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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

December 21, 2009

Mr. Randy Schmaltz
Environmental Manager
Western Refining, Bloomfield Refinery
P.O. Box 159
Bloomfield, New Mexico 87413

RE: SPH RECOVERY AT OBSERVATION WELLS AND ROUTINE FACILITY-WIDE GROUNDWATER MONITORING WESTERN REFINING SOUTHWEST, INC., BLOOMFIELD REFINERY EPA ID# NMD089416416 HWB-GRCB-09-006

Dear Mr. Schmaltz:

The New Mexico Environment Department (NMED) has reviewed Western Refining Southwest, Inc., Bloomfield Refinery's (Western) *SPH Recovery at Observation Wells and Routine Facility-Wide Groundwater Monitoring* (Report), dated June 2009. This document recommends changes to the Facility-Wide Groundwater Monitoring Plan (FWGMP). NMED has provided the following comments to this Report to aid in the revisions to the FWGMP.

Comment 1

On page 2 of the cover letter, Western states "[t]here are two inorganic compounds (nitrate and nitrite) detected above the screening level; however, based on distribution nitrate appears to be related to background conditions and nitrite appears to form in the southern portion of the facility as the higher background nitrate concentrations migrate into areas with reduced conditions probably associated with biodegradation of hydrocarbons."

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A background study has not been completed at the facility; therefore, Western cannot assume that nitrite conditions are related to background conditions. Western must take this into account when submitting future documents.

Comment 2

On page three of the cover letter, Western states “[t]o ensure that no constituents are overlooked, the ground water samples are collected from new wells installed as part of the RCRA Facility Investigation (RFI) will initially be analyzed for the full list of potential constituents as specified in the approved investigation work plans. Ground water samples are collected twice from each well during the investigation and this will provide sufficient information to determine if any new constituents should be added to the list of indicator parameters shown above. Western proposes to add new wells to the routine monitoring list. This includes MW-51, MW-52, and MW-54, all of which were installed as part of the recent RFI activities. There are two other wells MW-50 and MW-53 installed a part of this field effort and ground water samples have been collected and analyzed from all of these wells twice. We do not recommend inclusion of MW-50 in the routine monitoring because it is located between MW-1 and MW-51, which already provide good coverage in this area and only manganese has been detected above the screening level at this location. MW-53 is not included for routine monitoring because it is located close to MW-52, which has very similar ground water quality.”

Western must sample all newly installed monitoring wells (MW-50, MW-51, MW-52, MW-53, and MW-54) annually for two more sampling events before proposing revisions to the monitoring locations and chemical analytical suits. Therefore, MW-50 and MW-53 must be added to the sampling plan and all samples collected from the new monitoring wells (MW-50, MW-51, MW-52, MW-53, and MW-54) must be analyzed for the full suite (EPA Method 8260 and 8270, total and dissolved metals (see Comment 5 item d), gasoline range organics (GRO), diesel range organics (DRO) extended, and the general chemistry parameters). Western must incorporate these requirements into Table 3 of the FWGMP.

Comment 3

Western provides data summary tables for the monitoring wells at the facility which provide historical data. Although these tables were helpful, in the future, if Western chooses to submit similar reports to this one including the tables, the following must be considered:

- a. Many of columns/rows within the tables were left blank and the meaning of the blank spaces was not defined within the tables. The blank spaces could have had various meanings such as the well was not required to be sampled, the well was dry, the well contained separate phase hydrocarbons (SPH), typographical error, etc. In the future, if tables similar to these are provided in a report, Western must provide the reason for omitting data.

- b. Data was provided for some wells between 1999 to 2002 but no data was included after 2002 (e.g., MW-9). It was not clear why data was omitted from the year 2002 to the present (e.g., well no longer required to be sampled, data was not collected because of insufficient water or SPH). If future tables are included in a report, Western must include information clarifying this in the legend or notes section of the table.
- c. Complete historical information was not provided for some monitoring wells. For example, MW-4 was sampled and contained data for 1999, 2000, 2001, 2002, 2007, and 2008; it is not clear why data was not included from 2003 to 2006 (e.g., well not required to be sampled, samples not collected because of insufficient water or SPH). If future tables are included in a report, Western must include clarification in the legend or notes section of the table.
- d. The most recent Annual Groundwater Monitoring Reports provided useful historical data, which should be used as a reference in preparing future reports.

Comment 4

The Report does not mention the analyses of water quality parameters and general chemistry and it is therefore assumed that Western proposes to no longer analyze for these constituents (total dissolved solids (TDS), specific conductance, pH, temperature, carbon dioxide, alkalinity, fluoride, chloride, bromide, nitrogen (nitrite/nitrate), phosphorus, and sulfate). These constituents provide useful information related to natural attenuation and contaminant conditions; therefore, Western must continue to analyze for these constituents and include them in the revision to the FWGMP. These sampling activities must follow the current sampling regime as specified in the current FWGMP and include the newly installed monitoring wells.

Comment 5

NMED concurs with portions of the proposed Table 3 (revised June 2009), and provides the following remarks. Western must incorporate the following items into the FWGMP.

- a. Western must continue to collect field water quality parameters (e.g., conductivity, dissolved oxygen, oxidation reduction potential) and analyze for general chemistry (See Comment 4).
- b. Every two years, starting in 2012, all wells analyzed for the Target List of volatile organic compounds (VOCs) must report the full suite of EPA Method 8260 analytes as well as the full suite of EPA Method 8270 analytes for semi-volatile organic compounds (SVOCs).

- c. All wells identified in Table 3 of the *Facility-Wide Groundwater Monitoring Plan*, dated Revised December 2007 that analyzed for gasoline range organics (GRO) must continue to be analyzed for GRO. GRO cannot be removed from the analytical suite.
- d. NMED does not concur with the proposed metals Target List. Therefore, the sampling locations at the Refinery Complex, the Outfalls, and the San Juan River Terrace locations must be analyzed for the following total and dissolved metals: arsenic, barium, cadmium, calcium, chromium, copper, iron, lead, magnesium, manganese, mercury, potassium, selenium, silver, sodium, uranium, and zinc.
- e. RW-1 must be added to the sampling schedule listed under the "Refinery Wells," found in Table 3.
- f. The collection and observation wells listed in Table 3 may be sampled semi-annually; Table 3 lists the wells to be sampled semi-annually and annually.
- g. Table 2 provides a Target List for metals to be analyzed at the River Terrace. However, Table 3 does not indicate which metals Target List will be analyzed in samples collected from the River Terrace wells. The information appears to be consistent with the sampling requirements established in NMED's Approval with Direction River Terrace Voluntary Corrective Measures Bioventing System Annual Report letter dated June 16, 2009 letter. Western must ensure that the Target List for metals is clearly identified in Table 3 of the revised FWGWM.

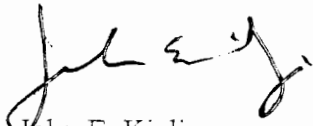
Revisions and a revised Report are not required. All comments must be incorporated into a revised FWGMP and submitted to NMED and the Oil Conservation Division (OCD) on or before February 22, 2010 for approval.

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Annual revisions to the FWGMP must be submitted annually to NMED and OCD by June 30th of each respective year. If the changes are approved, the approved changes must be implemented in April of the following year (i.e., the same sampling requirements must be completed during the yearly sampling events April, September/October).

If you have any 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
C. Chavez, OCD
A. Hains, Western
File: GRCB 2009 and Reading
HWB-GRCB-09-006