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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

January 26, 2021

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

RE: APPROVAL WITH MODIFICATIONS
SOLID WASTE MANAGEMENT UNIT 1 REVISED INVESTIGATION REPORT
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-20-010

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *Solid Waste Management Unit 1 Revised Investigation Report* (Report), dated January 5, 2021, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee). NMED hereby issues this Approval with Modifications with the following comments.

Comment 1

In the response to NMED's *Disapproval Comment 2*, the Permittee states, "[e]xcavation will be followed by laboratory confirmation sampling of excavation vertical and horizontal extent." A detailed method for post-excavation confirmation sampling and the anticipated horizontal and vertical extent of excavation for each aeration lagoon and Evaporation Pond 1 must be described in the work plan required by NMED's *Disapproval Comment 14*.

In addition, the work plan must include a provision to remove additional soils where contaminant concentrations exceed the applicable screening levels in the confirmation samples and the collection of additional confirmation samples from the areas where additional excavation was conducted.

Furthermore, a contingency measure addressing contaminated groundwater below the water table, where applicable, must be developed and included in the work plan. For example, chemical oxidants or biological amendments may be placed on the excavation floors, where groundwater is detected. Amendments may also migrate with groundwater flow and aid in degrading contaminants. Additionally, sheet(s) of impermeable liner (e.g., high density polyethylene (HDPE) liner) may be placed above the excavation floor to eliminate potential seepage of groundwater into the backfill.

Comment 2

In the response to NMED's *Disapproval* Comment 3, the Permittee states, "[w]hile equipment blanks were not collected, MPC does not believe the integrity of the samples was compromised." The Permittee must propose to collect equipment blanks at a frequency of ten percent of the samples collected in the future. No revision required.

Comment 3

In the response to NMED's *Disapproval* Comment 4, the Permittee states, "[a]lthough the mercury soil analyses exceeded the holding times for the EPA Method 7471, this analysis was not proposed in the approved investigation work plan and was requested later to provide additional information on mercury concentrations across the ponds." The Permittee's response does not justify the acceptability of analytical data acquired outside the holding time. The analysis should have been conducted within the holding time. However, the Permittee also states, "[t]he TCLP mercury samples, which were proposed in the approved investigation work plan, were analyzed within the holding time," and "TCLP mercury results for all samples (berm and pond) were several orders of magnitude below the Code of Federal Regulations (CFR) TCLP screening level of 0.2 milligram per liter (mg/L)." The results of the TCLP mercury analysis indicate that the mercury exceedance in the soil samples is not likely. Accordingly, the Permittee is not required to recollect soil samples for mercury analysis. No revision required.

Comment 4

In the responses to NMED's *Disapproval* Comments 6 and 10, the Permittee states, "[a]n FID is designed to detect a broader range of compounds such as long-chained hydrocarbons, also known as SVOCs, in addition to the VOCs. Because both AL-1 and AL-2 are aeration lagoons, most of the lighter VOCs had volatilized or degraded during aeration leaving the heavier SVOCs in the sludge and hydrocarbon that infiltrated the underlying clay liner," and "an additional functional FID unit will be kept on-site." However, the FID instrument did not work properly because FID flame did not stay lit. The problem may be caused by high moisture content in the samples and may recur. A combustible gas indicator (e.g., Bacharach TLV Sniffer), while less

sensitive at low concentrations, is known to be more effective in screening soils that contain high moisture content. Evaluate an applicability of the use of a combustible gas indicator as a backup soil screening tool for future sampling events in SWMU 1 and provide a discussion in the work plan required by NMED's *Disapproval* Comment 14.

Comment 5

In the response to NMED's *Disapproval* Comment 7, the Permittee states, "[b]ased on the berm sampling results shown in Table 7, shallow berm soils can likely be segregated in the field during excavation and composite sampled to determine suitability as backfill." The TPH-DRO concentrations in the samples collected from locations SWMU 1-19 (berm) (2.5 ft), SWMU 1-22 (berm) (2.5 ft), SWMU 1-15 (berm) (2.5 ft), and SWMU 1-16 (berm) (2.5 ft) are recorded as 6,300 mg/kg, 2,100 mg/kg, 20,000 mg/kg, and 32,000 mg/kg, respectively, and exceed the applicable soil screening levels (SSLs) according to Table 7, *SWMU-1 Berm Sample Results*. The berm soils excavated at depths more than 2.5 feet below ground surface (bgs) must not be used as a backfill. However, the berm soils excavated at depths less than 1.5 feet bgs can be segregated and composite samples may be collected to evaluate a suitability for backfill use. Include the provision in the work plan required by NMED's *Disapproval* Comment 14.

Comment 6

In the responses to NMED's *Disapproval* Comments 9 and 13, the Permittee states, "[t]his standing water is likely from precipitation, with a possible contribution from shallow groundwater seepage (< 6 ft in depth)," and "[p]onded water observed in AL-1 and AL-2 is likely perched water trapped by the clay layer which underlies the ponds and results from precipitation and possible shallow groundwater seepage from the east and south." The water observed in the ponds likely originates from groundwater since wastewater discharge was discontinued in 2013 and the precipitation is minimal at the site; yet water persists in the ponds. The clay liner may have been contaminated with the groundwater beneath the ponds. Similarly, the sludge and hydrocarbons accumulated above the liner may have seeped into the groundwater through the liner. Accordingly, it is appropriate to completely remove the clay liner and excavate soils to a depth below the historic water table for ponds AL-1 and AL-2. Include the provision in the work plan required by NMED's *Disapproval* Comment 14.

Comment 7

In the response to NMED's *Disapproval* Comment 14, the Permittee states, "MPC will revise the report to state that a separate work plan will be submitted for future remedial excavation of the SWMU." NMED's *Disapproval* Comment 14 states, "NMED will establish a due date for the work plan upon approval of this Report." NMED hereby issues this Approval with Modifications. The Permittee must submit a separate work plan that describes all proposed activities related to removal of the Aeration Lagoons and Evaporation Pond 1 that includes a schedule for implementation of the approved work plan for NMED's review no later than **April 30, 2021**.

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The Permittee must address all comments in this letter in the work plan required by Comment 7 above.

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 Approval with Modifications, please contact Michiya Suzuki of my staff at 505-476-6046.

Sincerely,



Dave Cobrain
Program Manager
Hazardous Waste Bureau

cc: M. Suzuki, NMED HWB
C. Chavez, OCD
L. King, EPA Region 6 (6LCRRC)

File: Reading File and WRG 2021 File