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Certified Mail - Return Receipt Requested

April 25, 2022

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

**RE: APPROVAL WITH MODIFICATIONS
2022 FACILITY-WIDE GROUNDWATER MONITORING WORK PLAN
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY
MCKINLEY COUNTY, GALLUP, NEW MEXICO
EPA ID # NMD000333211
HWB-WRG-22-001**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has completed its review of the Marathon Petroleum Company dba Western Refining Southwest LLC, Gallup Refinery (Permittee) *2022 Facility-Wide Groundwater Monitoring Work Plan* (Work Plan), dated February 11, 2022 and received on February 9, 2022. NMED has reviewed the Work Plan, and hereby issues this Approval with Modifications with the following comments.

Comment 1

In Section 1.1 (Refinery Information), page 10 of 20, paragraph 3, the Permittee states, “[a]dditional background information on regulatory status, historical operations, and environmental investigations and assessments are provided in Appendix A.” Although Appendix A (Historical Overview) included detailed information regarding current and historical investigations and assessments conducted at the Facility, some investigations were not included in the discussion (e.g., SMW-2 and GWM-1 Areas Investigation) and others were discussed but the information included in the discussion was incomplete or outdated. For example, Section 4.7 (Flare Knock Out Drum Investigation) of Appendix A, page 12 of 17, paragraph 3, concludes the discussion of the investigation with the following statement, “[t]he Flare KOD Investigation report was submitted to NMED on October 27, 2021 (Western 2021g).” However, NMED approved the referenced submittal on January 24, 2022 and requested the Permittee to provide post-excavation confirmation sampling results no later than **July 1, 2022**. Since Appendix A must be provided in future work plans, the Permittee must ensure that the

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information provided is current and up-to-date to the extent possible.

Comment 2

In Section 3.1 (Facility-wide Groundwater Monitoring Program), page 14 of 20, paragraph 4, the Permittee states, “[g]roundwater samples will not be collected from monitoring wells that have measurable [separate phase hydrocarbon (SPH)].” State the thickness of SPH to be considered as measurable in the revised Work Plan and provide replacement pages.

Comment 3

In Section 3.2 (Monitored Natural Attenuation Program), page 15 of 20, paragraph 2, the Permittee states, “[s]amples will be analyzed for the constituents presented in Table 3-1 and evaluated for evidence of chlorinated volatile organic compounds (CVOCs) [monitored natural attenuation (MNA)] and the methyl tert-butyl ether (MTBE) MNA.” Table 2 of the August 27, 2021 *Revised Natural Attenuation Assessment and Proposed Workplan for the Hydrocarbon Seep Area* lists analytical parameters relevant to CVOCs MNA (e.g., total organic carbon, carbon dioxide, alkalinity, hydrogen, volatile fatty acid) that are not included in Table 3-1 (MNA Groundwater Analytical List). Explain why these analytical parameters are not evaluated for CVOCs MNA in a response letter or include all analytical parameters necessary to fully evaluate for CVOCs MNA in the revised Work Plan and provide replacement pages and tables, if appropriate.

Comment 4

In Section 4.1 (Modifications to Monitoring Locations), page 16 of 20, bullet 3, the Permittee states, “[m]onitoring well OW-70 was installed between MKTF-32 and MKTF-33 and downgradient of the borrow pit seep area to serve as a sentinel well for SPH potentially migrating beyond the recovery sumps (NMED 2020, Comment 1).” According to Figure 1-2 (Facility and Well Groups 2022), well OW-70 is depicted between well OW-12 and OW-13 in the Eastern Boundary Wells area. However, in Figure 3-1 (MNA Well Network), wells are not present between wells MKTF-32 and MKTF-33. Resolve the discrepancy and provide replacement pages for all applicable sections, tables, and/or figures of the Work Plan. In addition, there appears to be a typographical error in the referenced citation (NMED 2020, Comment 1) when compared to the citation in Section 5.0 (reference). The citation in the Report references NMED’s *Disapproval Annual Groundwater Monitoring Report Gallup Refinery – 2019*, dated November 23, 2020. It is not clear how the referenced citation in the Report is relevant to the statement provided in Section 4.1. Provide an explanation in a response letter, or correct the referenced citation and provide replacement pages, as necessary.

Comment 5

In Section 4.2 (Modifications to Monitoring Frequency), page 17 of 20, paragraph 1, the Permittee states, “[t]he new wells will be sampled quarterly, which is the same frequency as the existing wells in the MKTF and eastern boundary groups. The new wells have been added to Table 4-1.” Two new wells (OW-67 and OW-68) were installed in the LTU Wells area. According

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to Table 4-1 (2022 Groundwater Monitoring Network and Sampling Frequency), page 1 of 4, wells OW-67 and OW-68 are proposed to be sampled annually. However, all new wells must initially be monitored and sampled on a quarterly basis in order to evaluate potential defects or contamination associated with drilling and installation of the well. The Permittee must propose to change the sampling frequency for these new wells in the Work Plan, as appropriate. Revise all applicable sections of the Work Plan and tables and provide replacement pages.

Comment 6

In Section 4.3.2 (Data Evaluation), page 17 of 20, paragraph 4 and bullet 1, the Permittee states, “[t]he data in Appendix C-2 was first evaluated for inclusion in the Region 5 Waste Management Branch “Modified ‘Skinner List’ for Constituents of Concern for Wastes from Petroleum Processes” (USEPA 1997). The 1997 Skinner List is provided in Appendix C-3 [and c]onstituents not included in the Skinner List were removed.” Note that only inorganic constituents (e.g., metals) that are not included in the Skinner List may be removed from the analyte list, as applicable. However, all organic constituents listed in respective analytical methods (e.g., EPA Method 8260) must initially be retained and evaluated for inclusion or exclusion as site analytes regardless of the status of constituents being listed on the Skinner List. If this provision was not incorporated into the determination process for contaminants of concern (COCs), revise all applicable sections, tables and appendices of the Work Plan, where applicable, to incorporate the provision.

