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Certified Mail - Return Receipt Requested



December 2, 2021

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

**RE: APPROVAL WITH MODIFICATIONS  
[REVISED] MARKETING TANK FARM LASER-INDUCED FLUORESCENCE/HYDRAULIC  
PROFILING INVESTIGATION REPORT  
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY  
MCKINLEY COUNTY, GALLUP, NEW MEXICO  
EPA ID # NMD000333211  
HWB-WRG-21-007**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has completed its review of the Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee) *[Revised] Marketing Tank Farm Laser-Induced Fluorescence/Hydraulic Profiling Investigation Report* (Report), dated September 14, 2021 and received September 29, 2021. NMED has reviewed the Report, and hereby issues this Approval with Modifications with the following comments.

**Comment 1**

The response to NMED's Disapproval Comments 2, 8, 11, and 26 references the Sitewide LIF/HP Investigation Report, which had not been submitted to NMED at the time the Report was submitted. NMED received the *Tank 570 Release and Additional Areas LIF/HP Investigation Report* on October 28, 2021 and this submittal is presumed to be the referenced Sitewide LIF/HP Investigation Report; however, it is not appropriate to reference a document that has not been submitted or approved by NMED. No response required.

**Comment 2**

In the response to NMED's Disapproval Comments 2, the Permittee states, "[t]he southern occurrence (borings MKTF-LIF-90, MKTF-LIF-77, MKTF-79A, and MKTF-LIF-67) is migrating to the

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southwest towards the 90-day pad but has not reached the water seep located just to the east of the pad (west of MKTFLIF-90)." The statement contains a typographical error. The referenced boring MKTF-79A is identified as MKTF-LIF-79A in Figure 3-2 (Approximate Locations of SPH Occurrence Marketing Tank Farm/Loading Rack). Resolve the discrepancy and provide applicable replacement pages.

### **Comment 3**

In the response to NMED's Disapproval Comments 10, the Permittee states, "[t]he air knife excavations were backfilled with excavated material prior to installing the LIF/HP boreholes. Therefore, the LIF/HP interval of 0-5 ft was not representative of undisturbed subsurface conditions." The response to NMED's Disapproval Comment 4 states that the borrow pit hydrocarbon seep area has had approximately 20 vertical feet of soil removed causing its surface elevation to be lower. The LIF/HP investigation must be conducted on undisturbed soil at depths between zero to five feet below ground surface (bgs) within the borrow pit hydrocarbon seep area because the smear zone may be present at those depths. Underground utilities are not commonly present in the borrow pit and therefore use of the air knife excavation is not necessary. When soil borings are advanced within the borrow pit hydrocarbon seep area, collect the data from undisturbed soil intervals. Include this provision in future work plans. No response is required.

### **Comment 4**

In the response to NMED's Disapproval Comments 14, the Permittee states, "[t]he gasoline occurrence appears to bifurcate due to the row of LIF/HP borings with residual or no response (e.g., MKTF-LIF-64, MKTF-LIF-65, MKTF-LIF-132) that splits the northern and southern occurrences." The location of boring MKTF-LIF-132 is not depicted on Figure 3-1 (LIF Sample Locations). The data for boring MKTF-LIF-132 is also not included in the Report. Revise Figure 3-1 to depict the location of the boring and include the data regarding boring MKTF-LIF-132 and provide replacement pages.

### **Comment 5**

In the response to NMED's Disapproval Comments 20, the Permittee states, "MPC respectfully disagrees with further investigation near MKTF-LIF-56. Based on the boring location within an area of known SPH and dissolved phase impacts, MPC does not see the value in doing additional investigation in the area." The Permittee indicates that the TPH-DRO concentrations in the groundwater samples collected from wells MKTF-23, -24, and -31 located downgradient and cross-gradient of boring MKTF-LIF-56, where diesel was detected, have been recorded as below the detection limit. Therefore, this observation may imply that the free phase diesel plume is likely stationary and not migrating downgradient of boring MKTF-LIF-56 at this time. If TPH-DRO is detected in wells MKTF-23, -24, and -31 in the future, the plume may be expanding and must be investigated. Acknowledge the provision in the response letter.

