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Governor

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Lieutenant Governor

NEW MEXICO  
ENVIRONMENT DEPARTMENT  
**ENTERED**  
*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)



DAVE MARTIN  
Secretary  
BUTCH TONGATE  
Acting Deputy Secretary

**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

February 16, 2012

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

**RE: SECOND NOTICE OF DISAPPROVAL  
REQUIREMENT TO RESURVEY GROUNDWATER MONITORING WELLS  
AND RECOVERY WELLS  
WESTERN REFINING COMPANY, SOUTHWEST, INC., GALLUP REFINERY  
EPA ID # NMD000333211  
HWB-WRG-11-003**

Dear Mr. Riege:

The New Mexico Environment Department (NMED) has received Western Refining Company, Southwest Inc., Gallup Refinery's (Permittee) *Requirement to Resurvey Ground Water Monitoring Wells and Recovery Wells* (Report), dated December 5, 2011. NMED has reviewed the Report and hereby issues this second notice of disapproval (NOD).

**Comment 1**

The Permittee states that "NMED's NOD Annual Ground water Monitoring Report dated May 16, 2011, Comment 15 d. states, "It appears that all the wells need to be resurveyed to provide accurate information." On June 7, 2011, DePauli Engineering & Surveying, LLC completed their survey of the active ground water monitoring wells and the recovery wells at the request of Gallup Refinery. On June 8, 2011 Western received correspondence from NMED – in which Western was required to submit a work plan describing the proposed methods that will be used to re-survey the existing wells. The survey had already been completed prior to receiving the

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correspondence requiring a work plan.” The last two sentences of NMED’s May 16, 2011 NOD for the Annual Groundwater Monitoring Report Comment 15d states, “[i]t appears that all the wells need to be resurveyed to provide accurate information. NMED will address resurveying all wells at the refinery in a separate letter.” The Permittee did not wait for the correspondence prior to conducting the survey. Instead, DePauli Engineering & Surveying, LLC was contracted and the survey work was completed at-risk on June 7, 2011. The survey work is considered “at-risk” because it was not conducted in accordance with an approved work plan.

### **Comment 2**

The Permittee did not fully address Comment 1 of NMED’s August 22, 2011 NOD, which states that “[t]he Report did not include a description of the methods used for surveying the wells or the specific survey points at the wells surveyed. [Revise] the Report to describe the specific work performed during the surveying event to include the survey method, the survey point locations for each well, and a complete table with the total well depth measurement for each well.” NMED cannot completely evaluate the adequacy of the survey data without this information. The Permittee must provide a letter report that describes the specific work performed during the surveying event to include the survey method and instruments, the accuracy and error associated with the method and instruments, and the survey point locations for the wells. The Permittee must verify and state in the letter report that the surveys were conducted in accordance with Sections 500.1 through 500.12 of the Regulations and Rules of the Board of Registration for Professional Engineers and Surveyors Minimum Standards for Surveying in New Mexico and that horizontal positions were measured to the nearest 0.1-ft, and the vertical elevations were measured to an accuracy of 0.01-ft.

### **Comment 3**

Notes 2 and 3 on Page 5 of the Western Refining Monitoring Well 2011 survey report submitted by DePauli Engineering & Surveying, LLC states that the “[i]nstrument [used was the ] Leica 1200 GPS – Base & Rover, [and t]he method used to survey the wells was GPS-RTK.” The Permittee must define all acronyms in the letter report, explain all methods and instruments used to conduct the surveying work, and the accuracy and error associated with the methods and instruments used (*see* Comment 1).

### **Comment 4**

The following comments pertain to the 2011 Corrected Well Elevation Summary Table:

- a. In the column labeled, “Previous Ground Level Elevation (feet),” there appears to be a discrepancy with reporting the elevations for OW-50, OW-52, and MW-2. The previously reported elevation for OW-50 is 6,929.00 feet, OW-52 is 6,823.00 feet, and

MW-2 is 6,880.84 feet. However, the elevations reported in the Well Data Summary Table – 2009 from the Annual Groundwater Monitoring Report: Gallup Refinery 2009 for OW-50 is 6,914.37 feet, for OW-52 is 6,906.26 feet, and for MW-2 is 6,878.40 feet. Revise the table to correct the discrepancies and include with the letter report. Ensure that all tables report the correct elevations for future submittals.

- b. In the column labeled, “Previous Well Casing Rim Elevation (feet),” there appears to be a discrepancy with the elevations for BW-2A, OW-50, and OW-52. The previously reported elevation for BW-2A is 6,974.24 feet, for OW-50 is 6,992.00 feet, and for OW-52 is 6,902.00 feet. However, the elevation reported in the Well Data Summary Table – 2009 from the Annual Groundwater Monitoring Report: Gallup Refinery 2009 for BW-2A is 6,874.72 feet, for OW-50 is 6,914.37 feet, and for OW-52 is 6,907.68 feet. Revise the table to correct the discrepancies and include the corrected table with the letter report. Ensure that all tables report the correct elevations for future submittals.
- c. There is a discrepancy with the data provided for the 2011 Survey Total Well Depth and Screened Interval Depth Top to Bottom for monitoring wells BW-3B, OW-1, OW-12, OW-52, SMW-2, SMW-4, NAPIS-1, NAPIS-2, and KA-3. The total well depth is reported to be higher than the screened interval in these monitoring wells. Verify the screened interval and total well depths for these monitoring wells. If the measurements are correct, explain why the total well depth is above the screened interval and how, if possible, the situation will be remedied. If the remedy requires additional work, propose a schedule to provide a work plan to conduct the remedy.
- d. Include an additional note in the table with the following text, “Previous measurements and elevations are from the Well Data Summary Table from the 2009 Annual Groundwater Monitoring Report.”
- e. Revise Note 3 to state, “2011 Survey Well Casing Bottom Elevation is determined by subtracting the 2011 Survey Well Casing Rim Elevation from the 2011 Survey Total Well Depth measurement.”
- f. Revise the table to include page numbers and the title on all pages and include the revised table with the letter report. Apply changes to all tables in future submittals.

#### **Comment 5**

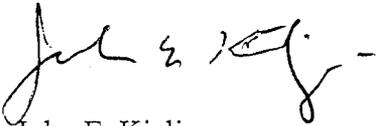
Note \*\* from the 2011 Well Elevation Summary Table for Artesian Water Wells states, “176 feet of 24” Surface Casing Steel.” Revise the statement to include the second diameter of the casing and if the casing was reduced after 176 feet. Revise the table and include with the letter report.

Ed Riege  
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The Permittee must submit a revised Report as a letter report with the required information addressing all the comments from this second NOD no later than **April 27, 2012**. If Comment 3c requires additional work, a proposed schedule for submittal of a work plan must be included in the letter report.

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

Sincerely,



John E. Kieling  
Acting Chief  
Hazardous Waste Bureau

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

File: Reading File and WRG 2012 File  
HWB-WRG-11-003