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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

June 10, 2019

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

**RE: DISAPPROVAL
[REVISED] INVESTIGATION REPORT SOLID WASTE MANAGEMENT UNIT
(SWMU) NO. 10 SLUDGE PITS
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-16-001**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *[Revised] Investigation Report Solid Waste Management Unit (SWMU) No. 10 Sludge Pits* (Report), dated October 2018, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee). NMED hereby issues this Disapproval. The Permittee must address the following comments.

Comment 1

The cover letter dated November 8, 2018 is incorrectly titled as the “*Revised Investigation Report for SWMU 12 (Sludge Pits)*.” The investigation is pertinent to SWMU 10 rather than SWMU 12. In addition, the cover letter states, “[e]nclosed please find two (2) copies of the report entitled *Investigation Work Plan...*” The submittal is a report rather than a work plan. Correct the typographical errors and submit a revised cover letter.

Comment 2

A red-line strikeout (RLSO) version of the revised Report was not included with the submittal. The Permittee must provide an accurate and complete RLSO versions that shows where all changes were made to the documents. Failure to provide RLSO version slows review by creating the potential for changes to be overlooked.

Comment 3

The Permittee's response to NMED's Comment 1 states, "NMED suggests that contamination in soil from other sources was identified; however, there is no evidence of "other sources" based on the historical research of the area of SWMU 10, field observations during the investigation, or the chemical analyses from samples of soil." There are several potential sources upgradient of SWMU 10 for the contaminants detected in soil samples collected during the investigation. The Permittee used the Aeration Basin soil laboratory analytical results to calculate the site-specific dilution attenuation factor (DAF) for SWMU 10. The Permittee's use of a site-specific DAF resulted in "chasing the contamination" beyond the SWMU boundary, which was unnecessary for the scope of this investigation. As a result, the intent of the investigation became unclear, because the Permittee investigated soils in general rather than soils located specifically within the Sludge Pits. Provide a figure based on the historic documents included in Appendix H (SWMU 10 Historical Aerial Photo) that depicts the soil boring locations overlain on the pit locations.

Comment 4

The Permittee's response to NMED's Comment 3 states, "[p]ursuant to Comment 1 above ("use of a site-specific dilution attenuation factor (DAF) resulted in investigation beyond the boundary of the SWMU and collected data related to contamination from other sources . . .") no further investigation is proposed. It appears that NMED believes the existing borings have delineated the lateral extent of SMWU 10 and any potential releases from the SWMU, to the extent of possibly detecting releases from other unassociated releases (e.g., the Old API Separator, release from the wastewater pipeline, etc.)." The Permittee misinterpreted the intent of NMED's Disapproval Comment 1. The Permittee must demonstrate that the soil borings drilled during the investigation were within the historic boundary of the SWMU.

Comment 5

The Permittee's response to NMED's Comment 4 Item 3 states, "[t]he land surface elevations used to calculate the elevation on top of bedrock were estimated using the site topographic map, which was prepared based on a site-wide survey conducted by Precision Engineering in 2008." According to the boring logs included in Appendix C (Boring Logs), the layer of claystone (bedrock) is clearly distinguished from the layer above it (e.g., clay) in most boring logs. However, previous borings installed in the vicinity (e.g., 1990 – 1994 soil borings) did not depict such clear distinction; the lithology was entirely described as clay in most boring logs. Claystone and clay are presumably similar at the site and the interpretation of the distinction may be subjective. Although the land surface elevation is likely proportional to the elevation on top of the bedrock, the data presented in Figure 11 (Estimated Elevation on Top of Bedrock) are subjective. Additionally, subsurface conditions in the vicinity of SWMU 10 are altered by previous pit construction and soil excavation activities. Remove Figure 11 from the revised

Report. In addition, during future drilling of borings, take photographs of soil cores that depict the distinction between the layers and include them in the submittal.

Comment 6

The Permittee's response to NMED's Comment 4 Item 7 states, "Figure 30 (now Figure 26) has been revised to use the higher value of 120 ug/L [in groundwater sample collected from well SWMU 25]." The value remains as 110 ug/L in the figure. Correct the discrepancy in the revised Report.

Comment 7

The Permittee's response to NMED's Comment 4 Item 8 states, "[t]he concentration of 2 methylnaphthalene [in groundwater sample collected from well SWMU 10-25] has been revised to the higher value of 180 ug/l on Figure 31 (now Figure 27)." The value remains as 140 ug/L in the figure. Correct the discrepancy in the revised Report.

