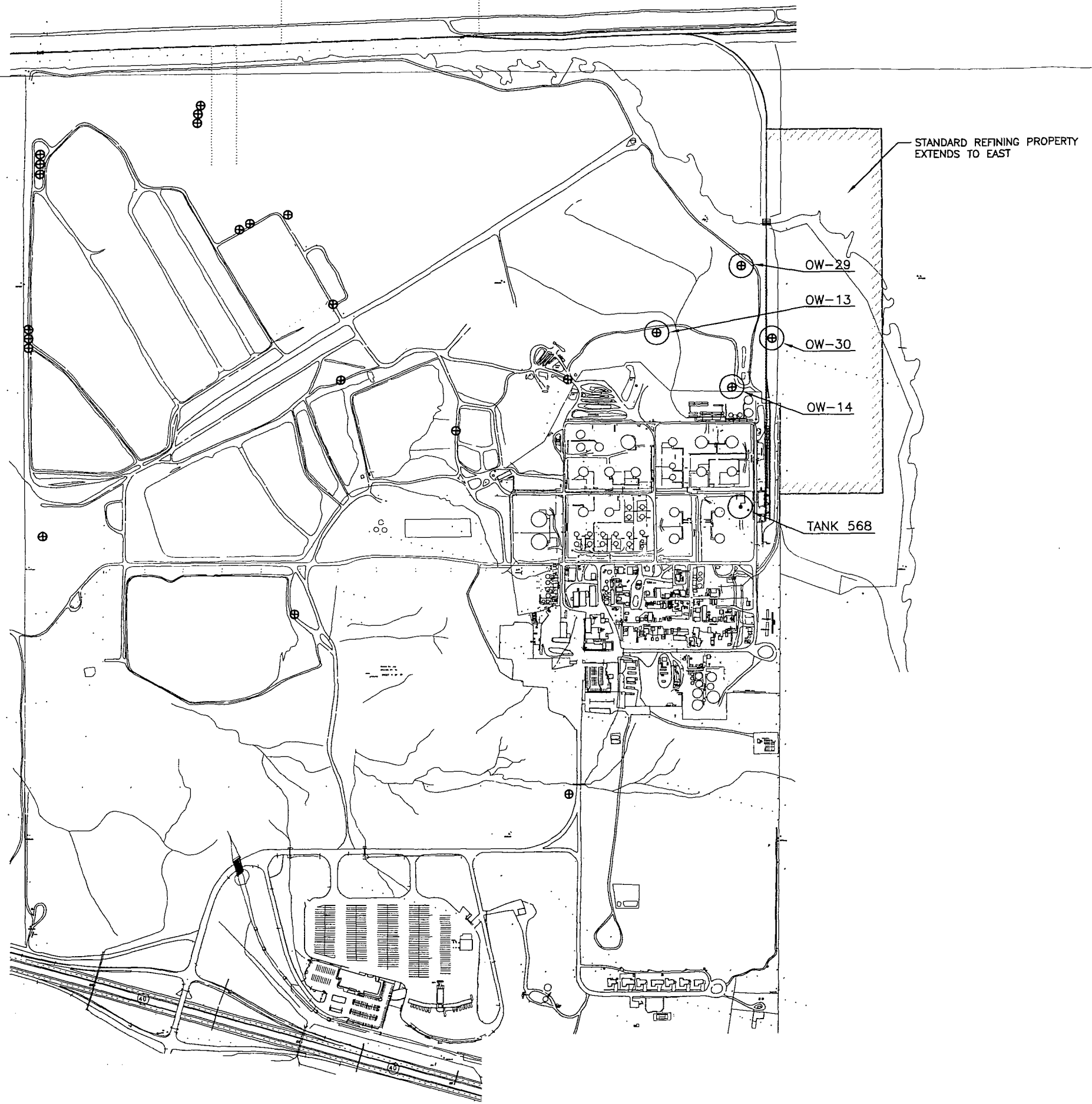
NO.	DESCRIPTION	DATE	BY
3			
2			
1			

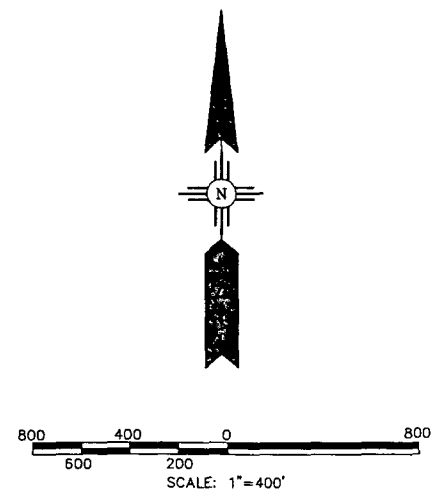
REVISIONS (OR CHANGE NOTICES)

GIANT – WESTERN REFINING COMPANY
SITE GRADING

LOCATION MAP

ENGR. FILE : _____





SITE PLAN LAYOUT

Table 2: Well Construction Details and Groundwater Elevations
Western Refining Inc-Ciniza Refinery
Gallup, New Mexico

Well Number	Measurement Date	Total Well Depth (feet TOC)	Ground Elevation (feet)*	Stick-Up Height (feet)	Depth to Groundwater (feet TOC)	Depth to PSH (feet TIC)	Apparent Groundwater Elevation (feet)	PSH Thickness (feet)	Notes and Well Conditior
OW-14	2/25/2008	48.8	6923	3.0	28.4	NA	6897.6	NA	Well and well protection in good condition, threaded PVC cap good condition.
OW-30	2/25/08	48.4	6921.6	3.0	26.6	NA	6898.1	NA	Well and well protection in very good condition, gasket sealing good condition

NOTES:
feet TOC = Feet below top of outer casing.
TIC = top of innner casing
NA = Not Applicable.
PSH =
* = Taken from Boring Log, measured from Ground Surface

Table 3: Summary of Groundwater Analytical Results
Western Refining Inc-Ciniza Refinery
Gallup, New Mexico

Sample ID	Date Sampled	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	EDB	EDC	Naphthalene	Other Detected Compounds
NMWQCC Standard[a]		10	750	750	620	100	0.1	10	30	
OW-14	2/25/2008	**23**	<1.0	2.5	<1.0	**570**	<0.01	1.6	<1.5	EDC
	1/2/2008	**14**	<5.0	<5.0	<7.5	**920**	<5.0	<5.0	27	
	12/28/2006	-	-	-	-	**180**	-	-	-	-
	10/27/2006	-	-	-	-	16	-	-	-	-
	9/28/2005	-	-	-	-	77	-	-	-	-
	12/8/2004	-	-	-	-	65	-	-	-	-
OW-30	2/25/08	<1.0	<1.0	<1.0	<1.0	**420**	<0.01	1.2	<2.0	-
	1/2/08	<1.0	<1.0	<1.0	<1.5	**290**	<1.0	<1.0	<2.0	-
	10/27/06	-	-	-	-	18	-	-	-	-
	9/27/05	-	-	-	-	<2.5	-	-	-	-
	12/8/04	-	-	-	-	<2.5	-	-	-	

NOTES:

All results reported in micrograms per liter (parts per billion [ppb]).

< = Less than the method detection limit shown.

a. Water quality standards of the New Mexico Water Quality Control Commission (NMWQCC).

NQS = No water quality standard for these parameters.

NA = Not Applicable.

Analytical results shown in bold indicate exceedances of the NMWQCC

BORING OW-14

SURFACE ELEVATION: 6923 FEET

DEPTH IN FEET	LABORATORY TEST DATA: TESTS REPORTED ELSEWHERE	ATTERBERG LIMITS: LIQUID LIMIT (%)	ATTERBERG LIMITS: PLASTICITY INDEX (%)	STRENGTH TEST DATA: TYPE OF TEST	STRENGTH TEST DATA: NORMAL OR CONFINING PRESSURE (PSF)	STRENGTH TEST DATA: SHEAR STRENGTH (PSF)	STRENGTH TEST DATA: DEVIATOR STRESS (PSF)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)
0									
10									
20									
30									
40									
50									
60									
70									
80									
90									
100									
110									
120									
130									
140									
150									
160									

PENETRATION RATE MINUTES/FOOT

SYMBOLS		DESCRIPTION
2.0 / 1.7 / 1.6 / 1.7 / 2.6	CL	TRIASSIC PERIOD CHINLE FORMATION REDDISH BROWN SILTY, FINE SANDY CLAY, CALCAREOUS, SOFT, HIGHLY WEATHERED
2.2 / 2.6 / 2.4	SM	24 FEET: REDDISH BROWN SILTY, VERY FINE SAND, SOFT, HIGHLY WEATHERED
5.0 / 4.0	SS	39 FEET: SANDSTONE, BROWN, FINE-TO COARSE-GRAINED SILTY, WITH OCCASIONAL THIN INTERBEDS OF LIMESTONE, HARD, FRESH

BORING COMPLETED AT 45.0 FEET ON 12/17/80.
4-INCH PVC PIEZOMETER INSTALLED WITH PERFORATIONS FROM 35.0 TO 45.0 FEET.
GRAVEL PLACED FROM 30.0 TO 45.0 FEET AND BORING SEALED WITH BENTONITE AND CEMENT TO SURFACE.
GROUND WATER LEVEL MEASURED AT 25.8 FEET BELOW GROUND ON 1/5/81.

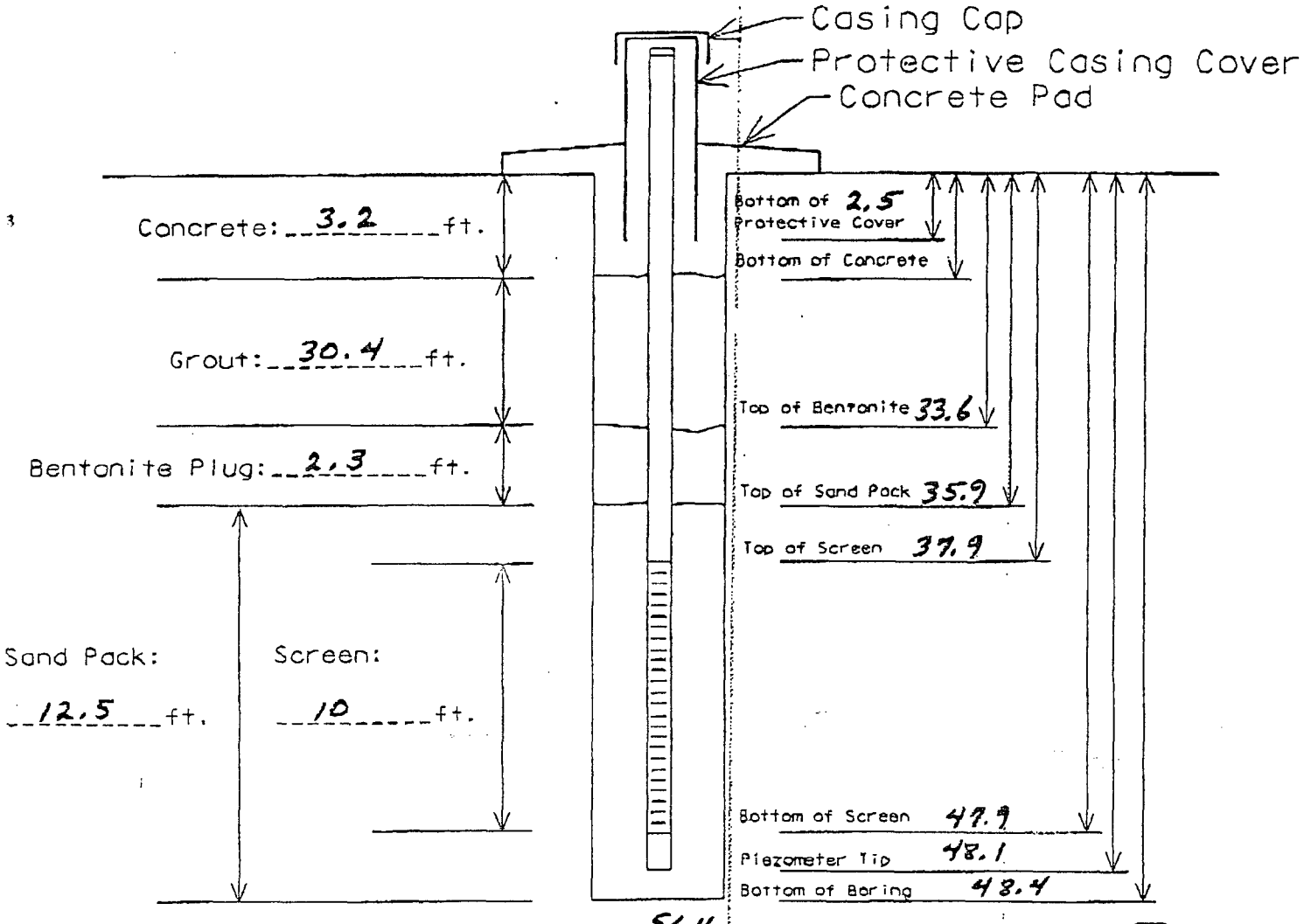
BAD LOG

LOG OF BORINGS

DAMES & MOORE

Installation Diagram

Monitoring Well No. OW-30



Boring Diameter: 8 5/8"

Sand Type: 20-40

Bollards, Type/Size: NONE

Bentonite: 3/8" PELLETS PELPLUG, TA-30

Screen Type/Size: 4", #10, SCH40 PVC

Cement/Grout: 6% BENTONITE/CEMENT

Riser Type/Size: 4", SCH 40, PVC

PRECISION ENGINEERING, INC.
505-523-7674

Water: POTABLE

Locking Expandable Casing Plug? YES

Site Northing: 4599.3

Other:

