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CERTIFIED MAIL - RETURN RECEIPT REQUESTED



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September 12, 2019

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

**RE: APPROVAL WITH MODIFICATIONS
[REVISED] INVESTIGATION WORK PLAN AREA OF CONCERN 35
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID# NMD000333211
HWB-WRG-18-010**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *[Revised] Investigation Work Plan Area of Concern 35 (Work Plan)*, dated July 2019, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (Permittee) and hereby issues this Approval with Modifications. The Permittee must address the following comments.

Comment 1

In the responses to NMED's *Disapproval* Comments 1 and 3, the Permittee states, "[n]one required." Although no revision is required to the Work Plan to address these comments, these comments provide NMED's direction and still require the Permittee's compliance and response. The Permittee's response does not clearly express concurrence, but NMED assumes as such. The same comments were previously provided in the NMED's correspondence letters (e.g., Comment 1 in the NMED's *Approval with Modifications Investigation Report OW-14 Source Area*, dated August 19, 2019). Respond to future comments where there is concurrence with an acknowledgement.

Comment 2

In the response to NMED's *Disapproval Comment 2*, the Permittee states, "[t]he discussion in Section 2.1 has been revised to note the lack of documentation on final cleanup actions." Section 2.1 (Main Truck Loading Rack Area) states, "[n]o final documentation of the spill response for the December 2009 release has been located to determine if the spill response was fully completed." The intent of NMED's *Disapproval Comment 2* was not limited to this specific incident; it was intended to point out the lack of follow up regarding the historic cleanup of releases. No response required.

Comment 3

In Section 2.5 (Prior Investigations) the Permittee states, "[o]n July 8, 2013, one pint of fluorescent FWT red dye was poured into a sump/drain at the second bay from the south end at the truck loading rack. After several minutes the red dye was observed in the sewer box located on the west side of the bundle cleaning pad, confirming the flow of the drain from the truck rack to the north in the main process sewer pipeline. A second pint of the same red dye was added to the same sewer box on the west side of the bundle pad. The excavations at the hydrocarbon seep area (located west of the crude tanks) were inspected each day afterward and on the 8th day, July 16, 2018, red dye as identified in one of the excavations." There appears to be a typographical error, confirm that the dates are accurate in a response letter.

Comment 4

In the response to NMED's *Disapproval Comment 6*, the Permittee states, "[t]he water levels to which NMED refers are the water levels that exist under confined conditions at MKTF-17 and MKTF-18 and are not necessarily reflective of water levels in the upper fill materials... The anticipated well depth of 10 feet at the two new wells is based on the bottom of the fill being at 8 feet bgl in MKTF-17 and 10 feet bgl in MKTF-18..." NMED provided a comment regarding these MKTF wells in the letter dated August 23, 2019 *Second Disapproval Response to Disapproval Work Plan 2015 Annual Groundwater Report Comments*, Comment 10. The comment stated, "[t]he Permittee suggests there are two separate water bearing zones within 20 feet bgs; however, it is likely that the two-separate water bearing zones are hydraulically connected. If the Permittee installs wells that are screened to only ten feet bgs as proposed, the wells may not produce sufficient groundwater. Propose to install replacement wells with comparable depths to the original wells with longer screens that intersect the water table in the revised Work Plan." The saturation observed in the upper fill likely originates from the sandy clay/clayey sand layer beneath the clay layer. According to the boring logs in Appendix A, the clay layer is moist throughout the soil column, suggesting that the layer may not be completely confining but permeable or leaky. Therefore, if the Permittee installs wells that are screened to ten feet bgs as proposed, the wells may not produce sufficient groundwater. Install replacement wells with comparable depths to the original wells, with longer screens that intersect the water table.

