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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  
NORTH DRAINAGE DITCH AREA INVESTIGATION REPORT  
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY  
MCKINLEY COUNTY, GALLUP, NEW MEXICO  
EPA ID # NMD000333211  
HWB-WRG-21-025**

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) *North Drainage Ditch Area Investigation Report* (Report), dated December 17, 2021 and received on December 21, 2021. NMED has reviewed the Report, and hereby issues this Approval with Modifications with the following comments.

**Comment 1**

Section 4.0 (Analytical Results), page 16 of 19, bullets 1 and 2 indicate that residential and industrial soil screening levels (SSL) were used to evaluate soil analytical results. Since construction worker SSLs are also relevant to the soil samples collected within ten feet below ground surface (bgs), evaluate and discuss soil analytical results that include construction worker SSLs in the revised Report and provide replacement pages and tables. In addition, since soil-leachate (Dilution-Attenuation Factor [DAF]) SSLs are relevant to the vadose zone soil samples, evaluate and discuss soil analytical results with DAF SSLs in the revised Report, as appropriate, or explain why the results were not compared with DAF SSLs in the revised Report.

**Comment 2**

Section 4.0 (Analytical Results), page 16 of 19, bullets 1 through 5 indicates that the NMED's 2017 and 2019 *Risk Assessment Guidance for Site Investigations and Remediation* (RAG) were used to reference the SSLs. The most current update to the RAG was November 2021 and the

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most recent version must be used for all future ongoing investigations. No revision is required.

**Comment 3**

In Section 4.1 (Soil Sample Results), page 16 of 19, paragraph 5, the Permittee states, "TPH-oil range organics (ORO) was only detected in NDD-MW-1 (7.5 to 8 ft bgs) and exceeded the applicable screening level." According to Table 4-4 (Soil Sample General Chemistry Results), page 1 of 3, the TPH-ORO concentrations in the soil samples collected from boring NDD-SB-2 at depths of 1.5 to 2.0 and 3.5 to 4.0 feet bgs are both recorded as ND (2,400) mg/kg. The residential SSL for TPH-ORO is 1,000 mg/kg. Therefore, it is not known whether these concentrations exceed the SSL. Similarly, according to Table 4-1 (Soil Sample Volatile Organic Compounds Results), pages 6 and 7, the detection limits of vinyl chloride and 1,2,3-trichloropropane in multiple soil samples exceeded the applicable SSLs. The detection limits of analytes must be lower than the applicable screening levels; otherwise, address the concentrations of all analytes where the detection limits are higher than the corresponding SSL as data quality exceptions and identify them as such in all related text, tables, and figures. Revise the appropriate sections in the revised Report. Furthermore, the values reported in the tables should not be reported as ND, but rather as less than the value of the detection limit. For example, boring NDD-SB-2 should be reported as <2,400 mg/kg. Revise the tables and include them in the revised Report and future submittals.

**Comment 4**

In Section 4.2 (Groundwater Sample Results), page 17 of 19, paragraph 1, the Permittee states, "[d]epth to groundwater was measured as 23.15 ft bgs, 19.33 ft bgs, and 3.41 ft bgs, in NDD-TW-2, NDD-TW-5, and NDD-MW-1, respectively. The depths to groundwater of the temporary monitoring wells, NDD-TW-2 and NDD-TW-5, were consistent with permanent wells in the area; NDD-MW-1 is not near the preexisting monitoring wells." Address the following issues:

- a. The Report does not include a table that summarizes gauging data collected during the investigation. Provide a table that summarizes the gauging data and includes the construction details of all temporary and permanent wells (e.g., total depth and screened interval) and the survey data (e.g., ground and groundwater elevations), where available.
- b. The depth to water (DTW) reading for permanent well NDD-MW-1 is stated as 3.41 feet bgs. However, the DTW readings collected from preexisting well OW-56 with a screened interval of 6 to 16 feet bgs, which is located close to permanent well NDD-MW-1 (approximately 150 feet north of the well), are recorded as approximately 12 to 14 feet bgs and the DTW readings (12 to 14 feet bgs) are not comparable to that of permanent well NDD-MW-1 (3.41 feet bgs). Well OW-56 exhibits unconfined conditions while permanent well NDD-MW-1 exhibits confined conditions of an aquifer. According to the well completion diagram for permanent well NDD-MW-1 included in Appendix B (Well Completion Logs), permanent well NDD-MW-1 is screened from 25 to 45 feet bgs while

well OW-56 was screened to the Chinle/Alluvial interface from 6 to 16 feet bgs. Although it is not clear from the boring log included in Appendix C (Boring Logs), permanent well NDD-MW-1 may potentially have been advanced to the Sonsela since the screened interval of the well is deeper compared to that of well OW-56. Evaluate the groundwater chemistry data collected from wells OW-56 and NDD-MW-1 and discuss whether the water bearing zones are separate or contiguous. Revise the appropriate section(s) of the Report.

- c. The referenced preexisting well near temporary well NDD-TW-5 is presumed to be well OW-54 based on the location and comparable DTW data. However, preexisting wells do not appear to be present in the vicinity of temporary well NDD-TW-2. Therefore, it is not clear which preexisting well near temporary well NDD-TW-2 was referenced in the statement. Clarify the statement by listing the preexisting wells in the revised Report and provide replacement pages.

#### **Comment 5**

In Section 4.2 (Groundwater Sample Results), page 17 of 19, paragraph 2, the Permittee states, “[m]ost exceedances were observed in temporary monitoring well NDD-TW-5, including benzene, toluene, ethylbenzene, and total xylenes (BTEX), as well as naphthalene, arsenic, barium, chromium, lead, beryllium, TPH-DRO, and TPH-GRO.” According to Table 4-8 (Groundwater Sample General Chemistry Results), page 2 of 2, the TPH-ORO concentration in the groundwater samples collected from temporary wells NDD-TW-2 and NDD-TW-5 are both recorded as ND (5) mg/L. The applicable screening level for TPH-ORO is 0.0858 mg/L. Therefore, as stated in Comment 3, it is not known whether these concentrations exceed the applicable screening level. Similarly, according to Table 4-5 (Groundwater Sample Volatile Organic Compounds Results), the concentrations of analytes in multiple groundwater samples (e.g., 1,1,2-trichloroethane in groundwater sample collected from well NDD-TW-5) exceed the applicable screening levels. The detection limits of analytes must be lower than the applicable screening levels; otherwise, address the concentrations of all analytes where the detection limits are higher as data quality exceptions and identify these results as such in all text, tables, and figures. The values reported in the tables must not be reported as ND, but rather as less than the value of the detection limit. In this case, boring NDD-TW-2 must be reported as <5 mg/L. Revise the tables and include them in the revised Report and for future submittals. Include a discussion about the data quality exceptions in the revised Report.

#### **Comment 6**

In Section 5.0 (Conclusions), page 18 of 19, paragraph 2, the Permittee states, “[b]ased on the detections of hydrocarbons in soils above the screening levels, we recommend to complete additional soil delineation sampling to the south of NDD-SB-1 and NDD-SB-2, and to the northeast of NDD-SB-3.” NMED concurs that the extent of soil contamination in the vicinity of the North Drainage Ditch area should be further investigated. Submit a work plan for the investigation and provide an anticipated date for the work plan to be submitted to NMED in the

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response letter.

The Permittee must address all comments above and submit a response letter, replacement pages, and an electronic version of the revised Report no later than **October 3, 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.

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

Sincerely,

**Rick Shean**

Digitally signed by 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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