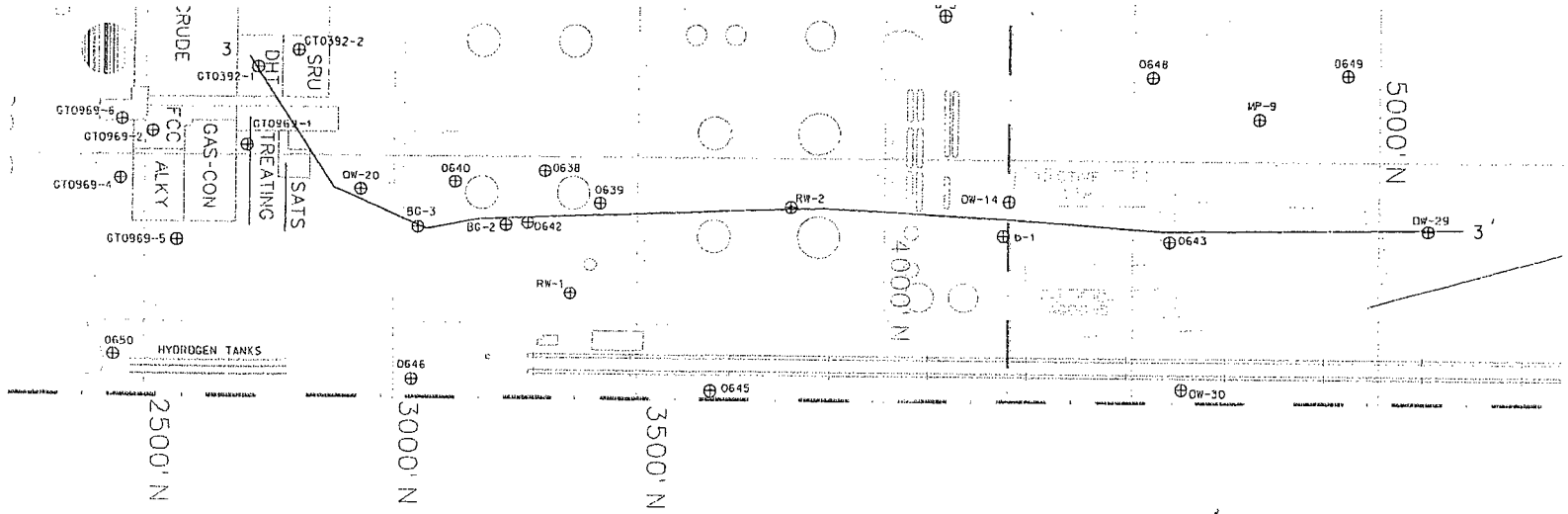
Bottom Cap Used? YES

Site Easting: 30.0

Project #: 96-134

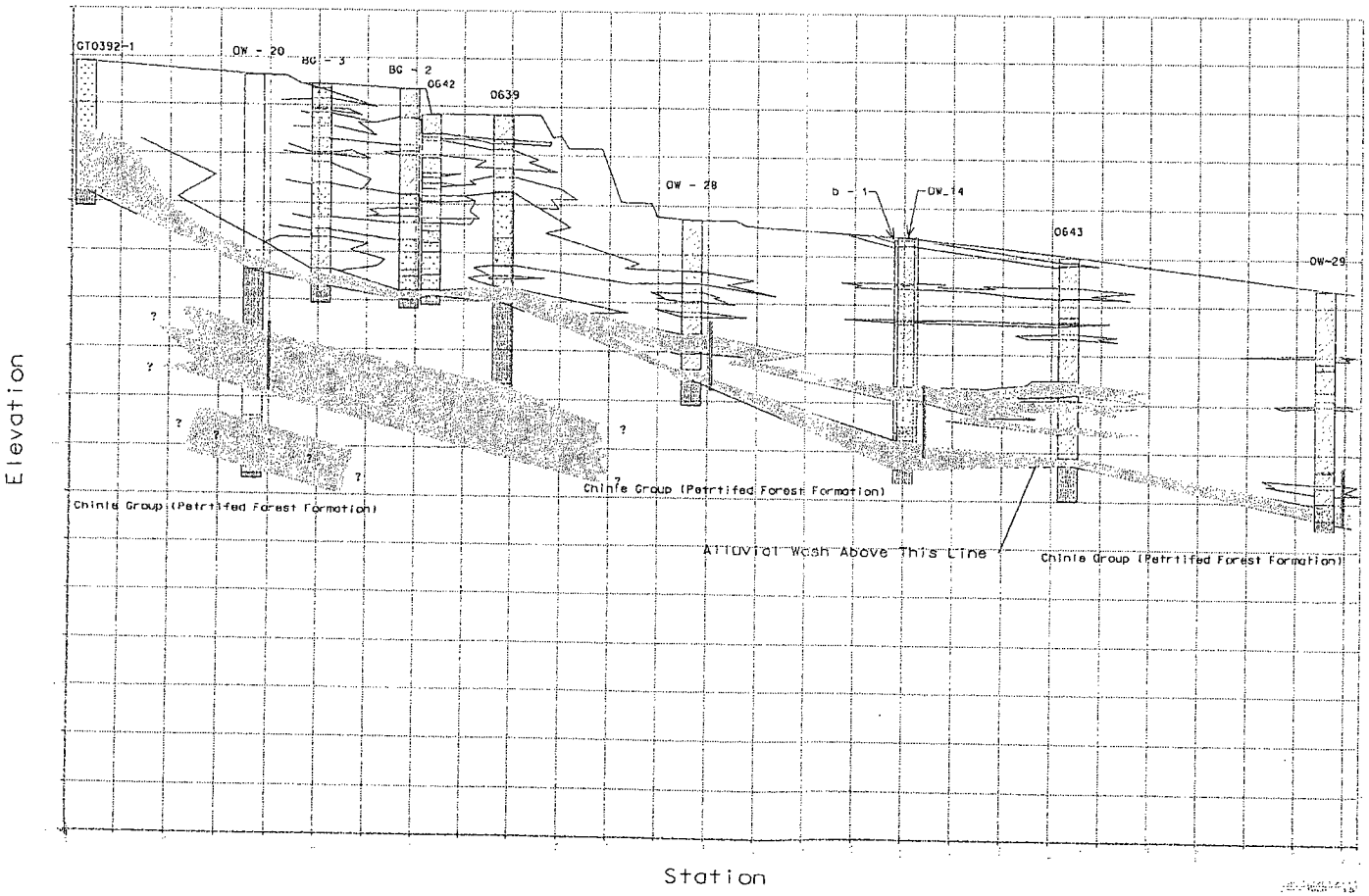
Project Name: CINIZA REFINERY INVESTIGATION

Elevation: 6921.6



2004

Profile 3 - 3'

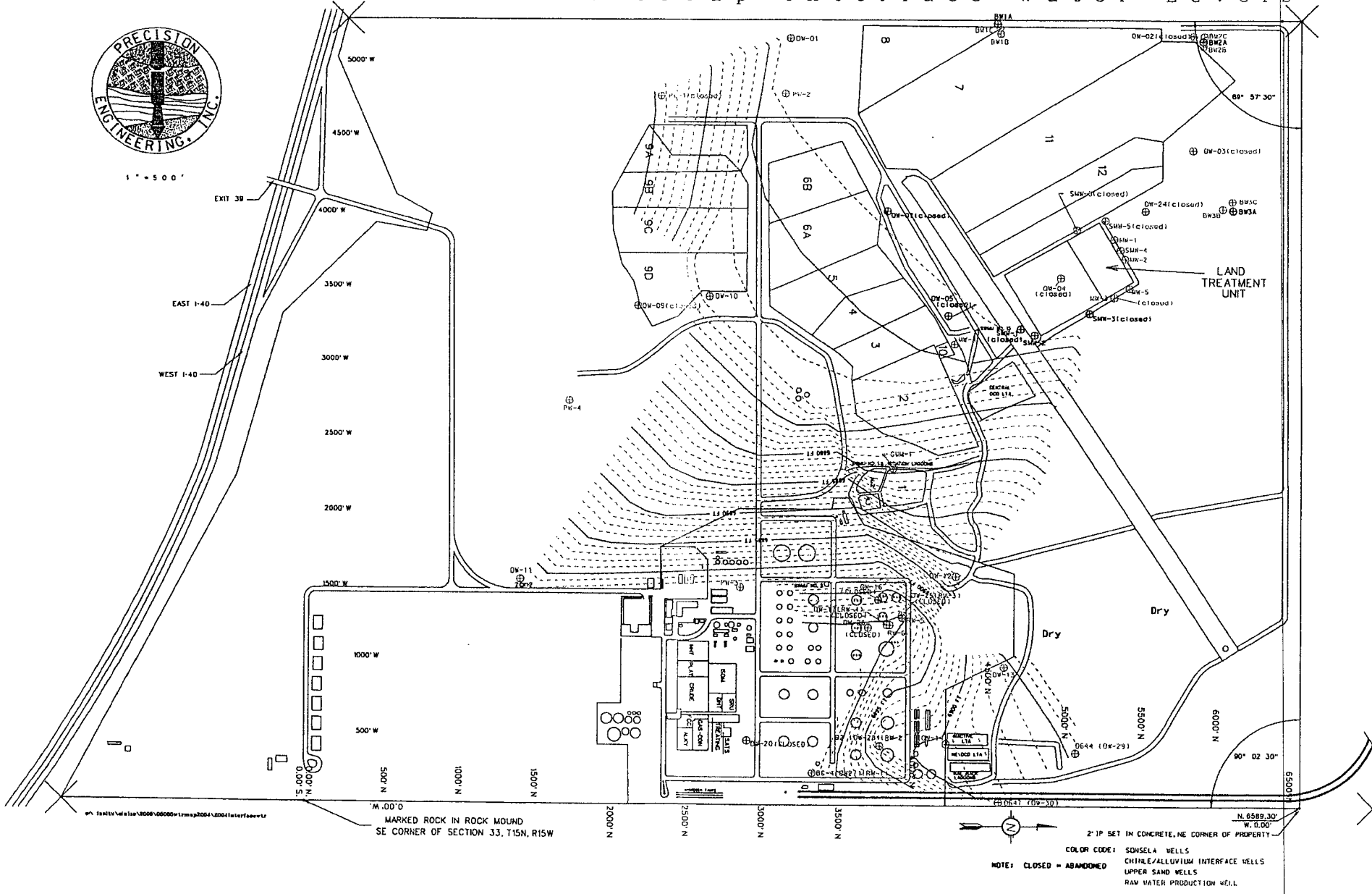


- Clay
- Gravel and Sand
- Silt
- Sandy Clay or Clayey Sand
- Sand
- Shale
- Shaley Sandstone or Sandy Shale
- Sandstone
- Water Bearing Sands or Gravels
- Screen Length + Sanded Interval Above Screen

2004

CINIZA REFINERY

Alluvium / Chinle Group Interface Water Levels



HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Friday, February 29, 2008

Mike Brazie
Gannett-Fleming West
2155 Louisiana Ave. Ste. 9000
Albuquerque, NM 87110

TEL: (505) 259-8053
FAX (505) 881-2513

RE: Giant Ciniza Refinery

Order No.: 0802294

Dear Mike Brazie:

Hall Environmental Analysis Laboratory, Inc. received 3 sample(s) on 2/26/2008 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

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,

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

NM Lab # NM9425
AZ license # AZ0682
ORELAP Lab # NM100001

Hall Environmental Analysis Laboratory, Inc.

Date: 29-Feb-08

CLIENT:	Gannett-Fleming West	**Client Sample ID:**	OW30
Lab Order:	0802294	**Collection Date:**	2/25/2008 12:01:00 PM
Project:	Giant Ciniza Refinery	**Date Received:**	2/26/2008
Lab ID:	0802294-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: SMP
Benzene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
Toluene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
Ethylbenzene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
Methyl tert-butyl ether (MTBE)	420	10		µg/L	10	2/28/2008 9:32:42 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
1,2-Dichloroethane (EDC)	1.2	1.0		µg/L	1	2/27/2008 11:57:25 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
Naphthalene	ND	2.0		µg/L	1	2/27/2008 11:57:25 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	2/27/2008 11:57:25 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	2/27/2008 11:57:25 AM
Acetone	ND	10		µg/L	1	2/27/2008 11:57:25 AM
Bromobenzene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
Bromodichloromethane	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
Bromoform	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
Bromomethane	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
2-Butanone	ND	10		µg/L	1	2/27/2008 11:57:25 AM
Carbon disulfide	ND	10		µg/L	1	2/27/2008 11:57:25 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
Chlorobenzene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
Chloroethane	ND	2.0		µg/L	1	2/27/2008 11:57:25 AM
Chloroform	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
Chloromethane	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
2-Chlorotoluene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
4-Chlorotoluene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
cis-1,2-DCE	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/27/2008 11:57:25 AM
Dibromochloromethane	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
Dibromomethane	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	2/27/2008 11:57:25 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
2-Hexanone	ND	10		µg/L	1	2/27/2008 11:57:25 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level
E	Value above quantitation range
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: 29-Feb-08

CLIENT:	Gannett-Fleming West	**Client Sample ID:**	OW30
Lab Order:	0802294	**Collection Date:**	2/25/2008 12:01:00 PM
Project:	Giant Ciniza Refinery	**Date Received:**	2/26/2008
Lab ID:	0802294-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: SMP
Isopropylbenzene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	2/27/2008 11:57:25 AM
Methylene Chloride	ND	3.0		µg/L	1	2/27/2008 11:57:25 AM
n-Butylbenzene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
n-Propylbenzene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
sec-Butylbenzene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
Styrene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
tert-Butylbenzene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/27/2008 11:57:25 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
trans-1,2-DCE	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/27/2008 11:57:25 AM
Vinyl chloride	ND	1.0		µg/L	1	2/27/2008 11:57:25 AM
Xylenes, Total	ND	1.5		µg/L	1	2/27/2008 11:57:25 AM
Surr: 1,2-Dichloroethane-d4	94.1	68.1-123		%REC	1	2/27/2008 11:57:25 AM
Surr: 4-Bromofluorobenzene	98.9	53.2-145		%REC	1	2/27/2008 11:57:25 AM
Surr: Dibromofluoromethane	92.6	68.5-119		%REC	1	2/27/2008 11:57:25 AM
Surr: Toluene-d8	98.9	64-131		%REC	1	2/27/2008 11:57:25 AM

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	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: 29-Feb-08

CLIENT:	Gannett-Fleming West	**Client Sample ID:**	OW14
Lab Order:	0802294	**Collection Date:**	2/25/2008 3:25:00 PM
Project:	Giant Ciniza Refinery	**Date Received:**	2/26/2008
Lab ID:	0802294-02	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: SMP
Benzene	23	1.0		µg/L	1	2/27/2008 12:32:48 PM
Toluene	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
Ethylbenzene	2.5	1.0		µg/L	1	2/27/2008 12:32:48 PM
Methyl tert-butyl ether (MTBE)	570	10		µg/L	10	2/28/2008 12:29:52 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
1,2-Dichloroethane (EDC)	1.6	1.0		µg/L	1	2/27/2008 12:32:48 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
Naphthalene	ND	2.0		µg/L	1	2/27/2008 12:32:48 PM
1-Methylnaphthalene	16	4.0		µg/L	1	2/27/2008 12:32:48 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	2/27/2008 12:32:48 PM
Acetone	ND	10		µg/L	1	2/27/2008 12:32:48 PM
Bromobenzene	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
Bromodichloromethane	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
Bromoform	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
Bromomethane	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
2-Butanone	ND	10		µg/L	1	2/27/2008 12:32:48 PM
Carbon disulfide	ND	10		µg/L	1	2/27/2008 12:32:48 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
Chlorobenzene	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
Chloroethane	ND	2.0		µg/L	1	2/27/2008 12:32:48 PM
Chloroform	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
Chloromethane	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
2-Chlorotoluene	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
4-Chlorotoluene	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
cis-1,2-DCE	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/27/2008 12:32:48 PM
Dibromochloromethane	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
Dibromomethane	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	2/27/2008 12:32:48 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
2-Hexanone	ND	10		µg/L	1	2/27/2008 12:32:48 PM

