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March 18, 2022

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

**RE: DISAPPROVAL
AREA OF CONCERN 26 – PROCESS UNITS AND AREA OF CONCERN 27 –
BOILER AND COOLING UNIT AREA INVESTIGATION WORK PLAN
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY
MCKINLEY COUNTY, GALLUP, NEW MEXICO
EPA ID # NMD000333211
HWB-WRG-21-022**

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) *Area of Concern 26 – Process Units and Area of Concern 27 – Boiler and Cooling Unit Area Investigation Work Plan* (Work Plan), dated November 30, 2021 and received on December 6, 2021. NMED has reviewed the Work Plan, and hereby issues this Disapproval with the following comments.

Comment 1

In the Executive Summary, page 1 of 10, paragraph 1, the Permittee states, “[i]nvestigation into [Area of Concern] AOC 26 and AOC 27 was also requested in Comments 4 and 16 of the *Disapproval, Revised Investigation Work Plan No. 2 Area of Concern 35* letter dated October 20, 2021 (NMED 2021c).” Comment 16 of the October 20, 2021 Disapproval is not relevant to the investigation regarding AOCs 26 and 27. Remove the reference to Comment 16 in the revised Work Plan.

Comment 2

In the Executive Summary, page 1 of 10, paragraph 2, and Section 1.0 (Introduction), page 4 of 10, paragraph 5, the Permittee states, “[s]oil samples will be collected using a geoprobe direct-push drill rig, and LNAPL samples will be collected using disposable bailers. All samples will be

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analyzed for methyl tert-butyl ether, benzene, toluene, ethylbenzene, and total xylenes, total petroleum hydrocarbons (TPH) – diesel range organics [DRO], TPH – gasoline range organics [GRO], total arsenic, total chromium, and total lead.” Based on the historical groundwater analytical data collected from the wells in the vicinity of AOCs 26 and 27, other volatile organic compounds (VOCs), metals, and semi-volatile organic compounds (SVOCs) may potentially be present in the soils within AOCs 26 and 27. The Permittee’s *Revised Investigation Work Plan No. 2 Area of Concern 35*, dated August 2021 proposed the soil samples to be analyzed for VOCs, SVOCs, TPH-GRO, TPH-DRO, TPH motor oil range organics (MRO), 1,2-dichloroethane (EDB) by EPA Method 8011, 1,4-dioxane by EPA Method 8270 Selected Ion Monitoring (SIM), and Skinner List metals, iron, and manganese. Since residual soil contamination in AOCs 26 and 27 is likely similar to that of AOC 35, soil samples collected for the investigation of AOCs 26 and 27 must be analyzed for the same analytical suite proposed in the AOC 35 investigation work plan. Revise all applicable sections of the Work Plan accordingly.

Comment 3

In Section 3.0 (Scope of Activities), page 6 of 10, paragraph 2, and Section 4.1 (Sample Collection Procedures), page 7 of 10, paragraph 3, the Permittee states, “[b]ased on LIF responses in this area (Appendix A), soil borings will be completed to a total depth of 40 ft bgs [below ground surface] or until refusal, whichever occurs first [and photo ionization detector] PID readings will be collected at 5-ft intervals, beginning with a surface sample.” If field screening evidence (e.g., visual, headspace vapor, olfactory) of hydrocarbons is observed at the depth interval of 35 to 40 feet bgs, the boring must be extended to the depth where the contamination is no longer detected in order to better delineate the vertical extent of the contamination. Include the provision in the revised Work Plan.

Comment 4

In Section 3.0 (Scope of Activities), page 6 of 10, paragraph 2, the Permittee states, “[a]nalytical results will be compared to their respective NMED Residential and Industrial Soil Screening Levels (SSL).” Include the NMED Construction Worker SSL in addition to the proposed SSLs, where applicable, in the revised Work Plan.

