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Certified Mail - Return Receipt Requested



November 15, 2021

John Moore
Environmental Superintendent
Western Refining, Southwest Inc., Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301

**RE: SECOND DISAPPROVAL
[REVISED] FACILITY WIDE GROUNDWATER MONITORING WORK PLAN – UPDATES FOR
2021
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
MCKINLEY COUNTY, GALLUP, NEW MEXICO
EPA ID # NMD000333211
HWB-WRG-21-006**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has completed its review of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee) *[Revised] Facility Wide Groundwater Work Plan (Work Plan)*, dated September 30, 2021 and received September 24, 2021. The revised Work Plan is in response to NMED's May 25, 2021 Disapproval letter (Disapproval). NMED has reviewed the revised Work Plan and hereby issues this second disapproval with the following comments.

Comment 1

The response to NMED's Disapproval Comment 5 states, "[t]he new data collected during the evaluation shows that there is no communication between the NAPIS/LDU and groundwater in the area. The NAPIS secondary containment is not leaking." The NAPIS has a history of problems since shortly after it was installed. Groundwater in the vicinity of the NAPIS is contaminated and there is uncertainty regarding the release history. The statements relating to the conclusions about the NAPIS containment should not be included in the Work Plan. Remove the statement(s) relating to the conclusions about the NAPIS secondary containment from the revised Work Plan.

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Comment 2

The response to NMED's Disapproval Comment 7 states, "[i]f SPH recovery system wells (OW-13, OW-14, OW-29, OW-30, RW-1, RW-2, RW-5, and RW-6) do not have measurable SPH, the recovery system will be removed from the well and the well sampled." Whether or not certain wells contain measurable separate phase hydrocarbon (SPH), the Permittee is required to halt the operation of the SPH recovery system prior to gauging and sampling events. This allows the groundwater to equilibrate and provides more accurate data from these wells. Gauging data must be collected from these wells regardless of the presence/absence of measurable SPH. Include the provisions in the revised Work Plan.

Comment 3

The response to NMED's Disapproval Comment 9 states, "[w]ell OW-13A was proposed to be installed near OW-13 to address concerns that OW-13 may be a migration pathway for constituents (e.g., MTBE) to move vertically downward to the Sonsela aquifer (NMED 2018, Comment 18.4). Water was not observed in the boring and the well was not installed. However, soil samples were collected. Given that water was not observed in the shallow zone, it is not expected that there would be any downward migration of contaminants into the Sonsela." NMED's Disapproval Comment 9 directed the Permittee to collect monitoring data from well OW-13. This comment is not addressed by the Permittee's statement. Address the comment in the revised Work Plan. Based on the Permittee's statement, well OW-13A could not be installed; however, the details of the activities of this particular installation of new wells, abandonment of existing wells, and vertical migration as related to the determination of MTBE to the Sonsela is required to be submitted separately from the Work Plan. The Permittee's response to NMED's Disapproval Comments 10 and 12 states that "the information regarding the installation of well OW-13A will separately be submitted to NMED by **October 13, 2021.**" Provide the submittal that discusses the installation of the well OW-13A or submit an extension request for submitting the document.

Comment 4

The response to NMED's Disapproval Comment 10 states, "six wells were plugged and abandoned and replaced because the well screens have been historically submerged (NMED 2018, Comment 40; NMED 2019b, Comment 4). Wells MKTF-01R, MKTF-02R, MKTF-04R, MKTF-17R, MKTF-18R, and RW-2R were installed adjacent to the original well locations." Comment 3 of the NMED's September 14, 2021 *Approval with Modifications Hydrocarbon Seep Interim Measures 2021 Second Quarter Status Report* (September 2021 Approval with Modifications) states, "[e]xisting wells MKTF-1, MKTF-2, MKTF-4, MKTF-17, and MKTF-18 must not be plugged and abandoned; they must be preserved at this time. Furthermore, the replacement wells must be installed adjacent to the existing wells. NMED will evaluate the abandonment of the existing wells once the data collected from the existing and replacement wells are compared and evaluated. The Permittee must monitor the existing and replacement wells (once they have been installed) and submit the evaluation in a future status report." State whether these wells were plugged and abandoned prior to the receipt of NMED's September 2021 Approval with

Modifications in the revised Work Plan. The Permittee is reminded that Section IV.C.3 (Facility Wide Groundwater Monitoring Reports) of the October 2013 RCRA Permit (modified September 2017) requires that “[t]he Permittee shall submit to NMED a Facility-Wide Groundwater Monitoring Report [that] describes all the groundwater monitoring activities, including all well abandonment procedures and activities, conducted in the previous year.” Furthermore, the Permittee is reminded that “[a]ll well abandonment must be conducted in accordance with 19.27.4 NMAC” as required by Section IV.K.6 (Well Abandonment) of the Permit. The Permittee must not plug and abandon any additional existing wells prior to notifying NMED and receiving a concurrence.

