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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

March 17, 2017

Mr. Ed Riege
Remediation Manager
Western Refining, Southwest Inc., Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301

**RE: APPROVAL WITH MODIFICATIONS
WORK PLAN SMW-2 AREA INVESTIGATION AND BOUNDARY WELL
INSTALLATION
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-16-006**

Dear Mr. Riege:

The New Mexico Environment Department (NMED) has received the *Work Plan SMW-2 Area Investigation and Boundary Well Installation* (Work Plan), dated October 2016 on behalf of Western Refining Southwest Inc., Gallup Refinery (Permittee). NMED hereby issues this Approval with Modifications. The Permittee must address the following comments. NMED understands that the Permittee is also in receipt of comments regarding the Work Plan from the Energy Minerals and Natural Resources Department Oil Conservation Division (OCD), dated February 21, 2017.

Comment 1

The Permittee discusses sampling and then abandoning shallow monitoring well (SMW)-2 during the investigation. In Section 2.1 (SMW-2 Area), the Permittee states, “[t]here is a concern that well SMW-2 may be allowing communication between the upper sands and the Chinle/alluvial aquifer that would naturally be isolated by intervening clay layers. Western proposes to plug and abandon well SMW-2. Similar concerns were previously observed in some

of the other SMW series wells (e.g., SMW-1 and SMW-5) that were plugged in 2004.” Abandonment of the well is permitted; however, the RCRA Permit states, “[a]t least four thin sand lenses exist above the Chinle shale, between the ground surface and the top of the Sonsela sandstone; the first two lenses encountered are dry. SMW-1, 2, and 3 (up-gradient wells) are completed in the third lens. SMW-4 and SMW-5 (down-gradient wells) are completed in the fourth sand lens, which is saturated and perched immediately above the Chinle shale. Currently the unsaturated zone detection monitoring system consists of SMW-3, SMW-4, SMW-5, and SMW-6 and the detection monitoring system consists of MW-1, MW-2, MW-4, and MW-5.” Monitoring wells SMW-1 and SMW-5 have been abandoned, SMW-3 was abandoned in 2004 and the Permittee has not been monitoring SMW-6. With the proposed abandonment of SMW-2, there are no wells monitoring the vadose zone upgradient of the LTU to detect contamination migrating from an upgradient source. Therefore, the Permittee must submit a work plan to install two additional monitoring wells upgradient of the LTU: one to monitor the Chinle/Alluvium Interface and one to monitor the Sonsela. A Permit modification will need to be submitted to address changes to the monitoring well network at the LTU. NMED can address the modification with the Permittee.

Comment 2

In Section 4.1 (SMW-2 Investigation) the Permittee states, “[t]wo new shallow monitoring wells are proposed up-gradient of SMW-2 (Figure 5). One well will be located on the southeast (up-gradient) corner of the NMOCD Central Landfarm and the second well will be located on the northwest (down-gradient) corner of the Central Landfarm.” Ensure that the wells are screened in the upper sand interval captured by SMW-2 which is screened from 34.31 to 54.31 ft bgs. If sand layers within the clay are not encountered at the proposed locations, then alternate locations must be proposed. Also, based on the Permittee’s *September and October 2016 Chloride Exceedance Excavation Report Central Oil Conservation Division Landfarm*, dated January 2017, there are elevated chloride concentrations in soils within Evaporation Pond 10 (EP-10)/OCD Landfarm, the elevated groundwater chloride levels in monitoring well SMW-2 may be a result of the elevated chloride levels in the EP-10/OCD Landfarm. If elevated chloride levels are detected in groundwater in the newly installed upgradient well, then the Permittee must propose to install an additional groundwater monitoring well further upgradient from SMW-2 and the southern boundary of EP-10/OCD Landfarm. The new wells must be included in the Facility-Wide Groundwater Monitoring Work Plan.

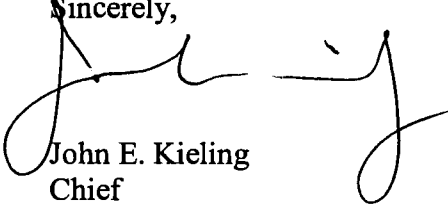
Comment 3

In Section 4.3 (Soil Sample Field Screening and Logging) the Permittee states, “[a]lthough the borings are being drilled at locations outside known areas of concern, Western may, at its’ discretion retain soil samples for laboratory analysis.” Whether or not the borings are located in areas of concern is not a measure of whether or not to collect soil samples for laboratory analysis. All investigation-related drilling activities must include both logging of the borings as well as collection of soil samples for laboratory analysis regardless of whether or not the area being investigated is an area of concern. The NMED and OCD may require drilling and sampling outside of identified “areas of concern” in order to collect data and gather information about the soils and groundwater that may be affected by activities conducted at the facility.

Ed Riege
Gallup Refinery
March 17, 2017
Page 3

If you have questions regarding this Approval with Modifications, please contact Kristen Van Horn of my staff at 505-476-6046.

Sincerely,

A handwritten signature in black ink, appearing to read "John E. Kieling". The signature is fluid and cursive, with a large initial "J" and "K".

John E. Kieling
Chief
Hazardous Waste Bureau

cc: D. Cobrain NMED HWB
K. Van Horn NMED HWB
C. Chavez OCD
A. Hains WRG
L. King EPA Region 6

File: Reading File and WRG 2017 File
HWB-WRG-16-006