Comment 5

In Section 3.0 (Scope of Activities), page 6 of 10, paragraph 3, the Permittee states, “[light non-aqueous phase liquid] LNAPL samples will be collected from monitoring wells OW-61 and MKTF 39 with a disposable bailer. During the June 2021 fluid level event, LNAPL measured 2.27 ft thick and 0.79 ft thick in OW-61 and MKTF-39, respectively. LNAPL samples will be analyzed for the same constituents as the soil samples.” There may be additional monitoring wells (e.g., MKTF-37, -38, -47, and -48) that potentially contain LNAPL present in the vicinity of AOCs 26 and 27. Provide a table presenting the most recent gauging data collected from these wells in the revised Work Plan. In addition, a small amount of LNAPL was intermittently detected in wells MKTF-37, -38, -47, and -48 in 2020. Include a provision to gauge the wells for the presence of LNAPL during the investigation, and if present, the LNAPL samples must also be

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collected from the wells where a sufficient volume for the required analyses can be sampled in the revised Work Plan. Furthermore, state the purpose of the LNAPL sampling and analysis in the revised Work Plan. Modify the analytical suite for the LNAPL samples to include MRO and SVOCs in addition to GRO, DRO, MTBE, BTEX, arsenic, chromium and lead in the revised Work Plan.

Comment 6

In Section 4.1 (Sample Collection Procedures), page 7 of 10, paragraph 2 and bullet 1, the Permittee states, "PID readings will be collected at 5-ft intervals, beginning with a surface sample (0 to 6 inches bgs)." Since the constituents exposed on the ground surface may be volatilized or degraded, the surface samples must be collected from the depth interval of 6 to 12 inches bgs. Revise the Work Plan accordingly.

Comment 7

Figure 2 (Proposed Sampling Locations AOC 26 and AOC 27 Investigation Work Plan) does not depict all of the groundwater monitoring wells in the vicinity of the AOCs. Include all of the groundwater monitoring wells (e.g., MKTF-37, -38, -47, and -48) that are present in the vicinity of the AOCs in the revised figure.

Comment 8

In Appendix B (Standard Operating Procedure – Soil Sampling), Section 3.0 (Preparation), paragraph 5, the Permittee states, "[f]or soil sampling, the only field monitoring equipment used will be a photoionization detector (PID)." Include a discussion about the appropriate lamp strength of ionization potential for the PID used for this investigation based on the preliminary investigation results obtained from the LIF investigation in the revised Work Plan. In addition, the first page number for Appendix B is missing. Include the page number in the revised Appendix B.

Comment 9

According to Appendix B, Section 4.0 (Equipment), page 3 [sic], bullet 2, the soil sampling device is indicated as a hand auger. However, Section 1.0 (Introduction) states that soil samples will be collected using a geoprobe direct-push drill rig. In addition, the page number provided at the bottom of the page is incorrect (i.e., page 2 rather than 3) in Appendix B. Clarify which sampling device will be used to collect the soil samples and correct the typographical error for the page number in the revised Work Plan.

Comment 10

In Appendix B, Section 5.0 (Sample Collection), page 3, paragraph 4, the Permittee states, "[a]fter collecting the [PID] reading, additional material will be collected and placed into a clean glass jar as described above." It is not clear from the statement if the Permittee will use the soil collected in the glass jars for both the PID readings and the laboratory samples. Since some VOCs can potentially be volatilized and lost from the soil during the collection of the PID

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readings, the Permittee must not use the same soil samples for the laboratory samples. Soil samples collected for VOC analyses must be obtained using Encore or equivalent sampling devices or other method to collect undisturbed samples approved by NMED. Clarify the statement and include the provision in the revised Work Plan.

The Permittee must submit a revised Work Plan that addresses all of the comments contained in this Disapproval. Two hard copies and an electronic version on a CD/DVD of the revised Work Plan must be submitted to the NMED. The Permittee must also include a redline-strikeout version in an 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 **June 10, 2022**.

If you have questions regarding this letter, 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
H. Jones, Trihydro
L. Barr, EMNRD OCD
L. King, EPA Region 6 (6LCRRC)

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