



MICHELLE LUJAN GRISHAM
GOVERNOR

JAMES C. KENNEY
CABINET SECRETARY

Certified Mail - Return Receipt Requested



January 3, 2022

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

**RE: APPROVAL WITH MODIFICATIONS
SWMU-1 TEST PIT INSTALLATION LETTER REPORT
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
MCKINLEY COUNTY, GALLUP, NEW MEXICO
EPA ID # NMD000333211
HWB-WRG-21-018**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has received the Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee) *SWMU-1 Test Pit Installation Letter Report* (Report), dated October 27, 2021 and received on November 1, 2021. NMED has reviewed the Report, and hereby issues this Approval with Modifications with the following comments.

Comment 1

In the Test Pit Yield Testing Section, page 2 of 4, paragraph 2, the Permittee states, “[o]nly TP-2, TP-3 and TP-4 had sufficient water for testing.” According to Figure 1 (SWMU-1 Test Pit Locations), test pit TP-1 was advanced approximately 70 feet west of well OAPIS-1. During the test, groundwater was not detected in test pit TP-1 even though the screened interval of test pit TP-1 was completed between 5 to 15 feet below ground surface (bgs) as reported in Attachment A (Boring Logs). The screened interval of test pit TP-1 is recorded as 5 – 15 feet bgs according to Attachment A (Boring Logs). Based on the field observations, the depth of the water table at test pit TP-1 appears to dip more than 5 vertical feet across approximately 70 lateral feet across the ponds. Furthermore, previous measurements indicate that the depth to groundwater (DTW) in well OAPIS-1 is recorded as approximately 10 feet bgs. Since groundwater was not detected in test pit TP-1 during the test, the depth of the water table at test pit TP-1 is anticipated to be more than 15 feet bgs (below the bottom of the screened interval). In addition, previous groundwater depth measurement data indicate that the DTW in

SCIENCE | INNOVATION | COLLABORATION | COMPLIANCE

Hazardous Waste Bureau - 2905 Rodeo Park Drive East, Building 1, Santa Fe, New Mexico 87505-6313
Telephone (505) 476-6000 - www.env.nm.gov

Mr. Moore
January 3, 2022
Page 2

well GWM-1 located on the northwest corner of pond AL-2 is recorded as approximately 20 feet bgs. This data also suggests that the groundwater gradient across the ponds is very steep. Comments 5 and 7 of the NMED's December 14, 2021 *Disapproval SWMU-1 Closure Plan* (Disapproval) states, "the proposed excavation depth must be extended to depths of the historic water table [and] the groundwater elevation at well GWM-1 must be referenced as a minimal depth of the excavation at the western boundary of AL-2 and EP-1." Although revisions to the Report are not required, the Permittee must acknowledge that the volume of excavated soils may be larger than anticipated because of the observed depths of the water table across the ponds. Address this comment in the revised Closure Plan to be submitted no later than **February 11, 2022**. No response required.

Comment 2

In the Test Pit Yield Testing Section, page 2 of 4, paragraph 3, the Permittee states, "[o]bservation wells for TP-3 consisted of NAPIS-2 and NAPIS-3, located approximately 22 ft and 45 ft from the TP-3. No influence was observed during the yield test in these wells." The screened interval of test pit TP-3 is recorded as 5 to 15 feet bgs as reported in Attachment A (Boring Logs). The depth of the interceptor trench in the Permittee's September 30, 2021 Closure Plan is proposed to be 5 feet bgs which will not be installed deep enough to construct an effective interceptor trench. Comment 18 of the NMED's December 14, 2021 Disapproval states, "[t]he depth of the interceptor trench must be lower than the depth of the excavation or the historic water table at a minimum." Since the test pits were installed to the depths comparable to the surrounding water table depths (greater than 10 feet bgs), the data collected from the test will be useful to design the interceptor trench. However, since no hydrostatic influence was observed in the upgradient neighboring wells, the proposed depth of the interceptor trench must be greater than 15 feet bgs in order to ensure that there is the ability to sufficiently depress the water table across the ponds. NMED recommends that the depth of the interceptor trench be comparable to the excavation depth on the western perimeter of the ponds (e.g., 20 feet bgs). Address this comment in the revised Closure Plan. No response required.

Comment 3

In the Analysis of Water Levels at SWMU-1 Section, page 3 of 4, paragraph 1, the Permittee states, "[t]he catchment area of the former API most likely contributed storm water to AL-1 in the past (the drain line was capped in May 2021)." The aerial photographs depict the persistent presence of standing water in the ponds. The standing water did not recede after the drainage pipe was capped and approximately 63,000 gallons of water was subsequently removed from pond AL-2. After the water was removed, water still remained in the pond. It is probable that groundwater seepage is contributing to the persistent presence of standing water in the ponds. No revision to the Report is necessary.

Comment 4

In the Analysis of Water Levels at SWMU-1 Section, page 3 of 4, bullet 3, and Conclusion, page 3

Mr. Moore
January 3, 2022
Page 3


of 4, number 3, the Permittee states, “[a]t a minimum, the seepage rate is likely low enough to control with standard excavation practices, such as a shallow diversion trench installed at the excavation bottom [and a] likely source of the accumulated water in ponds AL-1 and AL-2 is surface water and precipitation.” Figure 2 (SWMU-1 and NAPIS Cross Section) depicts that groundwater level at test pit TP-1 is approximately 10 feet bgs and also depicts groundwater intersecting the screened interval of test pit TP-1; however, Figure 2 is not accurate because groundwater was not present in the screened interval of test pit TP-1 during the test. The water levels and surface water observed in the ponds depicted in the cross-sections of Figure 2 do not correspond well with the field observations (see Comment 1) and conditions (e.g., construction depth of the pond is approximately 14 feet, not less than 5 feet as depicted in Figure 2). Furthermore, the seepage rate may also be greater than anticipated and the depth of the interceptor trench will need to be extended (see Comment 2). Although no revision is required, the comment must be addressed in the revised Closure Plan.

Comments 1 through 4 must be addressed and incorporated in the revised Closure Plan. The revised Closure Plan must be submitted to NMED no later than February 11, 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,



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 (6LCRRC)
H. Jones, Trihydro

File: Reading File and WRG 2021 file