



NEW MEXICO ENTERED  
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](http://www.nmenv.state.nm.us)

SUSANA MARTINEZ  
Governor

JOHN A. SANCHEZ  
Lieutenant Governor

DAVE MARTIN  
Secretary

BUTCH TONGATE  
Deputy Secretary

JAMES H. DAVIS, Ph.D.  
Director  
Resource Protection Division

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

December 12, 2012

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

**RE: APPROVAL WITH MODIFICATIONS  
ANNUAL GROUNDWATER MONITORING REPORT:  
GALLUP REFINERY 2010, REVISION 1  
WESTERN REFINING COMPANY, SOUTHWEST, INC., GALLUP REFINERY  
HWB-WRG-11-004  
EPA ID # NMD000333211**

Dear Mr. Riege:

The New Mexico Environment Department (NMED) has completed its review of the *Annual Groundwater Monitoring Report: Gallup Refinery – 2010, Revision 1* (Report), dated July 12, 2012, submitted on behalf of Western Refining Company, Southwest Inc., Gallup Refinery (Permittee). NMED has reviewed the Report and hereby issues this Approval with the following modifications. However, the Permittee is not required to submit another revision of this Report, but must address and incorporate changes from the following comments in the 2011 Annual Groundwater Monitoring Report and all future Annual Groundwater Monitoring Reports.

Ed Riege  
December 12, 2012  
Page 2 of 7

### **Comment 1**

In NMED's Comment 6 of the April 11, 2012 Notice of Disapproval (NOD), the Permittee was required to correct the incorrect page numbers in the Table of Contents. In the Table of Contents and Section 8.0 (Data Tables), the page numbers for the data tables from pages 82 through 118 were not corrected. In future submittals, the Permittee must ensure the accuracy of all page numbers listed in all table of contents of work plans and reports.

### **Comment 2**

In the Executive Summary, *East Side Ground Water*, page 3, paragraph 1, the Permittee states, "[i]n OW-13 trace levels of MTBE was detected in the first quarter of 2010 ranging from 2.3E-03 mg/L first quarter to 4.8E-03 mg/L in the fourth quarter of 2010 which is below the EPA RSL of 0.012 mg/L." The Permittee reported an incorrect result for the fourth quarter. In the laboratory analytical data and Table 8.5 (OW-13, OW-14, OW-29, OW-30: BTEX Analytical Result Summary), page 78, the correct result is 3.8E-03 mg/L. In addition, the Permittee did not discuss the detected results in Section 6.2 (Wells with Constituent Levels below Standards). The Permittee continues to show inconsistency with its discussion of data results and the accurate reporting of information. The Permittee must conduct comprehensive document reviews prior to submitting future plans and reports to NMED to prevent multiple disapprovals.

### **Comment 3**

In the Executive Summary, *West Side Ground Water*, page 4, paragraph 1, the Permittee states, "[b]enzene levels range from 0.83 mg/L to 0.015 in the fourth quarter which are above the NMWQCC standards of 0.01 mg/L for benzene." The Permittee did not provide the units of measure for the fourth quarter result. In future reports, provide units of measure for all numerical values.

### **Comment 4**

In the Table of Contents, page 6, the Permittee is not consistent with the format of the table. For example, under Section 8.0 (Data Tables), all subsections are "tabbed in" for this section while the rest of the sections with subsections are not formatted the same way. The rest of the subsections in the Table of Contents are not presented in the same format. In addition, the Permittee labeled two sections as "Section 6.3" in both the Table of Contents and the text. In future reports, the Permittee must ensure all formatting is consistent and that all sections are numbered correctly.

**Comment 5**

In the List of Figures, page 7, there is a typographical error in the Figure 9 title, *Sonsela Water – Piezometric Surface*. The figure presented in the Report is a potentiometric surface map. The Refinery does not have any piezometers at the facility. In addition, the same error occurs in Figure 10 (Chinle Gp./Alluvium Interface Water, Piezometric Surface (September 2010)). Revise the figures for future reports.

**Comment 6**

In the List of Acronyms, page 10, there are two typographical errors. EPA MCL is “EPA Maximum Contaminant Level” and In. is “Inch(es).” Correct the errors in future reports.

**Comment 7**

In Table 1 (2010 Monitoring Schedule), pages 19 and 20, there appears to be information missing from the data table.

- a. In the *General Monitoring and Sampling Comments* column for wells OW-1 and OW-10, the Permittee includes GRO analysis with the list of analytes for these wells. However, the laboratory analytical data for these wells include DRO, GRO, and MRO analytical results.
- b. In the *General Monitoring and Sampling Comments* column for wells GW-2, GW-3, NAPIS-1 through 3, and KA-3, the Permittee did not include MTBE in the list of analytes.
- c. In the *General Monitoring and Sampling Comments* column for wells MW-1, MW-2, MW-4, and MW-5, the Permittee refers to the RCRA Skinner List metals as RCRA List constituents. Use the correct designation for all constituents listed in Table 1.