Comment 5

The response to NMED’s Disapproval Comment 13 states, “NMED included BW-5B and PW-3 in their approval statement, however, this appears to be a typo and has not been included in the sampling frequency change. Because NMED has not approved changing the frequency of sampling for BW-5B, BW-5C, and PW-3, Table 5-2 has been revised by removing the request for annual in the 2021 Frequency column.” NMED’s Disapproval Comment 13 did contain a typographical error and the sampling frequency for wells BW-5B, BW-5C, and PW-3 must remain quarterly. No response or revision is required.

Comment 6

The response to NMED’s Disapproval Comment 14 states, “[i]n addition, every compound reported by the laboratory and detected above respective detection limit will be included in the 2021 report. Tables 5-4 and 5-5 have been revised.” Although the Permittee states that every compound reported by the laboratory that is detected above the respective detection limit will be reported, Tables 5-4 (Proposed Modifications to the Analyte List) and 5-5 (Analyte List) list a limited number of analytes under the categories of volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs). For example, only acetone and methylene chloride are listed as analytes under the category of VOC for wells MW-1 through -5. Although it is unnecessary to list every compound analyzed by the analytical method in each category, Tables 5-4 and 5-5 must be revised to:

- a. remove analytes listed in each category
- b. indicate the analytical methods utilized (e.g., EPA Methods 8260B/8011 for VOCs/ethylene dibromide and 8270C/8270 SIM for SVOCs/1,4-dioxane) for each well; and
- c. BTEX and MTBE must not be listed separately from the category of VOCs because EPA Method 8260B includes BTEX and MTBE.

The same issues were identified in Table 5-3 (2020 Groundwater Monitoring Schedule). Revise Tables 5-3, 5-4, and 5-5, where applicable, in the revised Work Plan.

Comment 7

The response to NMED's Disapproval Comment 15 states, "[t]he Refinery agrees that every compound reported by the laboratory and detected above the respective detection limit will be included in the 2021 report. The Refinery disagrees with redundant analyses for any constituent. An analyte should be measured with the method most applicable to their chemical characteristics. While naphthalene, 1-methyl naphthalene, and 2-methyl naphthalene can be measured using either method 8260 (VOCs) and method 8270 (SVOCs), method 8270 is the most applicable." Although the Permittee has agreed with reporting every compound reported by the laboratory that is detected above the respective detection limit, there is disagreement with reporting naphthalene, 1-methyl naphthalene, and 2-methyl naphthalene analyzed and reported by EPA Method 8260. Report every compound reported by the laboratory that is detected above the respective detection limit regardless of the analytical method. An applicability of analytical methods for particular analytes may be discussed in the text of the reports, if any discrepancy is identified at that time; however, an omission of particular analytes from reporting is not acceptable. Revise applicable sections of the Work Plan accordingly.

Comment 8

NMED's Disapproval Comment 16 states, "[p]revious groundwater monitoring reports do not appear to include total anions or cations data and an associated discussion. Provide a clarification in the response letter and revise the Work Plan for clarity." The Permittee's response to Comment 16 states, "[t]he statement has been removed from the text. Tables 5-4 and 5-5 have been revised." The Permittee's response to Comment 16 is not clear. Provide clarification in the response letter to state why the statement was removed from the text and how NMED's comment has been addressed in the response letter.

Comment 9

NMED's Disapproval Comment 17 states, "[i]f 1,4-dioxane was detected in any of [wells OW-54, OW-55, and OW-56 during the sampling events, the Permittee must continue 1,4-dioxane sampling regardless of the level of the concentration. Revise the Work Plan, as appropriate." The Permittee's response to Comment 17 states, "[t]he statement has been removed from the text. Tables 5-4 and 5-5 have been revised." The Permittee's response to Comment 17 did not explain why the revisions were made to Tables 5-4 and 5-5 or how the changes impact these tables. Table 5-4 does not indicate that 1,4-dioxane analysis was proposed for wells OW-54, -55, and -56 in 2021 while Table 5-5 lists 1,4-dioxane as an analyte for these wells in 2021. There appears to be a discrepancy between these tables. Correct the discrepancy in the revised Work Plan by revising the appropriate section(s) and table(s).