Comment 7

Table 4-2 (2022 Groundwater Monitoring Analyte List), page 4 of 5 indicates that pesticide compounds are analyzed by EPA Method 8011; however, EPA Method 8081B is a more appropriate analytical method for pesticide compounds. Revise the Work Plan and provide replacement Table 4-2.

Comment 8

Table 4-2 does not include some of the analytes listed on Table 3-1 (MNA Groundwater Analytical List). For example, Table 4-2 presents MNA analytes such as 1,1-DCA, 1,1-DCE and MTBE; however, the table does not present other MNA analytes listed in Table 3-1 such as ethene, nitrate, and sulfide. Explain why some of the analytes listed in Table 3-1 do not appear in Table 4-2. If appropriate, resolve the discrepancy and revise Table 4-2 to include all analytes and provide a replacement Table 4-2.

Comment 9

The data presented in Appendices C-1a through C-1d (Analyte Data) were used to evaluate the inclusion or exclusion of analytes based on the criteria discussed in Section 4.3.2 (Data Evaluation) and a detailed summary of the evaluation was presented in Appendices C-2a through C-2d (Data Evaluation). Appendices C-1a through C-1d present all sampling locations, analytes listed on analytical methods, laboratory results, reporting limits (RLs), and method detection limits (MDL) for sampling dates from 2012 to 2020. Resolve the following issues and

provide replacement Appendices C-1 and C-2 as well as all applicable sections of the Work Plan.

- a. All laboratory results that are presented as “not detected (ND)” must be presented as “< RLs” [< Reporting Limits] rather than ND. Note that MDL applies to the instrument at the lab and not to individual samples. Use of the MDL to indicate a value for ND data is not accurate and is a misrepresentation of the data. The Permittee must use the RL rather than MDL values to report undetected analyte concentrations.
- b. Section 4.3.2, page 17 of 20, bullet 5 states that “analytes considered to be facility-wide COC based on exceeding the applicable clean-up level within the last 5 years (2016 to 2020) were retained, regardless of detection frequency.” Appendix C-1 does not provide the applicable screening level (SL) for each analyte necessary to evaluate for inclusion or exclusion of analytes. Include the applicable SL for each analyte in a revised Appendix C-1.
- c. Each ND laboratory results in Appendix C-1 (“<RLs”) must be compared to the respective SLs. If RL values exceed the respective SLs, inclusion/exclusion of such analytes must be evaluated as follows:
 - i. ND laboratory results with RL values exceeding respective SLs must be considered as a data quality exception and must be identified as such in Appendices C-1 and C-2 as well as all applicable sections, tables, and figures of the Work Plan.
 - ii. If such data quality exception is identified in the SWMUs and/or AOCs where long-term monitoring and/or remedial activities are required, the Permittee may continue to utilize the same analytical method for tracking contamination at the sites. However, if Corrective Action Complete (CAC) status is planned to be proposed within three years, the Permittee must contract a laboratory for a method that can meet the criteria for all data used to establish compliance with the SLs. The Permittee must demonstrate compliance for a minimum of eight quarterly groundwater sampling events leading up to a CAC petition; otherwise, the Permittee must provide a logical argument, including detailed and documented lines of evidence, to support removal of the contaminant from the COC list.

For example, according to Appendix C-2a, page 1 of 2, 1,2,3-trichloropropane was removed from the volatile organic compound (VOC) analyte list due to “zero (0)” detection frequency. Although all lab results for 1,2,3-trichloropropane were recorded as ND in Appendix C-1a, the results must be revised to report “<RLs” (see Comment 9.a). The RL values for 1,2,3-trichloropropane range from 2 to 20 µg/L according to Appendix C-1a and all reported RL values for 1,2,3-trichloropropane exceed the SL

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value of 8.35×10^{-3} µg/L; therefore, 1,2,3-trichloropropane must be identified as a data quality exception (Comment 9.c.i). If this data quality exception is identified in the SWMUs and/or AOCs where long-term monitoring and/or remedial activities are required, 1,2,3-trichloropropane does not need be retained as an analyte at this time. If CAC status is planned to be petitioned within three years from the last reporting event, the Permittee must propose to use an analytical method that is capable of achieving the SL in the revised Work Plan (Comment 9.c.ii). The change of analytical method must be approved by NMED prior to its use.

Once the above issues are resolved, reevaluate inclusion or exclusion of each analyte using the criteria discussed in Section 4.3.2. If Table 4-2 is required to be revised based on the data revision in Appendices C-1 and C-2, provide a replacement Table 4-2.

Comment 10

Although Appendices C-2a through C-2d summarize the decisions for inclusion or exclusion of each analyte, the basis for the decision is unclear. Modify Appendices C-2a through C-2d to clearly state the basis for deciding the proposed exclusion of each analyte in accordance with the criteria described in Section 4.3.2 and provide replacement Appendices C-2a through C-2d.

The Permittee must address all comments in Approval with Modifications and submit a response letter detailing where changes were made in the revised Work Plan in response to each comment; two copies of the replacement pages, appendices, figures, and tables; and two CDs each including the revised Work Plan and a redline strikeout version of the revised Work Plan showing where all changes to the Work Plan have been made must be submitted to NMED no later than **September 30, 2022**.

This approval is based on the information presented in the document as it relates to the objectives of the work identified by NMED at the time of review. Approval of this document does not constitute agreement with all information or every statement presented in the document.

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

Sincerely,

Rick Shean

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Rick Shean
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
L. Tsinnajinnie, NMED HWB
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