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	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: 29-Feb-08

CLIENT:	Gannett-Fleming West	**Client Sample ID:**	OW14
Lab Order:	0802294	**Collection Date:**	2/25/2008 3:25:00 PM
Project:	Giant Ciniza Refinery	**Date Received:**	2/26/2008
Lab ID:	0802294-02	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **SMP**
Isopropylbenzene	1.7	1.0		µg/L	1	2/27/2008 12:32:48 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	2/27/2008 12:32:48 PM
Methylene Chloride	ND	3.0		µg/L	1	2/27/2008 12:32:48 PM
n-Butylbenzene	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
n-Propylbenzene	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
sec-Butylbenzene	4.7	1.0		µg/L	1	2/27/2008 12:32:48 PM
Styrene	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
tert-Butylbenzene	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/27/2008 12:32:48 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
trans-1,2-DCE	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/27/2008 12:32:48 PM
Vinyl chloride	ND	1.0		µg/L	1	2/27/2008 12:32:48 PM
Xylenes, Total	ND	1.5		µg/L	1	2/27/2008 12:32:48 PM
Surr: 1,2-Dichloroethane-d4	90.3	68.1-123		%REC	1	2/27/2008 12:32:48 PM
Surr: 4-Bromofluorobenzene	107	53.2-145		%REC	1	2/27/2008 12:32:48 PM
Surr: Dibromofluoromethane	91.6	68.5-119		%REC	1	2/27/2008 12:32:48 PM
Surr: Toluene-d8	93.5	64-131		%REC	1	2/27/2008 12:32:48 PM

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	MCL	Maximum Contaminant Level
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: 29-Feb-08

CLIENT:	Gannett-Fleming West	**Client Sample ID:**	Trip Blank
Lab Order:	0802294	**Collection Date:**	
Project:	Giant Ciniza Refinery	**Date Received:**	2/26/2008
Lab ID:	0802294-03	**Matrix:**	TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: SMP
Benzene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
Toluene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
Ethylbenzene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
Naphthalene	ND	2.0		µg/L	1	2/27/2008 1:08:21 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	2/27/2008 1:08:21 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	2/27/2008 1:08:21 PM
Acetone	ND	10		µg/L	1	2/27/2008 1:08:21 PM
Bromobenzene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
Bromodichloromethane	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
Bromoform	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
Bromomethane	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
2-Butanone	ND	10		µg/L	1	2/27/2008 1:08:21 PM
Carbon disulfide	ND	10		µg/L	1	2/27/2008 1:08:21 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
Chlorobenzene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
Chloroethane	ND	2.0		µg/L	1	2/27/2008 1:08:21 PM
Chloroform	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
Chloromethane	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
2-Chlorotoluene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
4-Chlorotoluene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
cis-1,2-DCE	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/27/2008 1:08:21 PM
Dibromochloromethane	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
Dibromomethane	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	2/27/2008 1:08:21 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
2-Hexanone	ND	10		µg/L	1	2/27/2008 1:08:21 PM

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	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: 29-Feb-08

CLIENT:	Gannett-Fleming West	**Client Sample ID:**	Trip Blank
Lab Order:	0802294	**Collection Date:**	
Project:	Giant Ciniza Refinery	**Date Received:**	2/26/2008
Lab ID:	0802294-03	**Matrix:**	TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **SMP**
Isopropylbenzene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	2/27/2008 1:08:21 PM
Methylene Chloride	ND	3.0		µg/L	1	2/27/2008 1:08:21 PM
n-Butylbenzene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
n-Propylbenzene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
sec-Butylbenzene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
Styrene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
tert-Butylbenzene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/27/2008 1:08:21 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
trans-1,2-DCE	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/27/2008 1:08:21 PM
Vinyl chloride	ND	1.0		µg/L	1	2/27/2008 1:08:21 PM
Xylenes, Total	ND	1.5		µg/L	1	2/27/2008 1:08:21 PM
Surr: 1,2-Dichloroethane-d4	94.8	68.1-123		%REC	1	2/27/2008 1:08:21 PM
Surr: 4-Bromofluorobenzene	103	53.2-145		%REC	1	2/27/2008 1:08:21 PM
Surr: Dibromofluoromethane	91.3	68.5-119		%REC	1	2/27/2008 1:08:21 PM
Surr: Toluene-d8	99.0	64-131		%REC	1	2/27/2008 1:08:21 PM

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	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

QA/QC SUMMARY REPORT

Client: Gannett-Fleming West
Project: Giant Ciniza Refinery **Work Order:** 0802294

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260B: VOLATILES									
Sample ID: 5ml rb		*MBLK*			Batch ID: **R27510**		Analysis Date: 2/27/2008 6:06:20 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						
1,2,4-Trimethylbenzene	ND	µg/L	1.0						
1,3,5-Trimethylbenzene	ND	µg/L	1.0						
1,2-Dichloroethane (EDC)	ND	µg/L	1.0						
1,2-Dibromoethane (EDB)	ND	µg/L	1.0						
Naphthalene	ND	µg/L	2.0						
1-Methylnaphthalene	ND	µg/L	4.0						
2-Methylnaphthalene	ND	µg/L	4.0						
Acetone	ND	µg/L	10						
Bromobenzene	ND	µg/L	1.0						
Bromodichloromethane	ND	µg/L	1.0						
Bromoform	ND	µg/L	1.0						
Bromomethane	ND	µg/L	1.0						
2-Butanone	ND	µg/L	10						
Carbon disulfide	ND	µg/L	10						
Carbon Tetrachloride	ND	µg/L	1.0						
Chlorobenzene	ND	µg/L	1.0						
Chloroethane	ND	µg/L	2.0						
Chloroform	ND	µg/L	1.0						
Chloromethane	ND	µg/L	1.0						
2-Chlorotoluene	ND	µg/L	1.0						
4-Chlorotoluene	ND	µg/L	1.0						
cis-1,2-DCE	ND	µg/L	1.0						
cis-1,3-Dichloropropene	ND	µg/L	1.0						
1,2-Dibromo-3-chloropropane	ND	µg/L	2.0						
Dibromochloromethane	ND	µg/L	1.0						
Dibromomethane	ND	µg/L	1.0						
1,2-Dichlorobenzene	ND	µg/L	1.0						
1,3-Dichlorobenzene	ND	µg/L	1.0						
1,4-Dichlorobenzene	ND	µg/L	1.0						
Dichlorodifluoromethane	ND	µg/L	1.0						
1,1-Dichloroethane	ND	µg/L	1.0						
1,1-Dichloroethene	ND	µg/L	1.0						
1,2-Dichloropropane	ND	µg/L	1.0						
1,3-Dichloropropane	ND	µg/L	1.0						
2,2-Dichloropropane	ND	µg/L	2.0						
1,1-Dichloropropene	ND	µg/L	1.0						
Hexachlorobutadiene	ND	µg/L	1.0						
2-Hexanone	ND	µg/L	10						
Isopropylbenzene	ND	µg/L	1.0						
4-Isopropyltoluene	ND	µg/L	1.0						

Qualifiers:

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
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Gannett-Fleming West
Project: Giant Ciniza Refinery **Work Order:** 0802294

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260B: VOLATILES									
Sample ID: 5ml rb		*MBLK*			Batch ID: **R27510**		Analysis Date:	2/27/2008 6:06:20 AM	
4-Methyl-2-pentanone	ND	µg/L	10						
Methylene Chloride	ND	µg/L	3.0						
n-Butylbenzene	ND	µg/L	1.0						
n-Propylbenzene	ND	µg/L	1.0						
sec-Butylbenzene	ND	µg/L	1.0						
Styrene	ND	µg/L	1.0						
tert-Butylbenzene	ND	µg/L	1.0						
1,1,1,2-Tetrachloroethane	ND	µg/L	1.0						
1,1,2,2-Tetrachloroethane	ND	µg/L	2.0						
Tetrachloroethene (PCE)	ND	µg/L	1.0						
trans-1,2-DCE	ND	µg/L	1.0						
trans-1,3-Dichloropropene	ND	µg/L	1.0						
1,2,3-Trichlorobenzene	ND	µg/L	1.0						
1,2,4-Trichlorobenzene	ND	µg/L	1.0						
1,1,1-Trichloroethane	ND	µg/L	1.0						
1,1,2-Trichloroethane	ND	µg/L	1.0						
Trichloroethene (TCE)	ND	µg/L	1.0						
Trichlorofluoromethane	ND	µg/L	1.0						
1,2,3-Trichloropropane	ND	µg/L	2.0						
Vinyl chloride	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	1.5						
Sample ID: 5ml rb		*MBLK*			Batch ID: **R27517**		Analysis Date:	2/28/2008 6:37:04 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						
1,2,4-Trimethylbenzene	ND	µg/L	1.0						
1,3,5-Trimethylbenzene	ND	µg/L	1.0						
1,2-Dichloroethane (EDC)	ND	µg/L	1.0						
1,2-Dibromoethane (EDB)	ND	µg/L	1.0						
Naphthalene	ND	µg/L	2.0						
1-Methylnaphthalene	ND	µg/L	4.0						
2-Methylnaphthalene	ND	µg/L	4.0						
Acetone	ND	µg/L	10						
Bromobenzene	ND	µg/L	1.0						
Bromodichloromethane	ND	µg/L	1.0						
Bromoform	ND	µg/L	1.0						
Bromomethane	ND	µg/L	1.0						
2-Butanone	ND	µg/L	10						
Carbon disulfide	ND	µg/L	10						
Carbon Tetrachloride	ND	µg/L	1.0						
Chlorobenzene	ND	µg/L	1.0						
Chloroethane	ND	µg/L	2.0						
Chloroform	ND	µg/L	1.0						

Qualifiers:

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
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Gannett-Fleming West
Project: Giant Ciniza Refinery **Work Order:** 0802294

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260B: VOLATILES									
Sample ID: 5ml rb		*MBLK*			Batch ID: **R27517**		Analysis Date:	2/28/2008 6:37:04 AM	
Chloromethane	ND	µg/L	1.0						
2-Chlorotoluene	ND	µg/L	1.0						
4-Chlorotoluene	ND	µg/L	1.0						
cis-1,2-DCE	ND	µg/L	1.0						
cis-1,3-Dichloropropene	ND	µg/L	1.0						
1,2-Dibromo-3-chloropropane	ND	µg/L	2.0						
Dibromochloromethane	ND	µg/L	1.0						
Dibromomethane	ND	µg/L	1.0						
1,2-Dichlorobenzene	ND	µg/L	1.0						
1,3-Dichlorobenzene	ND	µg/L	1.0						
1,4-Dichlorobenzene	ND	µg/L	1.0						
Dichlorodifluoromethane	ND	µg/L	1.0						
1,1-Dichloroethane	ND	µg/L	1.0						
1,1-Dichloroethene	ND	µg/L	1.0						
1,2-Dichloropropane	ND	µg/L	1.0						
1,3-Dichloropropane	ND	µg/L	1.0						
2,2-Dichloropropane	ND	µg/L	2.0						
1,1-Dichloropropene	ND	µg/L	1.0						
Hexachlorobutadiene	ND	µg/L	1.0						
2-Hexanone	ND	µg/L	10						
Isopropylbenzene	ND	µg/L	1.0						
4-Isopropyltoluene	ND	µg/L	1.0						
4-Methyl-2-pentanone	ND	µg/L	10						
Methylene Chloride	ND	µg/L	3.0						
n-Butylbenzene	ND	µg/L	1.0						
n-Propylbenzene	ND	µg/L	1.0						
sec-Butylbenzene	ND	µg/L	1.0						
Styrene	ND	µg/L	1.0						
tert-Butylbenzene	ND	µg/L	1.0						
1,1,1,2-Tetrachloroethane	ND	µg/L	1.0						
1,1,2,2-Tetrachloroethane	ND	µg/L	2.0						
Tetrachloroethene (PCE)	ND	µg/L	1.0						
trans-1,2-DCE	ND	µg/L	1.0						
trans-1,3-Dichloropropene	ND	µg/L	1.0						
1,2,3-Trichlorobenzene	ND	µg/L	1.0						
1,2,4-Trichlorobenzene	ND	µg/L	1.0						
1,1,1-Trichloroethane	ND	µg/L	1.0						
1,1,2-Trichloroethane	ND	µg/L	1.0						
Trichloroethene (TCE)	ND	µg/L	1.0						
Trichlorofluoromethane	ND	µg/L	1.0						
1,2,3-Trichloropropane	ND	µg/L	2.0						
Vinyl chloride	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	1.5						
Sample ID: 100ng lcs		*LCS*			Batch ID: **R27510**		Analysis Date:	2/27/2008 7:15:58 AM	

Qualifiers:

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
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Gannett-Fleming West
Project: Giant Ciniza Refinery **Work Order:** 0802294

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260B: VOLATILES									
Sample ID: 100ng lcs		*LCS*			Batch ID: **R27510**		Analysis Date:	2/27/2008 7:15:58 AM	
Benzene	20.45	µg/L	1.0	102	72.4	126			
Toluene	20.31	µg/L	1.0	102	79.2	115			
Chlorobenzene	19.81	µg/L	1.0	99.1	83.1	111			
1,1-Dichloroethene	23.01	µg/L	1.0	115	81.4	122			
Trichloroethene (TCE)	18.93	µg/L	1.0	94.7	64.4	118			
Sample ID: 100ng lcs		*LCS*			Batch ID: **R27517**		Analysis Date:	2/28/2008 7:46:35 AM	
Benzene	19.18	µg/L	1.0	95.9	72.4	126			
Toluene	19.61	µg/L	1.0	98.1	79.2	115			
Chlorobenzene	18.67	µg/L	1.0	93.4	83.1	111			
1,1-Dichloroethene	20.74	µg/L	1.0	104	81.4	122			
Trichloroethene (TCE)	16.94	µg/L	1.0	84.7	64.4	118			

Qualifiers:

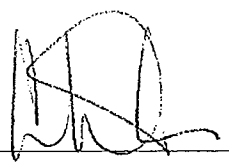
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name GFW | Date Received: 2/26/2008

Work Order Number 0802294 | Received by: ARS

Checklist completed by:  Signature 2/26/08 Date | Sample ID labels checked by  Initials

Matrix | Carrier name Client drop-off

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☐	Not Shipped ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	3°	<6° C *Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

Chain-of-Custody Record

Client: Garrett Fleming West

Address: 2155 Louisiana Blvd NE
Suite 7000, ABQ, NM 87110

Phone #: 505-265-8468

email or Fax#: 505-881-2513

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
☐ Other
☐ EDD (Type)

Turn-Around Time:
☐ Standard ☐ Rush

Project Name: Giant Ciniza Refinery

Project #: 49415

Project Manager: M. Brazie

Sampler: T. Shevlin

On Ice: ☒ Yes ☐ No

Sample Temperature: 5°

Date	Time	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
2/25	1201	OW30		~~HgCl2~~ HCl	0802294 1
2/25	1525	OW14		HgCl2	2
		Trip Blank			3

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8260)	8310 (PNA or PAH)	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)						Air Bubbles (Y or N)
									X							
									X							

Date:	Time:	Relinquished by:	Received by:	Date:	Time:
2/26/08	9:10			2/26/08	9:10

Remarks:

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

Chavez, Carl J, EMNRD

From: Monzeglio, Hope, NMENV

Sent: Friday, April 11, 2008 10:09 AM

To: Ed Riege

Cc: Cobrain, Dave, NMENV; Frischkorn, Cheryl, NMENV; Kieling, John, NMENV; Martinez, Cynthia, NMENV; Price, Wayne, EMNRD; Chavez, Carl J, EMNRD; Jim Lieb

Subject: Evaporation Pond Closure Plan

Attachments: GRCC MISC EP Closure 4_11_08.pdf

This will go out in the mail today.