Comment 10

The response to NMED's Disapproval Comment 19 a states, "[b]romomethane was detected in EP-2 and outfall STP-1 to EP-2 during the 2019 groundwater sampling event. Both of these sampling points are surface water monitoring locations. In addition, it was not detected at any other evaporation pond, indicating that the detection was not widespread. Because

bromomethane is localized to two surface water sample locations, there is no reason to assume that it is present in groundwater. Therefore, the Refinery maintains its position that it will not sample for bromomethane.” Bromomethane is a highly volatile compound; therefore, it is not surprising to detect it in surface water samples because gaseous bromomethane can partition into surface water exposed to the atmosphere. Comment 5 of the NMED’s September 28, 2021 *Response to Approval with Modifications Annual Groundwater Monitoring Report Gallup Refinery – 2019* states, “[t]he source of bromomethane may potentially be ethylene dibromide (EDB) detected at the Facility. As such, the Permittee must demonstrate that the detected bromomethane concentrations are not the result of Refinery operations. The Permittee must investigate the source of bromomethane or the Permittee must conduct pesticide analysis for samples collected from evaporation pond EP-2 using EPA Method 8081 in the upcoming groundwater monitoring work plan for the next two consecutive sampling events.” If the Permittee chooses to conduct pesticide analysis for samples collected from evaporation pond EP-2 using EPA Method 8081 in the upcoming groundwater monitoring work plan for the next two consecutive sampling events, revise the Work Plan to address the comment. Otherwise, provide a date when a work plan to evaluate the source of bromomethane at the Facility will be submitted to NMED in the response letter.

Comment 11

The response to NMED’s Disapproval Comments 19b, c, and d states, “[a]lthough the natural attenuation report is due the same day as the annual groundwater monitoring work plan update, the Refinery believes that the potential for conflicting comments and responses for updating two reports with the same information is unnecessary. To ensure the natural attenuation evaluation remains as flexible as possible, i.e., wells and analytes can be modified based on the annual evaluation, and the annual groundwater workplan focuses on sitewide groundwater changes, the Refinery recommends keeping the two work plans separate. Therefore, natural attenuation monitoring in the hydrocarbon seep area is not included in the 2021 Facility Wide Ground Water Monitoring Work Plan and will not be included in future annual updates.” For continuity, the Permittee must include the natural attenuation monitoring and sampling requirements in the annual groundwater monitoring work plan to track all of the reoccurring monitoring and sampling activities for each well. A section of the revised Work Plan may be dedicated to the natural attenuation monitoring activities, and the Permittee can then state in the Work Plan and the annual groundwater monitoring report that the analytical data and discussions for the natural attenuation evaluation will be submitted in the Natural Attenuation Assessment report. A somewhat similar approach is currently being utilized at the Bloomfield Terminal with the River Terrace Annual Report. In order to include all facility monitoring activities, all changes regarding monitoring/sampling frequency and analytical suites for every groundwater monitoring well must be provided in the annual groundwater monitoring work plan updates. This also includes the analyses of sulfide, the degradation products of MTBE, and the daughter products of vinyl chloride for pertinent wells as required by Comments 19 b, c, and d. The activities required by the NMED’s January 26, 2021

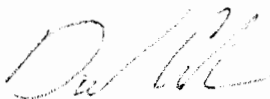
Mr. Moore
November 15, 2021
Page 6

Disapproval Natural Attenuation Assessment and Proposed Workplan for the Hydrocarbon Seep Area must be referenced in the revised Work Plan. In addition, all changes in monitoring/sampling frequency and analytical suites found to be necessary during the course of monitoring the natural attenuation evaluation or other investigations, must be discussed in the pertinent reports and proposed changes to the monitoring program must be reported in the annual groundwater monitoring work plan updates. Revise the Work Plan to include these provisions.

The Permittee must submit a revised Work Plan that addresses all comments contained in the letter. Two hard copies and an electronic version of the revised Work Plan on a CD/DVD must be submitted to the NMED. The Permittee must also include a redline-strikeout version in electronic format showing where all revisions to the Work Plan have been made. The revised Work Plan must be accompanied with a response letter that details where all revisions have been made, cross-referencing NMED's numbered comments. The revised Work Plan must be submitted to NMED no later than **January 31, 2022**.

If you have questions regarding this Disapproval, please contact Michiya Suzuki of my staff at 505-690-6930.

Sincerely,



Dave Cobrain
Program Manager
Hazardous Waste Bureau

cc: L. Tsinnajinnie, NMED HWB
M. Suzuki, NMED HWB
L. Barr, EMNRD OCD
L. King, EPA Region 6 (GLCRRC)

File: Reading File and WRG 2021 file