**Comment 6**

The response to NMED's Disapproval Comments 20 discusses the colors and shapes of peaks specific to naphtha, gasoline, and diesel. The method used to distinguish each product appears to be based on professional judgement since the product comingles. The distinction of each product identified by the LIF investigation may only be discussed qualitatively. In order to confirm each product type, discrete soil samples must be collected from the corresponding locations for the future investigation, as necessary, for fuel fingerprint or other laboratory analysis. Acknowledge this provision in the response letter.

**Comment 7**

In the response to NMED's Disapproval Comments 21, the Permittee states, "[t]he northern extent of the diesel and naphtha was not delineated because of known dissolved phase constituents and SPH in wells MKTF-49 and MKTF-50. These wells are located north of MKTF-LIF-84 and MKTF-LIF-86." SPH was detected in well MKTF-50 in September 2020; however, SPH has not previously been detected in well MKTF-49, which is located south of well MKTF-50 and closer to the naphtha release origin. Since SPH has not previously been detected in well MKTF-49, the detection of SPH in well MKTF-50 is not likely related to the naphtha release. Regardless, wells MKTF-49 and -50 may serve as sentinel wells for the naphtha plume. If SPH (as naphtha) is detected in well MKTF-49 in the future, the naphtha plume may be expanding and the extent must be investigated. Acknowledge this provision in the response letter.

**Comment 8**

In the response to NMED's Disapproval Comments 30, the Permittee states, "[s]amples were collected based on visual and olfactory observations." Since the LIF investigation was conducted at the time and % RE data was available to evaluate the most contaminated intervals at the time of sampling, soil samples should have been collected based on the available data to support the evaluation of the most contaminated intervals. Note that visual and olfactory observations can miss potential contamination in soils; therefore, soil sampling intervals must be evaluated using field screening devices (e.g., LIF, PID) rather than only visual and olfactory observations in the future investigations.

**Comment 9**

In the response to NMED's Disapproval Comments 37, the Permittee states, "[t]he recovery well between MKTF-LIF-77 and MKTF-LIF-90 was installed the week of July 19, 2021. A summary report including all wells installed during that week will be submitted to NMED within 90 days of completion of the work. MPC will not be submitting an additional interim measures report for this reason." The referenced report has not been submitted to NMED as of October 21, 2021, which has passed 90 days from completion of the work. The Permittee must submit the referenced report. The Permittee also appears to be describing a well completion report rather than an interim measures report. The interim measures report is required to provide a summary of monitoring data and evaluation for the effectiveness of the remediation system. Therefore, the referenced and required reports are different and the referenced report cannot

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replace or substitute for the required interim measures report. Submit the required interim measures report no later than **December 31, 2021**, as required by NMED's Disapproval Comments 37.

**Comment 10**

In the response to NMED's Disapproval Comments 38, the Permittee states, "Table 3-1 has been revised to include applicable soil screening levels (Attachment B)." Table 3-1 (LIF Investigation – Soil Sample Results) includes NMED industrial soil screening levels to compare with the soil concentrations. Note that the screening criteria (NMED industrial soil screening levels) are only applicable to the soils collected from depths between zero to one foot below ground surface (bgs). Table 3-1 indicates that all soil samples were collected from the intervals deeper than depths of one foot bgs; thus, the selected screening criteria are not applicable. Revise the table to include all relevant soil screening criteria (residential, construction worker) and provide a replacement table.

The Permittee must address all comments in this Approval with Modifications and submit a response letter, the replacement pages, table and figure, and an electronic version on a CD/DVD of the revised Report no later than **February 18, 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)

File: Reading File and WRG 2021 file