Hope

Hope Monzeglio
Environmental Specialist
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, BLDG 1
Santa Fe NM 87505
Phone: (505) 476-6045; Main No.: (505)-476-6000
Fax: (505)-476-6060
hope.monzeglio@state.nm.us

Websites:
New Mexico Environment Department
Hazardous Waste Bureau

NEW MEXICO
ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Phone (505) 476-6000 Fax (505) 476-6030
www.nmenv.state.nm.us

BILL RICHARDSON
Governor

DIANE DENISH
Lieutenant Governor

RON CURRY
Secretary

JON GOLDSTEIN
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

April 11, 2008

Mr. Ed Riege
Environmental Superintendent
Western Refining Company Gallup Refinery
Route 3, Box 7
Gallup, New Mexico 87301

RE: CLARIFICATION OF RCRA CORRECTIVE ACTION PROCESS
EVAPORATION POND CLOSURE PLAN
WESTERN REFINING COMPANY, GALLUP REFINERY
HWB-GRCC-MISC
EPA ID # NMD000333211

Dear Mr. Riege:

The New Mexico Environment Department (NMED) received the *Evaporation Pond Closure Plan* (Closure Plan) dated, December 2007 submitted on behalf of Western Refining Company, Gallup Refinery (Permittee). The Closure Plan was submitted as a requirement of the Oil Conservation Division (OCD) Discharge Permit (GW-032). This letter does not provide comments regarding the Closure Plan; however, NMED has taken this opportunity to provide the RCRA requirements that must be followed at the time the Evaporation Ponds (EPs) are removed from service. This process also applies to Solid Waste Management (SWMU) Unit No. 1 Aeration Basin.

The EPs are SWMU Unit No. 2 based on NMED's Post-Closure Care Permit. When the EPs are removed from service, they must go through the RCRA corrective action process outlined below. Definitions to the terminology below can be found in 20.4.2.7 NMAC.

a. The Permittee must submit a RCRA Facility Investigation (RFI) work plan (investigation work plan) for the EPs to determine the extent of any releases. An RFI describes the proposed investigation activities to determine the nature and extent of contamination at a unit or facility.

b. Upon completion of approved RFI activities, the Permittee must submit an RFI report (i.e., investigation report) that discusses the results of the investigation and provides conclusions and recommendations.

c. If additional investigation activities are required, a subsequent Phase II RFI work plan and Phase II RFI report would be required by NMED.

d. Once the Permittee determines the full extent of contamination, a Corrective Measures Evaluation (CME) to identify and evaluate potential corrective measures (remedy) and alternatives may be required by NMED.

e. If a CME is required, NMED will evaluate the proposed remedies. When a remedy is selected by NMED, the Permittee would then be required to submit a Corrective Measures Implementation (CMI) work plan, which would present specifications to implement the approved remedy at the SWMU.

f. After implementing the selected remedy, the Permittee must submit a CMI report describing implementation of the remedy to NMED.

g. After completion of all remedial actions, the Permittee must submit a Remedy Completion Report, which summarizes the results of completion of the implementation of corrective measures.

h. Once NMED has determined that no additional remedial activity is required at a unit, then the Permittee may petition for corrective action complete determination.

The EPs have not achieved no further action status (NFA) (i.e. Corrective Action Complete without Controls) as implied in the Closure Plan prepared for OCD. In addition, the Closure Plan discusses an investigation at the evaporation ponds conducted in the early 1990's where soil and groundwater samples were collected in the pond areas. The Permittee states in the Closure Plan that volatile organic compounds (VOCs) or semi-volatile organic compounds (SVOCs) were not detected in soil and groundwater at SWMU No. 2. The analytical data collected during the investigations at the EPs in the 1990s cannot be used to determine if further sampling is necessary for the following reasons:

a. Data collected during the investigations conducted in the early 1990's were not collected in accordance with standard sampling methods and procedures (e.g.; soil samples analyzed for VOC analysis were collected as composite samples);

b. The data collected is 10 to 15 years old and the EPs have been in continuous operation since this time;

c. The facility has had various releases of untreated wastewater to the aeration lagoons and EPs 1 and 2. Remedial actions to remove contaminated soil from the banks of EP 1 and 2 have been conducted twice since 2000. It is unknown whether contamination has migrated to the other ponds.

If you have questions regarding this letter, please contact Hope Monzeglio of my staff at 505-476-6045.

Sincerely,

John E. Kieling
Program Manager
Permits Management Program
Hazardous Waste Bureau

cc: D. Cobrain NMED HWB
C. Frishkorn, NMED HWB
H. Monzeglio NMED HWB
W. Price, OCD
C. Chavez, OCD
J. Lieb, Western
File: Reading File and GRCC 2008 File
HWB-GRCC-MISC

Chavez, Carl J, EMNRD

From: Ed Riege [Ed.Riege@wnr.com]
Sent: Thursday, April 03, 2008 3:52 PM
To: Monzeglio, Hope, NMENV
Cc: Chavez, Carl J, EMNRD
Subject: Emailing: _0403152516_001

Attachments: _0403152516_001.pdf

_0403152516_001.pdf (453 KB)

<<_0403152516_001.pdf>>

Hope,

Here is a copy of the sampling plan for your review that we discussed.

Ed

Trihydro
CORPORATION

March 28, 2008

Mr. Ed Riege
Environmental Superintendent
Western Refining Company, L.P.
Route 3 Box 7
Gallup, NM 87301

RE: Aeration Lagoon and Evaporation Pond Sediment Sampling Work Plan

Dear Mr. Reige:

This Sediment Sampling Work Plan (Plan) has been prepared to assist in the characterization of the accumulated sediment present in the two aeration lagoons and Evaporation Pond No. 1 at the Western Refinery in Gallup, New Mexico. The information obtained during this investigation will be used to calculate approximate sediment volumes and to determine appropriate disposal options.

Preparation/Reconnaissance

To determine the approximate thicknesses of the accumulated sediment in the aeration lagoons/evaporation pond and appropriate sampling techniques, Trihydro completed a reconnaissance field event during the week of March 2, 2008. During this event, approximate water depths and sediment thicknesses were measured at six locations within Aeration Lagoon 2 and eight locations in Evaporation Pond No. 1.

Based on the results of the reconnaissance field event, the sediment in Aeration Lagoon 2 appears to be stratified into two general sediment types. The uppermost sediment layer is soft, loose, and unconsolidated. This "soft sediment" ranges in thickness from approximately 8-10 feet. Underlying the soft sediment is a more compact, dense layer of sediment. This "hardpack sediment" occurs directly beneath the soft sediment and extends to the rock liner of the aeration lagoons at approximately 15 feet.

In Evaporation Pond No. 1, no hardpack sediment was identified during the reconnaissance field effort. Soft sediment was identified and ranged in thicknesses from approximately 2-4 feet. A hard layer, presumably the native soil bottom of the pond, was identified beneath the soft sediment.

Sampling Methods and Procedures – Aeration Lagoons

Ten sediment samples will be collected from five locations in each aeration lagoon; one location near each of the four corners and one location in the center. Aeration Lagoon One is approximately 120 feet by 120 feet and Aeration Lagoon Two is approximately 150 feet by 150 feet. These dimensions will be confirmed during sampling activities. A figure illustrating the approximate dimensions of the aeration lagoons and the approximate sample locations will be created upon completion of the sampling event. At each location, one sample will be collected from the soft sediment, and one sample will be collected from the hardpack sediment. Trihydro plans to use two different sampling techniques to obtain representative sediment samples: a butterfly valve operated sediment sampler and a stainless steel hand auger.

Sediment Sampler Sample Method – Aeration Lagoons

Soft sediment samples will be collected using a butterfly valve operated sediment sampler. The sediment sampler will be pushed into the soft sediment from a boat at each sampling location. A clean, disposable, eight foot sediment core tube will be used at each sample location. The core tube will be pushed to a depth of eight feet, total depth, or until refusal is reached using a rubber mallet. Upon retrieval, the butterfly valve closes, creating a suction that prevents the sediment from falling out of the bottom of the core tube. The core tube will be immediately capped until samples can be extracted. Samples will be extracted by cutting the core tube lengthwise or by using a plunger to extract the sediment into a clean compositing container. A representative composite sample will be collected and placed on ice. If the sediment sampler is able to be driven into the hardpack sediment, the portion of the hardpack sediment obtained will be capped and saved so that it may be composited with hardpack sediment collected at the same location with the hand auger.

Hand Auger Sample Method – Aeration Lagoons

A stainless steel hand auger with extensions will be used to collect hardpack sediment samples from sample locations where hardpack sediment samples were not obtainable using sediment sampler. Field personnel will attempt to collect samples from as close to the original soft sediment sampling location as possible. The auger will be driven into the sediment to the desired depth. Soft sediment overlying the desired hard pack sample interval will be pushed through the open top of the auger as the auger is driven down.

Auger sampling will begin at the top of the hardpack sediment or, if the sediment sampler was able to obtain a portion of the hardpack sediment, at the deepest depth achieved by the sediment sampler. Samples will be collected in approximately one foot intervals (the length of the auger core barrel) from the top of the hardpack sediment to the total depth of the lagoon. As each interval is retrieved, it will be extracted from the auger into a clean compositing container. A clean liner will be installed in the

compositing container and sealed in between sample intervals to help prevent volatilization. After total depth is achieved, the hardpack sediment will be composited, sampled, and placed on ice.

Sampling Methods and Procedures – Evaporation Pond No. 1

Sediment samples will be collected from up to eight locations in Evaporation Pond No. 1 (Pond One). Pond One is approximately 300 feet by 150 feet. These dimensions will be confirmed during sampling activities. A minimum of one sediment sample will be collected near the inlet from Pond One as well as the overflow inlet (the southwest and southeast corners of the pond, respectively). These sampling locations have been chosen due to the fact that they have the highest potential to be contaminated. Additional sediment samples will be collected from other representative locations to be determined in the field. A figure illustrating the approximate dimensions of Pond One and the approximate sample locations will be created upon completion of the sampling event.

Sediment Sampler Sample Method – Evaporation Pond No. 1

All sediment samples obtained from Pond One will be collected using the butterfly valve operated sediment sampler. The core tube will be driven to the bottom of the accumulated sediment using a rubber mallet. Upon retrieval, the core tube will be immediately capped until samples can be extracted. Samples will be extracted by cutting the core tube lengthwise or by using a plunger to extract the core into a clean compositing container. The entire sediment interval will be composited, sampled, and placed on ice.

Sediment Thickness Measurements

Sediment thicknesses will be measured at all sampling locations in the aeration lagoons and Pond One, as well as five additional locations in each aeration lagoon and eight additional locations in the Pond One. In the aeration lagoons, the thicknesses of the soft sediment and hardpack sediment will be measured. This data will be collected to calculate the volume of accumulated sediment. A figure illustrating the approximate measuring point locations will be created upon completion of the sampling event.

Field Documentation and Logging

Field observations are critical to the verification and interpretation of the laboratory data. Field observations made during sediment sampling will be recorded in the field log book and on the sediment sampling field forms (Figure 1). The following information will be recorded, in indelible ink, where appropriate for each sample:

- Date and name of observer.
- Names and affiliations of sampling team members.

- Names and affiliations of others present at the sampling sites.
- Weather conditions.
- Sampling location and time of sampling.
- Health and safety measures implemented.
- Sampling site condition upon arrival (turbulent water, standing water, aerators on/off, etc.).
- Sediment characteristics and texture.
- Sediment observations including discoloration, hydrocarbon sheens, presence of waste, etc.
- Deviations from or clarifications of sampling procedures.
- Miscellaneous conditions which the sampling team finds noteworthy.
- Sampler and model number, photographs, and other QA/QC data as applicable.
- Sample interval depth.
- Odor qualities (sweet, sulfurous, strong, etc.) will also be recorded if casually noticed; however, field personnel will be cautioned against unnecessary exposure to volatile constituents.

Photographs

Photographs will be used to substantiate and augment the field notes. Photographs will be used during the investigation to document the color of sample media, sediment staining, and other defining features at each location. Each photograph will be numbered and recorded on the photograph log (Figure 2).

Investigative Derived Waste

Excess sediment collected from the aeration lagoons and Pond One will returned to the lagoon/pond from which they were collected. Wastes associated with sampling including personal protective equipment (PPE), rinse water from decontamination, and disposable sampling instruments will be managed according to appropriate regulations by the Gallup Refinery.

Equipment Decontamination Procedures

Non-disposable sampling equipment will be decontaminated prior to sampling in the field and after sampling at each location. Sampling equipment will be disassembled into component parts prior to

decontamination. Sampling devices will be decontaminated using warm non-phosphate detergent solution (e.g., Alconox) and then rinsed with distilled water.

To ensure proper equipment decontamination, one equipment blank will be collected from the hand auger for each day of sampling. Equipment blanks will be collected in appropriate containers.

Quality Assurance/Quality Control Procedures

The following QAQC procedures will be followed:

- Data listed in the Field Documentation and Logging section will be documented on the sediment sampling field forms.
- One blind duplicate will be collected per 20 samples collected.
- Matrix Spike (MS) and Matrix Spike Duplicate (MSD) samples will be collected and labeled as MS/MSD samples.
- One equipment blank will be collected each day of sampling.
- Chain-of Custody (COC) will be completed and will accompany the samples to the laboratory.
- The shipping container will be sealed with a custody seal to ensure that the samples have not been disturbed during transportation to the laboratory.