In future reports, the Permittee must review the current approved Facility-Wide Groundwater Monitoring Plan to determine the correct constituents for analysis and ensure that Table 1 has correct information prior to submitting to NMED for review.

**Comment 8**

In Section 2.7 (Remediation Activities), page 25, paragraph 1, the Permittee states, “SPH thickness level for the year in RW-6 averages 0.23 feet for 2010 and year to date product recovery is 0.15 gallons for 2010.” Review of Appendix A: *RW-6 Hydrocarbon Recovery Log*

Ed Riege  
December 12, 2012  
Page 4 of 7

(2/22/05 thru 11/2/10) indicates that the SPH thickness level average for 2010 is incorrect. The Permittee must ensure all information is accurate prior to reporting it in future submittals.

#### **Comment 9**

In Section 5.1 (Potentiometric Map), page 28, there are two typographical errors where the Permittee references Figure 8 (South-North Section Westerly Plant Area) as the Potentiometric Elevation Map and Section 10 (Figures) containing groundwater elevation data from 2010. Figure 8 is a cross-section figure of decommissioned monitoring wells located near the land treatment unit and Section 10 contains only figures. The correct references are Figure 9 (Sonsela Water, Piezometric Surface (July – Sept 2010)) and Section 9 (Well Summary Table). Review cross references to figures, tables, and appendices to ensure the references are correct prior to submitting future reports to NMED.

#### **Comment 10**

In Section 6.0 (Ground water Monitoring Results), pages 29 through 48, the Permittee discusses the analytical results from the 2012 groundwater monitoring events in three sections, Sections 6.1 (Monitoring Wells That Have Constituent Levels Above Standards), 6.2 (Wells with Constituent Levels below Standards), and 6.3 (Evaporation Ponds, Influent, Effluent, Boiler Water to EP-2 and Leak Detection Units – Constituent Levels). However, the Permittee does not consistently discuss exceedances and detections below the screening levels in their appropriate sections. For example, in Section 6.2, *BW-2A*, *BW-2B*, *BW-2C*, page 37, the Permittee discusses analytical results for constituents above and below the screening levels, repeating information from Section 6.1. To avoid redundancy, the Permittee must discuss all analytical results in one section but keep monitoring wells grouped as in Sections 6.1 and 6.2 for the discussions in future reports. In addition, the Permittee does not consistently report the screening levels with the results for every constituent mentioned. The Permittee must be consistent when comparing screening levels to analytical results in future reports.

#### **Comment 11**

In Section 6.1 (Monitoring Wells That Have Constituent Levels Above Standards), *NAPIS-1*, *NAPIS-2*, *NAPIS-3*, *KA-3*, page 32, paragraph 2, the Permittee states, "NAPIS-1 is an up gradient well located on the southeast side of and NAPIS-2 is located immediately down gradient on the southwest side of the NAPIS." The Permittee did not finish describing the location of NAPIS-1 in the statement. In future reports, the Permittee must review the entire report for completeness prior to submitting for review by NMED.

**Comment 12**

In Section 6.1 (Monitoring Wells That Have Constituent Levels Above Standards), *NAPIS-1*, *NAPIS-2*, *NAPIS-3*, *KA-3*; *OW-1*, *OW-10*; *OW-11*, pages 33 through 35, the Permittee discusses analytical results for uranium that are greater than the screening level, 0.03 mg/L. The Permittee must sample wells up gradient from *NAPIS-1*, *NAPIS-2*, *NAPIS-3*, *KA-3*, *OW-1*, *OW-10*, and *OW-11* and review groundwater analytical results to determine if uranium detections are similar to concentrations in unaffected wells. The Permittee must discuss the results in the 2011 Annual Groundwater Monitoring Report.

**Comment 13**

In Section 6.1 (Monitoring Wells That Have Constituent Levels Above Standards), *OW-1*, *OW-10*, page 34, the Permittee states, “[t]otal metals ranged from 5.25E-03 mg/L first quarter to 0.052 mg/L fourth quarter for uranium levels which are above the NMWQCC and EPA MCL standard of 0.03 mg/L.” There is a typographical error with the first quarter analytical result presented in the text. The analytical lab result and Table 8.4.2 (*OW-1*, *OW-10*: Total Metals Analytical Result Summary) report the first quarter result as 0.0525 mg/L. In future reports, review all analytical results reported in the text, data tables, and lab reports to ensure the correct result is being reported. In addition, the Permittee continues to have problems reporting the values using scientific notation. Review all data results prior to submitting reports so that all results are accurate.