Comment 8

The Permittee's response to NMED's Comment 6 states, "[t]he wastewater treatment system is designed to be capable of removing metals." Discuss how metals are removed by the wastewater treatment system in the revised Report.

Comment 9

The Permittee's response to NMED's Comment 7 states, "[t]his same comment [regarding the disposal of investigation derived waste in the bundle cleaning pad] has been included in other recent NMED correspondence and has already been addressed. Provide citations for the references that address the issue in a response letter.

Comment 10

The Permittee's response to NMED's Comment 8 states, "[h]owever, it is not possible to choose a dilution factor based on a desired outcome, but rather the dilution factor is driven by the sample-specific concentrations of other constituents that mandate dilution of the sample in order for the sample to be analyzed." The diesel and motor oil range organics (DRO and MRO) concentrations in the soil sample collected from boring SWMU 10-17 at depths between six and eight feet bgs was recorded as 7,800 and <4,776 mg/kg, respectively according to Table 7. Presumably, the dilution required by DRO analysis prevents quantification of MRO. The analytical method may be modified to analyze MRO separately from DRO. In addition, more than one analytical method is often available to analyze the same constituents. This appears to be a recurring issue. The Permittee must discuss a measure to analyze gasoline range organics (GRO), DRO and MRO independently without being affected by other constituents' dilution factors. Include the discussion in the response letter.

Comment 11

The Permittee's response to NMED's Comment 11 states, "[t]he only pipeline near temporary well SWMU 10-3 is an above-ground pipeline and there have not been any documented leaks in this area, which would have been easily observed and reported." The statement does not explain the elevated chloride concentration in the groundwater sample collected from well SWMU 10-3.

Explain the basis for the elevated chloride concentration in the vicinity of SWMU 10-3 in the revised Report.

Comment 12

The Permittee's response to NMED's Comment 16 states, "[w]ith removal of the DAF soil screening levels the above discussion is no longer relevant and has been removed." It is appropriate to remove the discussion pertinent to DAF; however, the response does not address Comment 16. The screening level referenced in Comment 16 is the residential soil screening level rather than the DAF soil screening level. Address the comment in the revised Report.

Comment 13

Section 5 (Regulatory Criteria) states, "[t]here are no soil screening levels for gasoline range organics and the individual compounds listed for groundwater (gasoline range criteria) are included in the list of analytes used for site samples." Since a revised Report is required and a further investigation is necessary at SWMU 10, evaluate all detections relative to the screening levels listed in the *Risk Assessment Guidance for Site Investigations and Remediation Volume I Soil Screening Guidance for Human Health Risk Assessments* (Guidance), dated February 2019. The Guidance lists the screening levels for TPH-GRO as 100 mg/kg (residential), 500 mg/kg (industrial/construction worker) and 10.1 ug/L (groundwater). Include the screening levels in the revised Report.

Comment 14

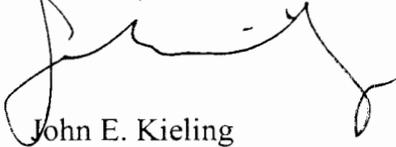
The source of screening levels for TPH-DRO and MRO is indicated as "(9)" in Table 7 (SWMU 10 Soil Analytical Results Summary). However, the note for "(9)" is missing and not explained in Table 7. Correct the table in the revised Report.

The Permittee must address all comments in this Disapproval and submit a revised Report. Two bound hard copies and two electronic versions must be submitted to NMED. In addition, include a red-line strikeout version in electronic format showing where all revisions to the Report have been made. The revised Report must be accompanied with a response letter that details where revisions have been made, cross-referencing NMED's numbered comments. The revised Report must be submitted to NMED no later than **August 30, 2019**.

Mr. Moore
June 10, 2019
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If you have questions regarding this Disapproval, please contact Michiya Suzuki of my staff at 505-476-6059.

Sincerely,

A handwritten signature in black ink, appearing to read "John E. Kieling". The signature is fluid and cursive, with a large initial "J" and a long horizontal stroke.

John E. Kieling
Chief
Hazardous Waste Bureau

cc: K. Van Horn, NMED HWB
D. Cobrain, NMED HWB
M. Suzuki, NMED HWB
C. Chavez, OCD
L. King, EPA Region 6 (6LCRRC)
B. Moore, WRG

File: Reading File and WRG 2019 File
HWB-WRG-16-001