Sample Analyses

Sediment samples will be collected in laboratory provided sample containers using the sampling techniques described above and submitted for analysis to Hall Environmental located in Albuquerque, New Mexico. Laboratory recommended preservation methods will be utilized for all samples. Laboratory sampling analyses will include diesel range organics (DRO)/gas range organics (GRO) by USEPA method 8015, semi-volatile organic compounds (SVOCs) by USEPA method 8270, volatile organic compounds (VOCs) by USEPA method 8260, and RCRA metals by USEPA method 6010C.

Health and Safety Procedures

Trihydro's "Boat Operation – Sediment Sampling" Job Safety Analysis (JSA) will be reviewed by all field team members prior to sampling activities. In addition, a safety meeting will be held every morning to discuss the anticipated activities and potential hazards. Trihydro will work with the Gallup Refinery to obtain any necessary permits. Proper access controls and health and safety precautions will be

implemented prior to sampling. Protective measures will be employed for limiting access to the sampling sites during sampling.

Trihydro is ready to implement this work plan at a mutually convenient date upon NMED approval. If you have any questions, please feel free to contact us at (307) 745-7474.

Sincerely,
Trihydro Corporation

Eric Worden
Client Manager

For: Regina Allen
Project Manager

cc: Jim Lieb, Giant Refining

697-019-001

Attachments

ATTACHMENTS

FIGURES

Figure 1. Example Sediment Sampling Field Form

Project Name: _____ Sample Media: _____
Sample ID: _____ Sample Date: _____
Sample Location: _____ Sample Time: _____
Samplers: _____ Photo Taken? (Y/N) _____
Weather: _____

Sample Description

Sampling Equipment: _____
Sample Depth: _____
Sample Recovery: _____
Latitude: _____
Longitude: _____
Moisture Content: _____
pH: _____

Sample Description: (Color, grain size, odor, organic matter, etc.) _____

FIGURE 2. EXAMPLE PHOTOGRAPH LOG

Project Name: ____________________

Site and Photograph Date: ____________________

Photo Number		Date		Direction		Photograph Description

Jim Lieb
Don Riley
Ann Allen

New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson
Governor

Joanna Prukop
Cabinet Secretary
Reese Fullerton
Deputy Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division

March 12, 2008

Mr. Mark B. Turri
General Manager
Western Refining Southwest, Gallup Refinery
Route 3 Box 7
Gallup, New Mexico 87301

Re: Revised Schedules for OCD Discharge Permit GW-032

Dear Mr. Turri:

The New Mexico Oil Conservation Division (NMOCD) has received Western Refining Southwest (WRSW), Gallup Refinery's letter dated February 22, 2008, which requests a change in schedules from the Discharge Permit (Permit). The request for date changes to the discharge permit was made subsequent to the meeting held in Santa Fe, New Mexico on February 11, 2008.

The NMOCD will not handle the schedule changes as a modification(s) to the Permit, but as revisions in this letter. Please note that any revisions (i.e., March 1, 2009 date) approved herein must be met. The revisions are as follows:

1) Condition 9 Above Ground Tanks Impermeable Secondary Containment Requirement: WRSW proposes an alternative to installing secondary containment liners under existing and new tanks at the refinery. WRSW proposes to install an automatic tank gauging system in all of its large liquid storage tanks in the tank farm. The installation after the engineering design is completed and capital funding is obtained from "Corporate" has been approved. The automatic tank gauges will be installed initially in the highest priority liquid storage tanks (i.e., marketing tanks).

The NMOCD does not feel that the proposed "automatic tank gauging system" will in itself satisfy the Permit requirements. We will consider alternative technologies that will satisfy permit requirements where liner retrofitting is not proposed. The NMOCD will require an inventory of all refinery tanks, chemical contents, volumes, and projected dates for alternative technology testing or other type of testing, liner emplacement or retrofitting. Any new tanks will be required to install secondary containment with leak detection underneath any new installed tank.

The NMOCD approves the lining of containments of smaller sized storage tanks where the containments are currently native soil. This would include any tanks less than 10,000 bbls. A 60-mil HDPE or LLDPE reinforced seamless liner (welded seams if seams are present) is acceptable or concrete pad and berm. As mentioned, many of the smaller tanks (i.e., additive tanks are already on concrete secondary containments and leak detection will be evident.

NMOCD require berming to contain 1 + 1/3 volume of the single largest tank or volume of interconnected tanks where required to contain spills.

2) Condition 16.B. Repair New API Separator

The NMOCD approves the March 15, 2008 date.

3) Condition 16.C. Activated Sludge Wastewater Treatment Study and Design and Condition 16.D Aeration Lagoons Replacement Engineering Design/Construction Plan and Schedule.

The NMOCD approve the March 1, 2009 deadline for submittal of the treatment study and the engineering design of the tank based activated sludge treatment process or equivalent. This time schedule. In addition, a schedule for the implementation of the activated sludge or alternative treatment process and tentative closure of the aeration lagoons will be included.

It appears that WRSW in addition to consideration of replacement of the aeration lagoons (ALs 1 & 2) with a tank based activated sludge treatment process or alternative equivalent system, is also evaluating whether lining the ALs is feasible. The NMOCD does not approve of this, since the tank based treatment system is the preferred technology.

4) Condition 16.E. Evaporation Ponds- Engineering Design/Construction Plan to Single Line the Evaporation Pond No. 1 (EP-1) or Alternative Plan.

Since the design of the activated sludge treatment or alternative process will have a bearing on the decision as to whether single lining or an alternative will be needed in EP-1. WRSW proposes to move this deadline for a plan also to March 1, 2009.

The NMOCD approves the March 1, 2009 deadline for submittal of lining EP-1. If the tank based treatment system is installed, the lining of EP-1 may not be necessary.

5) Condition 24.A. and 24.B. Installation of Dual Separation Device and Emergency Holding Tank for Pilot Travel Center Waste Water.

Similar to Item # 4 above, WRSW proposes to change the deadline for construction of the dual separation device and the emergency 48-hours storage to March 1, 2009. WRSW expects the engineering and design will be completed by April 2008. Requests for proposal will be sent by June 2008. The change will provide Western with the time to negotiate a new contract with the Pilot Travel Center (Pilot) to share the capital costs for the Pilot wastewater treatment and storage equipment.

The NMOCD approves the March 1, 2009 deadline. The engineering and design will be completed by April 2008 and sent to the agencies by June 2008. The construction will be completed by March 1, 2009.

6) Condition 24.E. Biohazard O&M Plan for WW Treatment Facility.

WRSW proposes to change the due date for the plan to March 1, 2009 to be consistent with the other requirements for the waste water treatment study and design.

The NMOCD approves the March 1, 2009 deadline.

Please contact me at (505) 476-3491 or carlj.chavez@state.nm.us if you have questions. Thank you for your cooperation in this matter.

Sincerely,

Carl J. Chávez
Environmental Engineer

CJC/cjc

xc: OCD District Office

Wayne Price

Western Refining

GALLUP REFINERY

WNR LISTED NYSE

February 22, 2008

Carl Chavez
Environmental Engineer
Oil Conservation Division
1220 S. Saint Francis Street
Santa Fe, NM 87505

Hope Monzeglio
Environmental Specialist
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, BLDG 1
Santa Fe, NM 87505

RE: Revised Schedules for OCD Discharge Permit GW-032

Dear Carl and Hope:

During our meeting on February 11th, Wayne Price mentioned that the Western Refining Gallup Refinery would be allowed more time for meeting conditions in the OCD Discharge permit and that the changed schedules could be adopted as a minor permit modification. Western presents a revised schedule. These schedule changes will allow Western sufficient time to evaluate cost effective alternatives and complete the permit requirements in a timely manner. For some requirements, Western respectfully requests additional time beyond the 120 days change provided in your February 19th email to Western . Western's reasons for the additional time are presented in the following sections.

Condition 9 Above Ground Tanks Impermeable Secondary Containment Requirement

As discussed in the meeting on February 11, as an alternative to lining secondary containments, Western proposes to implement an automatic tank gauging system in all of its large liquid storage tanks in the tank farm. We will install the gauges after final engineering design of the system is completed and the necessary capital funding from Corporate has been approved. The automatic tank gauges will be installed initially in our highest priority liquid storage tanks

I-40 Exit 39, Jamestown, New Mexico 87347 • 505 722-3833 • www.wnr.com
Mail: Route 3 Box 7, Gallup, New Mexico 87301

(tanks with the highest volumetric turnover rates) such as our Marketing tanks. Western will install radar assembly bells on two Marketing tanks in 2008; the console for monitoring the signals from these two gauges will be installed at a later time. Some tanks have the 6- or 8-inch diameter thief vents on their roofs so that the radar bells could be installed without needing to take the tanks out of service for installation. Western will conduct an inventory of each of our tank farm tanks to determine the tanks with the existing thief vents where the gauges can be installed. Radar gauges could be installed fairly quickly in the tanks with existing thief vents over the course of a few years. Tanks without existing thief vents will be modified when the tanks are taken out of service according to Western's API 653 inspection schedule. This would allow for as many as 7 or 8 tanks per year to be fitted with radar gauges. According to this schedule, each of the liquid storage tanks in the tank farm should be equipped with the automatic gauges within a fifteen year period beginning in 2008, many much sooner.

Western will line the containments of smaller sized storage tanks where the containments are currently diked clay. Most of the Gallup Refinery's smaller tanks, such as our additive tanks, are already equipped with concrete secondary containments.

As we discussed during the meeting, Western is installing secondary bottoms on tanks that fail inspection during the API 653 inspections. In the system that Western uses at the Gallup Refinery, a thick HDPE or FRP liner is laid over the steel tank bottom and fusion lined along the side of the tank. Three to five inches of sand is spread and compacted over the liner. Next, a leak detection network of perforated piping, arranged in a radial starfish pattern, is constructed on the sand. Additional sand from a freshwater beach is mounded on the leak detection piping and compacted into a convex form. A new steel floor is then installed on top of the sand.

Condition 16.B. Repair New API Separator

Western expects the work to repair the New API separator to be completed by March 15, 2008.

Condition 16. C. Activated Sludge Wastewater Treatment Study and Design *and* Condition 16. D Aeration Lagoons Replacement Engineering Design/Construction Plan and Schedule

Western is requesting a change on the deadline for submitting the activated sludge waste water treatment study, design and the aeration lagoons

replacement plan and schedule. Changing the deadline for these items to March 1, 2009 will provide Western with the time it will need to obtain results from piloting alternative wastewater treatment systems including a membrane bio-reactor (MBR) in conjunction with an activated sludge process and to evaluate other technologies and options. This change is based on the fact that the suggested period by the vendor for a thorough MBR pilot study is at least three months. The availability of the MBR pilot is pretty tight so it may take at least a month to acquire and several weeks to get it up and running (need to first get the activated sludge process running smoothly). Then it may take up to month for the pilot plant data to be analyzed by the consultant and presented to Western. Western will need time to evaluate the report and select the best alternative to implement. The activated sludge process or equivalent treatment system will be a large and complex project requiring significant engineering and design effort requiring time and funding. Hence, Western requests March 1, 2009 as the deadline for submittal of the treatment study and the engineering design of the tank based activated sludge treatment process or equivalent. This time schedule will also coincide with the Section 16.C.2. requirement for monthly grab samples at EP-1 through December 2008 allowing time for analysis of the December 2008 data.

As noted, Western is considering replacing the existing aeration lagoons with a tank based activated sludge treatment process or alternative equivalent systems. Western is also evaluating whether lining the lagoons is feasible. Hence the activated sludge treatment engineering design or alternatives will serve also as the aeration lagoons replacement engineering design/construction plan.

Western will also provide by March 1, 2009, the schedule for the implementation of the activated sludge or alternative treatment process and tentative closure of the aeration lagoons. Between now and December 31, 2008, Western will sample the sludge in the lagoons to determine the proper handling and disposition of the sediments that will be removed from the lagoons prior to their closure unless Western decides to line the aeration lagoons.

Condition 16. E. Evaporation Ponds - Engineering Design/Construction Plan to Single Line the Evaporation Pond EP-1 or Alternative Plan

The design of the activated sludge treatment or alternative process will have a bearing on the decision as to whether single lining or an alternative will be needed in EP-1. Hence Western proposes to move this deadline for a plan also to March 1, 2009.

Condition 24.A. and 24.B. Installation of Dual Separation Device and Emergency Holding Tank for Pilot Travel Center Waste Water

Western proposes to change the deadline for construction of the dual separation device and the emergency 48-hours storage to March 1, 2009. Western expects the engineering and design will be completed by April 2008. Requests for proposal will be sent by June 2008. The change will provide Western with the time to negotiate a new contract with the Pilot Travel Center (Pilot) to share the capital costs for the Pilot wastewater treatment and storage equipment.

Condition 24.E. Biohazard O&M Plan for WW Treatment Facility

Western proposes to change the due date for the biohazard O&M plan also to March 1, 2009 to be consistent with the other requirements for the waste water treatment study and design.

Attached is a schedule with Western's proposed deadlines as presented in this letter. The requested changes are shaded. Your consideration in approval of Western's proposed schedule and plan is greatly appreciated. If you have any questions regarding the plan presented in this letter, please feel free to contact Ed Riege at (505) 722-0217 or Jim Lieb at (505) 722-0227.

Sincerely,

Mark B. Turri
General Manager, Gallup Refinery

\Cc: Ed Riege
Don Riley
Jim Lieb
Ann Allen
Allen Hains
Ed Cote - HRC
Wayne Price - OCD
Dave Cobrain - NMED

Chavez, Carl J, EMNRD

From: Jim Lieb [Jim.Lieb@wnr.com]
Sent: Thursday, March 06, 2008 4:00 PM
To: Monzeglio, Hope, NMENV
Cc: Ed Riege; Cheryl Johnson; Chavez, Carl J, EMNRD
Subject: RE: GWM-2 at Western Refining - Gallup
Attachments: _0306144127_001.pdf; GWM-2WaterLevels.xls; _0306155807_001.pdf

Hope:

I am providing the report for GWM-2 now. We have measured water levels over the week. The initial sample date we found water in the well was on 2/18/08. I prepared a table summarizing the well measurements of GWM-2 to date. Steve Morris was able to obtain a sample for analysis on 2/28/08 which has been delivered to HEAL in Albuquerque for TPH and VOCs (8260B) analysis. Not enough water was present in the well to provide sufficient sample for additional analysis. I have not yet received the lab results but will forward them to you when I receive them. Steve measured the riser and his report including some additional well data is attached.