**Comment 14**

In Section 6.2 (Wells with Constituent Levels below Standards), *BW-2A*, *BW-2B*, *BW-2C*, page 37, paragraph 2, the Permittee states, “[g]eneral chemistry parameters were below the applicable NMWQCC standards except for fluoride which had detectable concentration levels in all three wells above the NMWQCC standard of 1.6 mg/L Phosphorous was also detected at a concentration levels above the EPA RSL standard of 3.1E-04 for *BW-2A* at 0.68 mg/L.” There are two typographical errors in these statements. First, the Permittee omitted the punctuation at the end of the first sentence and second, did not provide a unit of measure for the phosphorus EPA RSL standard, 3.1E-04 mg/L. In future reports, the Permittee must review entire reports for accuracy and correct all errors and omissions prior to submission for review.

**Comment 15**

In Section 7.0 (Conclusions), *East Side Ground Water*, page 49, paragraph 2, the Permittee states, “*RW-6* had a total of 0.15 gallons of product recovered in 2010 compared to 22 gallons recovered in 2009.” There is a reporting error with the amount of product recovered from *RW-6* in 2009. The error carries over to the table titled, *Summary of Total Product Removed and Total*

*Water Purged per yer from Recovery Wells (RW-1, RW-2, RW-3).* The Permittee reports that 22 gallons of product was removed from RW-16 in 2009. Calculation for the actual amount of product recovered in 2009 for the *Product Bailed/Purged (gal)* column on the table titled, *RW-6 Hydrocarbon Recovery Log (2/22/05 thru 11/3/2010)*, is 0.22 gallons. In addition, there are typographical errors on the table titled, *Summary of Total Product Removed and Total Water Purged per yer from Recovery Wells (RW-1, RW-2, RW-3)*; “year” is misspelled, and the recovery wells listed in the table are RW-1, RW-5, and RW-6. Correct the information on the tables and ensure in all future reports, that all reported results are correct and do not conflict with information in other sections of the report.

#### **Comment 16**

In Table 8.8 (NAPIS 1, NAPIS 2, NAPIS 3, KA-3, BTEX Analytical Result Summary), page 92, the Permittee summarizes BTEX and MTBE results. There is conversion error for the 3/8/2010 NAPIS-2 benzene result, 0.83 mg/L. The analytical lab result is 83 µg/L; the correct conversion is 0.083 mg/L. For future reports, review all analytical results and ensure all conversions (e.g., µg/L to mg/L) are correct prior to submittal to NMED. In addition, ensure all text, figures, and graphs report consistent results in future reports.

#### **Comment 17**

In Table 8.13.2 (MW-1, MW-2, MW-4, MW-5, DRO/GRO Analytical Result Summary), the Permittee summarizes DRO and GRO analytical results for monitoring wells MW-1, MW-2, MW-4, and MW-5. There is a typographical error in the table where the incorrect superscript is used to describe a sample event date (3/1/2010) for monitoring wells MW-4 and MW-5. The Permittee uses superscript “2,” which should be “3.” Ensure all superscripts and notes are correct in data tables in future reports prior to submittal to NMED.

#### **Comment 18**

In the Attachments for Appendix A, the Permittee submitted three hydrocarbon recovery logs and a table summarizing total product removed and water purged from wells RW-1, RW-5, and RW-6. For all future reports, the Permittee must include page numbers on all tables and ensure the title of the table is included on every page. In addition, the total product removed from RW-6 for 2009 is incorrect (*see also Comment 15*).

#### **Comment 19**

In the Attachments for Binders 2 & 3, the Permittee was required to submit corrected title pages for Binders 2 and 3 (Analytical data) per NMED’s Comment 8 of the April 11, 2012 NOD. However, the title pages are still incorrect. The title pages submitted are for Binder 2 with

Ed Riege  
December 12, 2012  
Page 7 of 7

Section 8.8-8.16; Binder 2 contains analytical data results for Sections 8.1-8.7 and Binder 3 contains analytical data results for Sections 8.8-8.16. In future reports and work plans, the Permittee must review all documents prior to submitting them to NMED for review to ensure their correctness.

The Permittee is not required to submit a revised Report but must address all comments included in this Approval with Modifications in the 2011 Annual Groundwater Monitoring Report and future Annual Reports.

If you have questions regarding this Disapproval please contact Leona Tsinnajinnie of my staff at 505-476-6057.

Sincerely,



John E. Kieling  
Chief  
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB  
K. Van Horn, NMED HWB  
L. Tsinnajinnie, NMED HWB  
C. Chavez, OCD  
A. Haines, Western Refining Company, El Paso, Texas  
T. Larson, Western Refining Company, Gallup Refinery  
C. Johnson, Western Refining Company, Gallup Refinery

File: Reading File and WRG 2012 File  
HWB-WRG-11-004