GWM-2 is at the far northwestern side of aeration lagoon adjacent to evap. pond 1. GWM-2 is located close to GWM-1. I attached a section of one of Kingsley's maps showing the location of GWM-2. This is from Figure 3 in the 2006 GW Report.

We will continue taking water level measurements until you tell us to stop.

If you need additional info or have a question please contact me at 505-722-0227 or reply email.

Regards,
Jim Lieb

From: Monzeglio, Hope, NMENV [mailto:hope.monzeglio@state.nm.us]
Sent: Thursday, February 28, 2008 8:34 AM
To: Jim Lieb; Price, Wayne, EMNRD; Chavez, Carl J, EMNRD; Ed Riege
Cc: Cobrain, Dave, NMENV; Frischkorn, Cheryl, NMENV
Subject: GWM-2

GWM-2 update

Western Gallup found ~5 inches or less of water in GWM-2. There is not enough water for a sample. NMED is having Western bail down the 5 inches of water as much as possible and will check the water levels daily. Jim will send an email update on March 7th. Jim is also going to inquire about the well cap being sealed prior to the water level measurement. Jim mentioned that they have had a lot of snow and rain fall this winter and rain over the weekend (Feb 23). Jim is also going to find out the length of the riser above ground.

Jim in your message you said GWM-2 was between Aeration lagoon (AL) 1 and AL-2. The map shows GWM-2 between AL-2 and Evaporation Pond 1. Please clarify the location for me. What day was the water level measured?

Thanks
Hope

Hope Monzeglio
Environmental Specialist
New Mexico Environment Department

Hazardous Waste Bureau
2905 Rodeo Park Drive East, BLDG 1
Santa Fe NM 87505
Phone: (505) 476-6045; Main No.: (505)-476-6000
Fax: (505)-476-6060
hope.monzeglio@state.nm.us

Websites:
New Mexico Environment Department
Hazardous Waste Bureau

Jim Lieb

From: Stephen Morris [smorris@trihydro.com]
Sent: Friday, February 29, 2008 9:12 AM
To: Jim Lieb
Subject: GWM-2 2-28-2008

Jim,

Alvin and I checked and sampled GWM-2 on Feb. 28, 2008:

Depth to water - 18.55 feet.

Sampled well using new plastic bailer for 8260 and 8015 GRO/DRO at 1430 hrs.

There was not enough water to sample well for General Chemistry.

Depth to water after sampling - 18.78 feet.

Total well depth measured - 18.98 feet.

Top of casing measured to concrete well pad (stick up) - 2.646 feet.

Top of casing measured to ground at well (stick up) - 2.812 feet.

Thanks, Steve

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other: _____

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

Client: Western Refining - Gallup
Address: Rt 3 Box 7 Gallup NM 87301
Phone #: 505 722 9833
Fax #: 505 722 0210

Project Name: GWM-2 Water Sample 22808
Project #:
Project Manager: Jim Lieb
Sampler: Stan Morris
Sample Temperature:

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
22808	1130	H2O	GWM-2	6				

ANALYSIS REQUEST

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)						Air Bubbles or Headspace (Y or N)
		X								X							

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
12/19/08	3:52PM		
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
			12/19/08

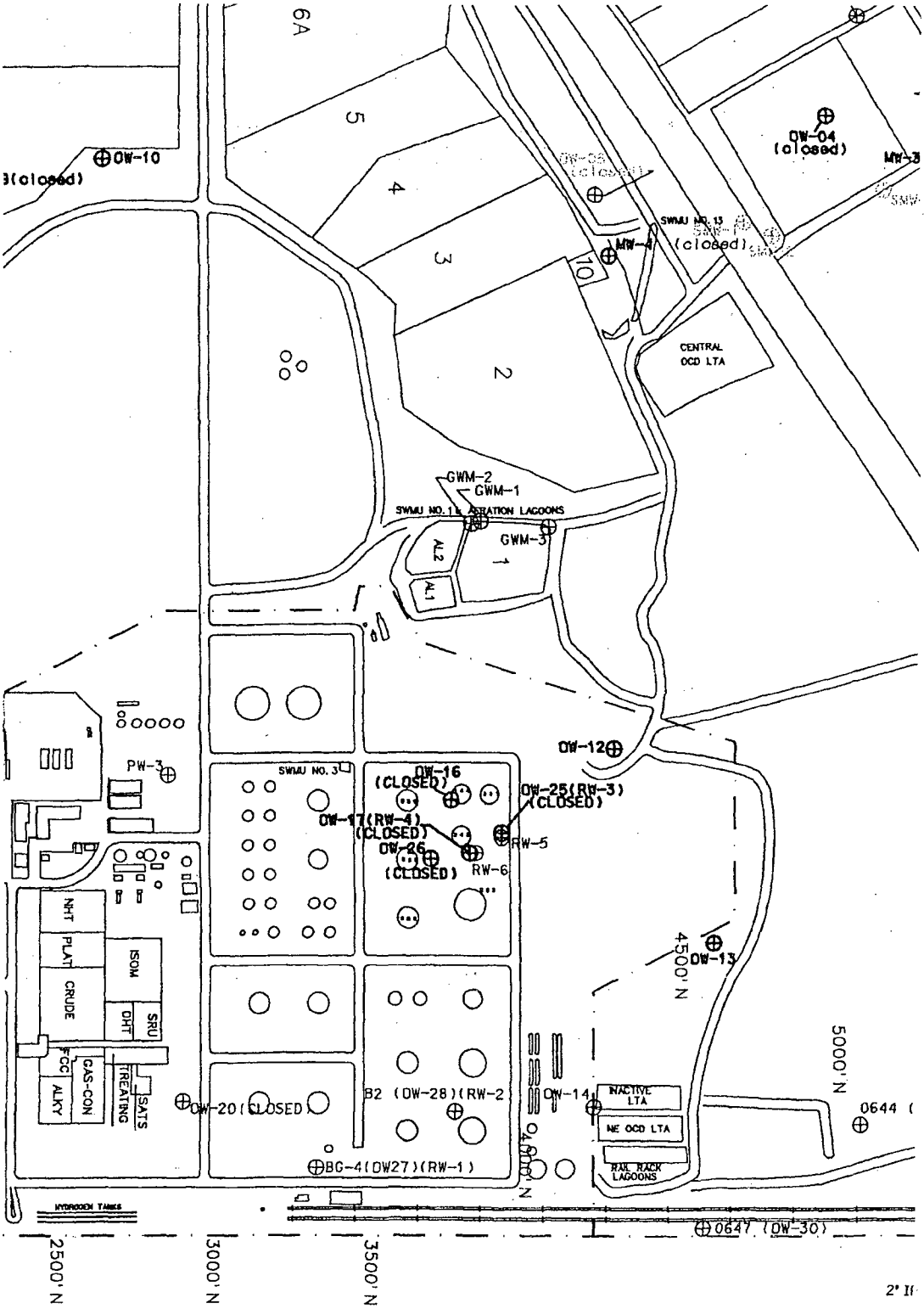
Remarks:

GWM-2 Inspections
Western Refining - Gallup Refinery

Date	Time	Depth to Water (feet)	Sampler
2/18/2008	2:12 PM	18.38	CJ
2/28/2008*	2:30 PM	18.55	SM
3/4/2008	1:00 PM	18.68	CJ
3/5/2008	9:00 AM	18.68	CJ
3/6/2008	8:45 AM	18.68	CJ

* The well water was sampled and delievered to HEAL for TPH and VOCs analysis
The well depth is before the sample was taken.

Note: Depth to well bottom = 18.98 feet measured 2-28-08 by Steve Morris



COLOR C

NOTE: CLOSED = ABANDONED

ure 3

Chavez, Carl J, EMNRD

From: Jim Lieb [Jim.Lieb@wnr.com]
Sent: Thursday, March 06, 2008 4:11 PM
To: Monzeglio, Hope, NMENV
Cc: Ed Riege; Chavez, Carl J, EMNRD
Subject: FW: Railroad Rack Lagoon Fan Out Area Update Memo
Attachments: 200803_Fan_Out_Memo.pdf

Hope:

Update on the RR Rack Lagoon fan Out area investigation as per your request.

Jim Lieb
Environmental Engineer
Western Refining, Inc.
Gallup Refinery
I-40, Exit 39
Jamestown, NM 87347
(505) 722-0227
fax (505) 722-0210
jim.lieb@wnr.com

From: Regina Allen [mailto:rmallen@trihydro.com]
Sent: Wednesday, March 05, 2008 5:01 PM
To: Jim Lieb
Cc: Grant Price
Subject: Railroad Rack Lagoon Fan Out Area Update Memo

Hi Jim,

I have attached the Memo that updates the progress on the Railroad Rack Lagoon Fan-out Area project.

Let me know if you have any questions or concerns.

Regina Allen
Environmental Scientist

Trihydro CORPORATION

1252 Commerce Drive
Laramie, Wyoming 82070
307/745-7474 (phone)
307/745-7729 (fax)
rmallen@trihydro.com

www.trihydro.com

Trihydro CORPORATION

memorandum

To: Western Refining, LLC
From: Trihydro Corporation
CC:
Date: March 5, 2008
Re: Railroad Rack Lagoon Fan-out Area

The purpose of this memo is to provide a progress update for the Railroad Rack Lagoon Fan-out Area. Trihydro personnel were onsite December 17 through December 19, 2007 to collect additional samples as described in the letter titled "Change Order – Railroad Rack Lagoon Fan-out Area Soil Sampling and Excavation" dated November 13, 2007. In this letter, Trihydro had proposed to collect additional samples to delineate the extent of diesel range organics (DRO) soil contamination.

Horizontal Delineation

Soil samples were collected extending outward in a radial pattern 20, 40 and 60 feet away from existing boreholes K, G, I and M at depths of 3, 8, and 13 feet below ground surface (ft-bgs). The proposed step-out distances of 20, 40, and 60 feet are designated as 1, 2, and 3, respectively. The 20 foot step out locations (M-1, I-1, G-1, and K-1) are illustrated on Figure 1. Boreholes M-1, I-1, G-1, and K-1 were installed on December 17, 2007 using a CME 75 drill rig. A 6 ¾" hollow stem auger was advanced to 1 foot above the discrete sampling depth. A split-spoon sampling device was then advanced from 1 foot above to 1 foot below the discrete sampling depth. Samples were taken directly from the split spoon sampling device. Samples were collected at 3, 8, and 13 ft bgs and submitted to Hall Environmental for 24 hour analysis on the same day. No visual contamination or odor was noted at any of these boreholes. Borehole logs were recorded for each location and a photograph was taken of each split spoon. Field documentation will be provided as needed as part of Trihydro's Railroad Rack Lagoon Fan-out Area Final Report.

On December 18th, while waiting for laboratory results of the December 17th sampling, boreholes K-2, K-3, G-2, G-3, I-2, and M-2 were installed and sampled in the same manner described above. The remaining proposed boreholes, M-3 and I-3, were installed on December 19, 2007.

Vertical Delineation

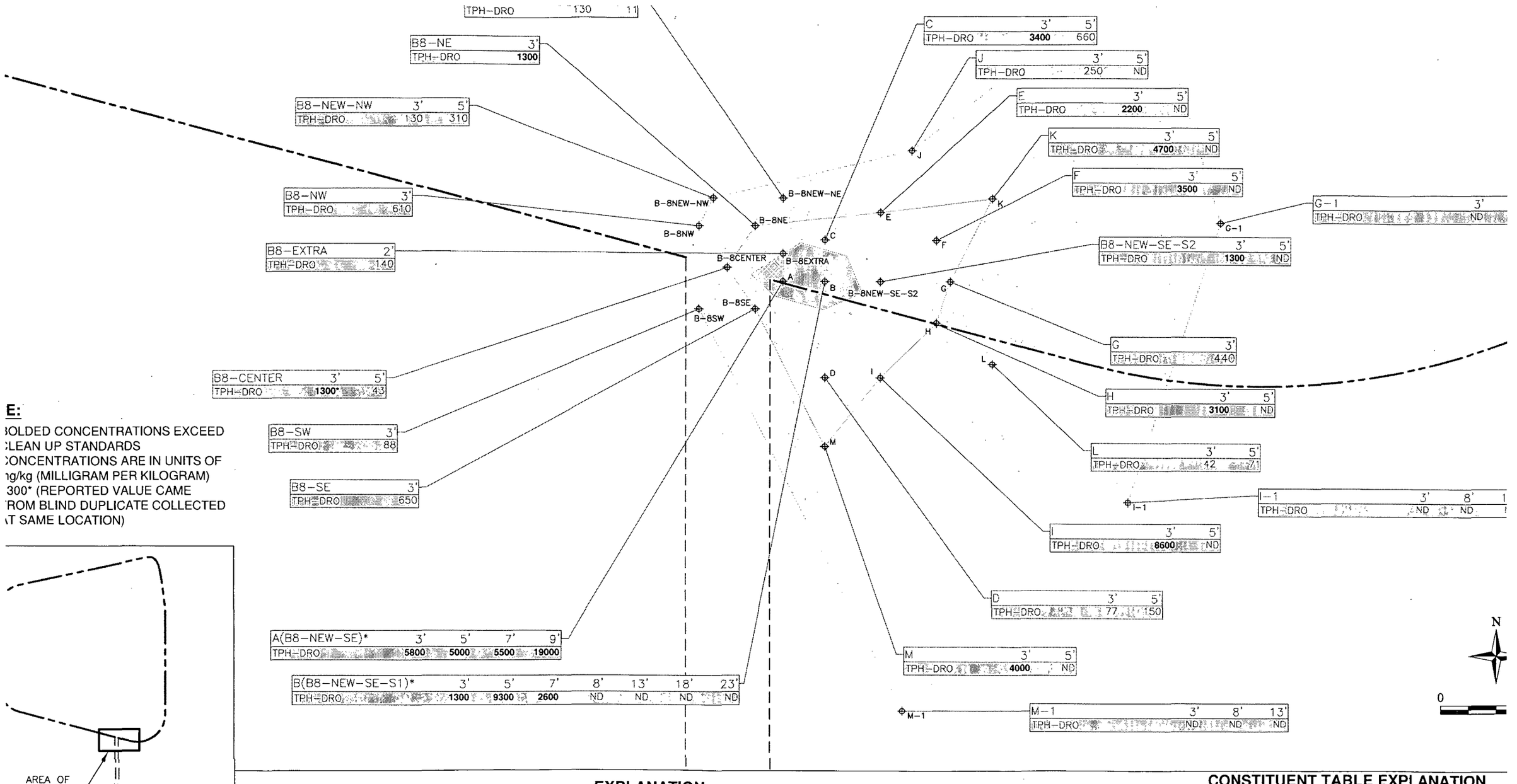
Existing borehole B (B8-NEW-SE-S1) was drilled to a depth of 23 ft-bgs to vertically delineate the extent of DRO contamination. This borehole was selected for vertical delineation because a previous sampling event showed that this borehole had a DRO exceedance of 2,600 mg/kg at 7 ft-bgs. Samples were collected on December 17 at 8, 13, 18, and 23 ft-bgs using the same methods described above. These samples were submitted to Hall Environmental for 24 hour DRO analysis on the same day that they were collected.

Results

The results for samples collected from new boreholes M-1, I-1, G-1, and K-1 at depths of 3, 8, and 13 and B ft-bgs and existing borehole B (B8-NEW-SE-S1) at 8, 13, 18, and 23 ft-bgs were all non-detect for DRO. Trihydro believes that this new data effectively delineates both the horizontal and vertical extent of DRO contamination associated with test pit B-8. In a meeting on December 20 between Gallup and Trihydro personnel, it was agreed that no further analysis of samples collected during the week of December 17 would be required since the delineation objectives had been met.

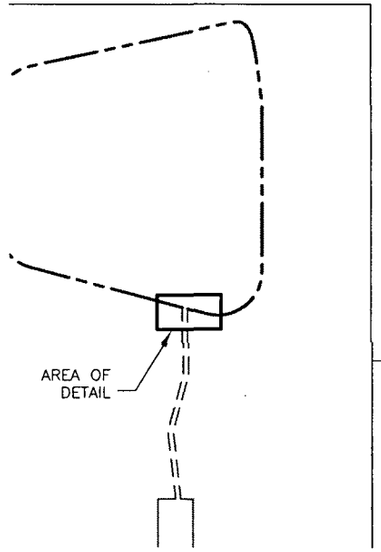
Path Forward:

Figure 1 has been prepared to approximate the area and volume of soil that exceeds clean-up standards. Because the field measurements were collected with a measuring tape, the areas and volumes calculated should be considered approximations. At the direction of the refinery, a final report including a detailed overview of the field activities completed at the Fan-out Area is being drafted.



E:

OLDED CONCENTRATIONS EXCEED
LEAN UP STANDARDS
ONCENTRATIONS ARE IN UNITS OF
ng/kg (MILLIGRAM PER KILOGRAM)
300* (REPORTED VALUE CAME
ROM BLIND DUPLICATE COLLECTED
T SAME LOCATION)



EXPLANATION

OUTFLOW DITCH

FAN-OUT AREA

RAILROAD RACK LAGOON

PREVIOUSLY EXCAVATED AREA

M-1 SOIL SAMPLE LOCATION AND DESIGNATION

ND NON DETECT

* A(B8-NEW-SE) = MAY EVENT(AUGUST EVENT)
B(B8-NEW-SE-S1) = MAY EVENT(AUGUST EVENT)

CONSTITUENT TABLE EXPLANATION

WELL DESIGNATION → M-1 3' 8' 13' ← SAMPLI
TOTAL PETROLEUM HYDROCARBONS AS DIESEL RANGE ORGANICS → TPH-DRO ND ND ND ← CONCEN IN MAXI

FIGURE 1
RAILROAD RACK LAGOO OVERFLOW DITCH AND FAN-OU

	ND(5.0)	ND(5.0)	mg/L	ND(50.0)	ND(50.0)	ND(50.0)	ND(1000)	ND(50.0)	ND(50.0)	ND(50.0)	ND(50.0)	ND(50.0)	
	0.31	5.5	mg/L	ND(5.0)	ND(5.0)	ND(5.0)	ND(100)	ND(5.0)	90	ND(5.0)	ND(5.0)	ND(5.0)	
	ND(0.0002)	ND(0.0002)	mg/L	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed	
A Metals				Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed	
arium	0.15	1.1	mg/L										
			µg/L	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed	
anthrene	42.0	ND	µg/L										
				All ND	All ND	All ND		All ND	All ND	All ND	All ND	All ND	
nzene	ND	240	µg/L				ND(0.25)						
benzene	4.5	190.0	µg/L				ND(0.25)						
ITBE	33.0	210.0	µg/L				ND(0.25)						
ethylbenzene	ND(1.0)	170.0	µg/L				ND(0.25)						
naphthalene	110.0	ND(40.0)	µg/L				13.0						
etone	12.0	ND(100)	µg/L				ND(3.8)						
loroethane	10.0	190.0	µg/L				ND(0.50)						
loroethene	1.3	20.0	µg/L				ND(0.25)						
ylbenzene	7.0	13.0	µg/L				0.44						
lbenzene	1.6	ND(10.0)	µg/L				0.49						
ylbenzene	1.3	31.0	µg/L				ND(0.25)						
tylbenzene	1.9	ND(10.0)	µg/L				0.34						
chloroethane	2.1	50.0	µg/L				ND(0.25)						
chloride	ND(1.0)	30.0	µg/L				ND(0.25)						
es, Total	ND(1.5)	20.0	µg/L				ND(0.50)						

	ND(50.0)	ND(50.0)	ND(50.0)	ND(50.0)	ND(50.0)	ND(50.0)	ND(50.0)	ND(50.0)	120.0	ND(50.0)	14000.0	
	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	NI
	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not ana
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ene	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	All ND	A
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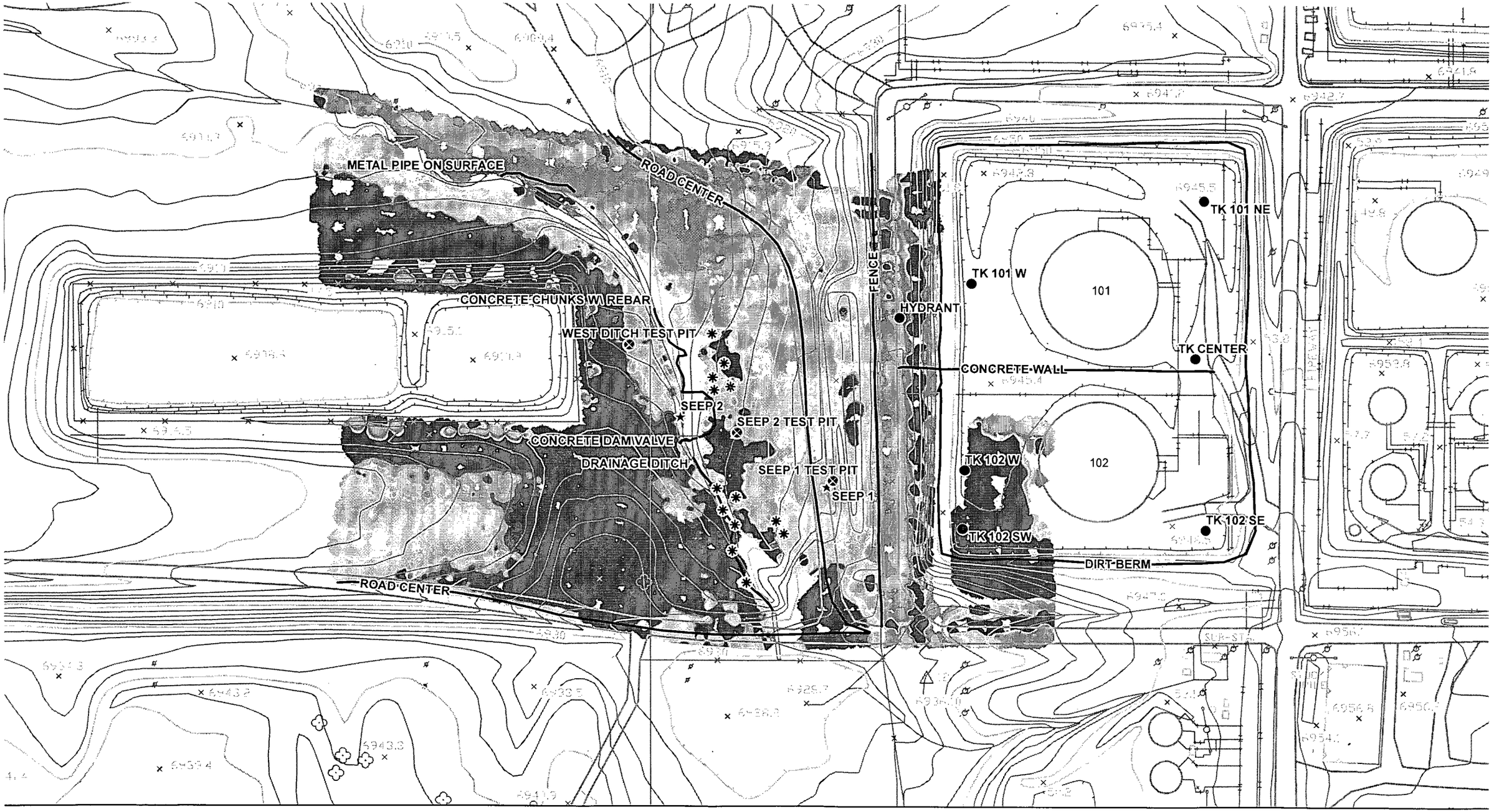

EXPLANATION

AMPLE LOCATIONS — BERMS, WALLS, PIPING

SOIL SAMPLE — ROAD EDGE

N

FIGURE 1

EM31 - MK2 DATA TANKS 101

Chavez, Carl J, EMNRD

From: Jim Lieb [Jim.Lieb@wnr.com]
Sent: Thursday, March 06, 2008 4:10 PM
To: Monzeglio, Hope, NMENV
Cc: Ed Riege; Chavez, Carl J, EMNRD
Subject: FW: Tank 101/102 Progress Memo
Attachments: 200803_Memo_Tank101_102_Progress.pdf

Hope:

Update on the Tank 101 and 102 investigation as per your request.

Jim Lieb
Environmental Engineer
Western Refining, Inc.
Gallup Refinery
I-40, Exit 39
Jamestown, NM 87347
(505) 722-0227
fax (505) 722-0210
jim.lieb@wnr.com

From: Regina Allen [mailto:rmallen@trihydro.com]
Sent: Wednesday, March 05, 2008 5:02 PM
To: Jim Lieb
Cc: Grant Price
Subject: Tank 101/102 Progress Memo

Hi Jim,

I have attached the Memo updating the progress for the Tank 101/102 project. Let me know if you have any questions or concerns.

Regina Allen
Environmental Scientist

Trihydro
CORPORATION

1252 Commerce Drive
Laramie, Wyoming 82070
307/745-7474 (phone)
307/745-7729 (fax)
rmallen@trihydro.com
www.trihydro.com

Trihydro CORPORATION

memorandum

To: Western Refining LLC
From: Trihydro Corporation
CC:
Date: March 5, 2008
Re: Tank 101 and 102 Soil Investigation

This memo has been prepared to provide a brief summary of field activities associated with the Tank 101 and 102 Soil Investigation. The investigation of this area was conducted in response to a request by the Giant Refining Company, Gallup Refinery (Gallup). Gallup requested that Trihydro identify the source of two water seeps located down-gradient of Tank 102 and to delineate the soil contamination associated with these seeps. The New Mexico Environmental Department (NMED) was verbally contacted by Gallup personnel as part of the project preparation activities and is aware of the seeps/soil contamination near Tanks 101 and 102. A work plan, in letter format, was submitted to NMED on August 16, 2007 (Work Plan).

Field Activities

Trihydro personnel were on-site during the week of August 20, 2007. Field activities associated with the Tank 101 and 102 Soil Investigation consisted of a site walk-through, an EM31-MK2 survey, surface water sampling, and soil sampling. These activities are described in detail below.

Site Walk-Through

A site walk-through was conducted with Gallup personnel prior to commencing the EM31-MK2 survey. During this walk through, the seeps were located and a plan was developed to conduct the EM31-MK2 survey. Trihydro personnel conducted a second site walk-through to identify any surface contamination. Some residuum was observed in and along the drainage ditch. These locations were logged with a global positioning system (GPS) and are included on Figure 1. Other features that had the potential to affect the results of the EM31-MK2 survey were also logged (e.g. test pits, rebar, fence, roadways, and tank berms).

EM31-MK2 Survey

An electromagnetic survey was performed on an area west of Tanks 101 and 102 which encompassed both seeps. The area was approximately 440 feet (north-south) by 625 feet (east-west) and is illustrated on Figure 1. The survey area was divided into a bi-directional grid with a grid spacing of approximately 15 feet. The grid was marked with 3 foot wooden stakes. The boundaries of the survey area and the boundary/grid line intersects were staked prior to conducting the survey.

The survey was performed by Trihydro personnel with a Geonics EM31-MK2 ground conductivity meter. Continuous conductivity measurements were recorded in conjunction with GPS navigation. The EM31-MK2 ground conductivity meter creates an electromagnetic induction field into the ground and measures two components of the return electromagnetic field which vary with changes in geology or other subsurface features. The two components are a quadrature-phase component and an in-phase component. The quadrature-phase component is a direct conductivity reading of subsurface geology measured in millisiemens per meter (mS/m). Since moisture content can affect conductivity of the subsurface geology, this phase may be useful in delineating soil contamination associated with the seeps. The in-phase component is a measurement of the magnetic susceptibility of subsurface features and is a good indicator of high-conductivity features such as metal objects. The in-phase is measured as the ratio of the secondary to primary magnetic field in parts per thousand (ppt). The effective depth of response is up to 18 ft bgs. Calibration of the EM31-MK2 ground conductivity meter was performed per the manufacturer's instruction.

The EM31-MK2 data was plotted and mapped using Geosoft's OasisMontaj software. A color grid was generated using the "minimum curvature" algorithm within the program. The color grid was overlain on an existing contour map of the refinery to assist in analyzing the image. This is illustrated on Figure 1.

Surface Water Sampling

Surface water samples collected from Seep 1 and Seep 2 were analyzed for Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), Diesel Range Organics (DRO), Gasoline Range Organics (GRO), Motor Oil Range Organics (MRO), and Resource Conservation and Recovery Act (RCRA) metals. Surface water samples were not collected from the West Ditch test pit because surface water was not present. Results are summarized in Table 1 and discussed below.

Soil Sampling

Three test pits were installed directly up-gradient of Tanks 101 and 102 inside the tank berm, three test pits were installed directly down-gradient of Tanks 101 and 102 inside the tank berm, one test pit was installed at Seep 1 (Seep 1 Test Pit), one test pit was installed in between Seep 1 and Seep 2 (Seep 2 Test Pit), and one test pit was installed west of the drainage ditch located directly west of Seep 2 (West Ditch Test Pit). The test pit sampling and logging procedures were conducted in accordance with the Work Plan and locations are shown on Figure 1.

The three test pits installed directly up-gradient of Tanks 101 and 102 were installed at the request of NMED to assist in determining if the source of the seeps was a result of these up-gradient tanks. The test pits are identified as TK 102_SE, TK Center, and TK 101_NE on Figure 1. These test pits were sampled at 2 and 8 feet below ground surface (ft bgs), 2 and 6 ft bgs, and 2 and 8 ft bgs, respectively and analyzed for DRO, MRO, GRO, and VOCs. The samples were also field-screened using a photo-ionization detector (PID) as outlined in the Work Plan. The results were logged on field forms that will be included in the final report. No elevated PID readings were identified. As shown in Table 1, analytical results from each discreet interval were reported as non-detect.

The three test pits installed directly down-gradient of Tanks 101 and 102 were installed to determine any potential connection between the seeps and contamination within the tank berms. These are identified as TK 101_W, TK 102_W, and Tank 102_SW on Figure 1. These test pits were sampled at 2 and 5.5 ft bgs, 2 and 6 ft bgs, and 2 and 6 ft bgs, respectively and analyzed for DRO, MRO, GRO, VOCs. The samples were also field-screened using a PID. The results were logged on field forms that will be included in the final report. As with the previous set of test pits, no elevated PID readings were identified. DRO and MRO were detected in TK 102_W and TK 102_SW as shown on Table 1.

Seep 1, Seep 2, and West Ditch test pits were excavated to a water-bearing sand lens. Seep 1 test pit was located against an embankment and was excavated to a total depth of 3 ft bgs. During the excavation a black seam was encountered. Soil samples were collected from above and below the black seam, directly from the black seam, and from the water-bearing sand lens. The water-bearing sand lens is located at approximately 1.5 to 2 ft bgs. Seep 2 test pit was excavated to a depth of 7 ft bgs and sampled at 2 and 6 ft bgs. A water-bearing sand lens was encountered at 7 ft bgs. The test pit became unstable at 7 ft bgs due to the high moisture content making it impossible to collect a sample below the water-bearing sand lens. The West Ditch test pit was excavated to a depth of 9 ft bgs and sampled at 4, 8, and 9 ft bgs. A water-bearing sand lens was encountered at 8 ft bgs. As with the Seep 1 test pit, this test pit became unstable at this depth due to the high moisture content; therefore collecting a sample deeper than 9 ft-bgs was not possible.

Photo Documentation

Field work was documented and recorded in Trihydro personnel's field log book in accordance with the Work Plan. Photos were taken at the test pits, residuum locations, and seeps. These photos will be included as part of the final report.

Analytical Data

Samples were shipped to Hall Environmental located in Albuquerque, New Mexico for analysis. The surface water samples collected from the seeps were analyzed for VOCs, SVOCs, DRO, GRO, MRO, Mercury, and RCRA metals. The soil samples collected from the test pits were analyzed for DRO, GRO, MRO, and VOCs. The analytical detections reported for soil and surface water are summarized in Table 1. A detailed summary of the analytical data will be presented in the final report.

Path Forward

Several meetings were held between Gallup and Trihydro personnel to evaluate the data collected during the field visit and to determine the most efficient cost effective path forward. Based on the field data already collected and recent discussions with refinery personnel, the source of the seeps may be the firewater line that runs parallel to the fence next to the tank berms or a source from within the tank berm. The following activities will be implemented to assist in determining the source of the seeps.

- During the post-field work meetings, Gallup personnel indicated a firewater line runs parallel and just to the west of the fence that is shown in Figure 1. To determine if firewater is the water source for the seeps Trihydro personnel will work in conjunction with Gallup personnel to conduct conductivity tests on the firewater line water and the water from Tank 101/102 water draws. According to Gallup personnel, the source for the firewater line is groundwater. Therefore, the conductivity between the two potential sources should be different and, in theory, the conductivity of one of these suspected sources would be similar to the conductivity of the water in the seep.
- Trihydro personnel will work with Gallup personnel to obtain the firewater line specifications. Specifications include drawings or schematics to determine the depth of the firewater line, how old the line may be, and when the line was re-pressurized. If the specifications allow, environmentally safe dye will be dispersed into the system and the seep will be examined for the presence of dye.
- Trihydro personnel will work with Gallup to excavate a test pit between Seep 1 and the tank berm to see if the "black seam" and the water bearing sand lens stretches up-gradient (i.e. to the east) of Seep 1. The intent of this task is to determine if the sand lens and/or black seem can be correlated to the subsurface beneath the Tank 102 berm.
- Prepare an excavation plan to remove contaminated soil from within the Tank 102 bermed area. A plan will be developed in consultation with NMED to determine the best path forward for removing the soil within the Tank 102 bermed area.

Chavez, Carl J, EMNRD

From: Jim Lieb [Jim.Lieb@wnr.com]
Sent: Friday, March 28, 2008 10:00 AM
To: Chavez, Carl J, EMNRD; Powell, Brandon, EMNRD; Monzeglio, Hope, NMENV
Cc: Mark Turri; Ed Riege; Joel Quinones; James Geer; Mike L. Facker; Bryon Holbrook; Ann Allen
Subject: C-141 Form for the Tank 577 ULSD Release at Western Refining Gallup Refinery
Attachments: Tank577releaseULSD 3-19-08.pdf

Carl, Brandon, and Hope
I prepared the OCD C-141 form for the release of ultra-low sulfur diesel (ULSD) from the Tank 577 that occurred at Western Refining's Gallup Refinery on March 19, 2008. The release resulted from overfilling of the tank. Approximately 300 barrels of fuel oil was released onto the ground around the tank. A vacuum truck was dispatched to the spill soon after it occurred. The vac truck was able to recover 274 barrels of the diesel. Diesel impacted soil has been removed and placed on plastic liner. We expect to send the soil off site probably to Envirotech near Farmington for landfarming.

All of the release was contained within the diking surrounding Tank 577.

If you have any questions, please contact me or Bryon Holbrook (505) 722-0258.
Regards,
Jim Lieb

Environmental Engineer
Western Refining, Inc.
Gallup Refinery
I-40, Exit 39
Jamestown, NM 87347
(505) 722-0227
fax (505) 722-0210
jim.lieb@wnr.com

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Western Refining: Gallup Refinery	Contact: Bryon Holbrook
Address: I-40, Exit 39, Jamestown NM 87347	Telephone No.: 505-722-0258
Facility Name: Gallup Refinery	Facility Type: Oil refinery

Surface Owner: Giant Industries, Inc.	Mineral Owner: Giant Industries, Inc.	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	23 & 33	15N	15W					McKinley

Latitude 35°29'30" **Longitude** -108°24'40"

NATURE OF RELEASE

Type of Release: Ultra Low Sulfur Diesel (ULSD) Fuel	Volume of Release: 200 to 300 barrels (estimate)	Volume Recovered: 274 barrels (estimate)
Source of Release: Tank 577	Date and Hour of Occurrence: 3/19/08 @ 1800hours	Date and Hour of Discovery: 3/19/08 @ 1830 hours
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? OCD - Carl Chavez NMED – Hope Monzeglio	
By Whom? Jim Lieb	Date and Hour 3/20/08 at 0805 hours	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Tank overfill. A pumper technician was transferring ULSD to Tank 577. The tank mechanical level gauge stuck.
A vacuum truck was dispatched soon after the spill occurred to vacuum up the spilled diesel. The vacuum truck was able to recover 274 barrels of the spilled diesel.

Describe Area Affected and Cleanup Action Taken.* The release is restricted to the diked area surrounding Tank 577. None of the release made its way off of Western property. Western used its vacuum truck to recover approximately 274 barrels of diesel. We estimate that approximately 26 barrels of diesel was released into the soil. We will take core samples to determine the penetration of the diesel into the soil. The impacted soil was removed and placed on plastic liner. We will sample the excavated area to ensure all the diesel impacted soil has been removed. Upon OCD and NMED approval, the excavation will be back-filled with fresh clay after confirmatory sampling is conducted. Impacted soils will be placed in roll-off boxes and taken off-site for land farming at an OCD approved facility (likely Envirotech in Farmington).

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: Mark B. Turri	OIL CONSERVATION DIVISION	
Printed Name: Mark B. Turri	Approved by District Supervisor:	
Title: General Manager	Approval Date:	Expiration Date:
E-mail Address: mark.turri@wnr.com	Conditions of Approval:	Attached ☐
Date: March 26, 2008 Phone: (505) 722-0260		

Attach Additional Sheets If Necessary

Chavez, Carl J, EMNRD

From: Jim Lieb [Jim.Lieb@wnr.com]
Sent: Friday, March 28, 2008 9:49 AM
To: Chavez, Carl J, EMNRD; Powell, Brandon, EMNRD; Monzeglio, Hope, NMENV
Cc: Mark Turri; Ed Riege; Joel Quinones; James Geer; Mike L. Facker; Bryon Holbrook; Ann Allen
Subject: C-141 Form for the Tank 706 Release at Western Refining Gallup Refinery
Attachments: Tank706 release3-19-08.pdf

Carl, Brandon, and Hope
I prepared the OCD C-141 form for the release of fuel oil from the Tank 706 that occurred at Western Refining's Gallup Refinery on March 19, 2008. The release resulted from a pump seal failure at the transfer pump located at Tank 706 that is used to transfer fuel oil from Tank 706 to the fuel oil loading rack. Approximately 5 to 6 barrels of fuel oil was released onto the ground near the pump. A vacuum truck was dispatched to the spill soon after it occurred. The vac truck was able to recover 4 barrels of fuel oil. Oil impacted soil has been removed and placed on plastic liner. We expect to send the soil off site probably to Envirotech near Farmington.

All of the release was contained within the diking surrounding the fuel oil tank farm tanks.

If you have any questions, please contact me or Bryon Holbrook (505) 722-0258.
Regards,
Jim Lieb

Environmental Engineer
Western Refining, Inc.
Gallup Refinery
I-40, Exit 39
Jamestown, NM 87347
(505) 722-0227
fax (505) 722-0210
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State of New Mexico
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Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Western Refining: Gallup Refinery	Contact: Bryon Holbrook
Address: I-40, Exit 39, Jamestown NM 87347	Telephone No.: 505-722-0258
Facility Name: Gallup Refinery	Facility Type: Oil refinery

Surface Owner: Giant Industries, Inc.	Mineral Owner: Giant Industries, Inc.	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	23 & 33	15N	15W					McKinley

Latitude 35°29'30" **Longitude** -108°24'40"

NATURE OF RELEASE

Type of Release: Fuel Oil	Volume of Release: 5 to 6 barrels (estimate)	Volume Recovered: 4 barrels
Source of Release: Tank 706	Date and Hour of Occurrence: 3/19/08 @ 1250hours (estimate)	Date and Hour of Discovery: 3/19/08 @ 1300 hours
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? OCD - Carl Chavez NMED – Hope Monzeglio	
By Whom? Jim Lieb	Date and Hour 3/20/08 at 0805 hours	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
A pump seal failed while fuel oil was being pumped from Tank 706 to the loading rack. A pumper technician saw the leakage and immediately turned off the pump. The spill is contained within the dike surrounding the hot oil tanks.
A vacuum truck was dispatched soon after the spill occurred to vacuum up the spilled fuel oil. The vacuum truck was able to recover approximately 4 barrels of the spilled fuel oil.

Describe Area Affected and Cleanup Action Taken.* The release is in the area around the Tank 706 pump. None of the release made its way off of Western property. A Veolia vacuum truck was able to recover approximately 4 barrels of fuel oil. We estimate that approximately 1-2 barrels of fuel oil was released into the soil. We will take core samples to determine the penetration of the fuel oil into the soil. The impacted soil has been removed and placed directly into roll-off boxes or on plastic liner until additional boxes can be obtained. We will sample the excavated area to ensure that all the oil impacted soil has been removed. Upon OCD and NMED approval, the excavation will be back-filled with fresh clay after confirmatory sampling is conducted. Impacted soils will be taken off-site for land farming at an OCD approved facility (likely Envirotech in Farmington).

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: Mark B. Turri	OIL CONSERVATION DIVISION	
Printed Name: Mark B. Turri	Approved by District Supervisor:	
Title: General Manager	Approval Date:	Expiration Date:
E-mail Address: mark.turri@wnr.com	Conditions of Approval:	Attached ☐
Date: March 26, 2008 Phone: (505) 722-0202		

Attach Additional Sheets If Necessary

Chavez, Carl J, EMNRD

From: Monzeglio, Hope, NMENV
Sent: Monday, March 31, 2008 10:49 AM
To: Ed Riege
Cc: Kieling, John, NMENV; Cobrain, Dave, NMENV; Frischkorn, Cheryl, NMENV; Price, Wayne, EMNRD; Chavez, Carl J, EMNRD; Jim Lieb; Martinez, Cynthia, NMENV
Subject: Annual GW Monitoring Plan
Attachments: GRCC 07-004 Approval Annual GW Mon Plan 4_1_08 .pdf

Ed,

The hard copy will go out in the mail tomorrow.

Hope

Hope Monzeglio
Environmental Specialist
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, BLDG 1
Santa Fe NM 87505
Phone: (505) 476-6045; Main No.: (505)-476-6000
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hope.monzeglio@state.nm.us

Websites:
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Hazardous Waste Bureau

NEW MEXICO
ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

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BILL RICHARDSON
Governor

DIANE DENISH
Lieutenant Governor

RON CURRY
Secretary

JON GOLDSTEIN
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

April 1, 2008

Mr. Ed Riege
Environmental Superintendent
Western Refining Company Gallup Refinery
Route 3, Box 7
Gallup, New Mexico 87301

RE: APPROVAL
REVISED OIL CONSERVATION DIVISION (OCD) 2006 ANNUAL GROUNDWATER REPORT (AND OCD ADDENDUM)
WESTERN REFINING COMPANY, GALLUP REFINERY
HWB-GRCC-07-004
EPA ID # NMD000333211

Dear Mr. Riege:

The New Mexico Environment Department (NMED) has completed its review of the *Revised Oil Conservation Division 2006 Annual Groundwater Report (and OCD Addendum)* (Report), dated March 13, 2008, submitted on behalf of Western Refining Company, Gallup Refinery (Permittee). This Report was submitted in response to NMED's Notice of Disapproval dated January 16, 2008. NMED hereby approves this Report. For future annual groundwater monitoring reports, the Permittee must provide explanations for all deviations from the sampling work plan.

If you have questions regarding this approval letter, please contact Hope Monzeglio of my staff at 505-476-6045.

Sincerely,

for

John E. Kieling
Program Manager
Permits Management Program
Hazardous Waste Bureau

cc: D. Cobrain NMED HWB
C. Frishkorn, NMED HWB
H. Monzeglio NMED HWB
W. Price, OCD
C. Chavez, OCD
J. Lieb, Western
File: Reading File and GRCC 2008 File
HWB-GRCC-07-004