Comment 5

In the response to NMED's *Disapproval* Comment 6, the Permittee states, "[t]he text in Section 4.1 is revised to clarify these wells will likely be installed under the Investigation Work Plan for the Up-Gradient MKTF wells, as that work plan has already been approved and field work is scheduled to start on July 30, 2019." NMED approved the *Investigation Work Plan Up-Gradient MKTF Wells* in a letter dated March 7, 2019; however, NMED did not approve the well installation method described in the response letter. Comment 2 in the *Approval with Modifications* states, "Section 4.2.1, Drilling Activities, page 4-3, states that slotted (0.01 inch) PVC well screen will be placed in the borings and will extend for 10 feet, unless a longer screen length is necessary to screen across all saturated and likely transmissive zones while also extending above the static water level in the well. In order to accommodate the decreasing trend of groundwater elevations in recent years, a longer screened interval (e.g., 20-foot screen) may be more appropriate for the proposed wells." Section 4.2.1 reads, "[a]ppropriate actions (e.g., installation of protective surface casing or relocation of borings to a less threatening location) will be taken to minimize any negative impacts from investigative borings. Slotted (0.01 inch) PVC well screen will be placed at the bottom of the borings at the two permanent wells and will extend for a maximum of 10 feet." The Permittee implied that ten feet or longer screens would be installed to intersect the water table but did not indicate that the total depth of the wells would be ten feet below ground surface (bgs) or less. The Permittee's statement was unclear and NMED did not intend to approve the work plan without modification, if the total depth of these wells were proposed to be less than ten feet bgs. The Permittee must not reference this approval to justify the proposed well installation method. Additionally, if these wells were already installed to the depths that only screen across the upper fill and did not produce sufficient water, these wells must be replaced. If these wells have already been installed, provide a status for whether the wells produce sufficient water in the response letter.

Comment 6

In the response to NMED's *Disapproval* Comment 10, the Permittee states, "[n]itrate and nitrite has been added to the listed analyses in Section 4.6." Refer to Comment 9 in the NMED's *Approval with Modifications Response to Disapproval Annual Groundwater Monitoring Report: Gallup Refinery – 2017*, dated August 23, 2019. The Permittee must conduct separate nitrate and nitrite analyses.

Comment 7

In the response to NMED's *Disapproval* Comment 12, the Permittee states, "[a]s noted above, we have added two an [sic] additional boring[s] along the pipeline rack to the south of MKTF-16." Only one proposed soil boring location along the pipeline rack to the south of MKTF-16 is shown on Figure 6 (Proposed Sampling Locations). Provide a revised figure that shows the other location along the pipeline rack to the south of MKTF-16.

Comment 8

In the Executive Summary the Permittee states, “[t]his investigation will focus on identification of potential source areas that have in the past or are continuing to contribute to the observed impacts to groundwater. Twenty-five soil borings are proposed to evaluate the presence of source areas.” In the Introduction the Permittee states, “[t]he purposes of this investigation are to: determine the source of the elevated concentrations of petroleum hydrocarbon constituents (e.g., BTEX) and MTBE detected in groundwater samples collected from the MKTF wells in the area of AOC 35; and evaluate the groundwater quality in the shallow perched zone that has been observed in MKTF-7, - 17 and -18 at the base of the surficial fill material.” The Permittee is also investigating potential migration pathways and will begin to define the extent of contaminant migration from the source areas.

Comment 9

In Section 4.1 (AOC 35 Investigation) the Permittee states, “[t]wo new shallow monitoring wells are proposed; one adjacent to existing monitoring well MKTF-17 and the second near MKTF-18 ... Additional monitoring wells were requested at these locations in comments received from NMED on the 2015 Annual Groundwater Monitoring Report. A separate work plan (Investigation Work Plan Up-Gradient MKTF Wells dated January 2019) also contains provisions for the installation of shallow wells at the same locations. As the Investigation Work Plan Up-Gradient MKTF Wells was approved with modifications on March 7, 2019, it likely these two wells will be installed under the Up-Gradient MKTF Wells Work Plan.” Ensure that the information regarding the wells is reported in both reports for consistency. At some point it may make sense to integrate the groundwater information gathered through individual investigations into an all-inclusive report regarding groundwater conditions at the facility.

Comment 10

In Section 4.2.1 (Drilling Activities) the Permittee states, “[d]ue to physical access limitations (e.g., near the tank water draws) and high traffic concerns in other locations, the soil borings will be completed using hand augers or a geo-probe using a macrocore for shallow intervals, converting to dual tube for deeper intervals. Both soil and groundwater samples can be collected using the dual tube technology.” During a meeting on August 14, 2019 it was discussed that the drilling planned in high traffic areas may be able to be completed during the Facility’s turnaround period. If other methods of drilling and sampling are used because access to the area is not an issue, discuss any changes in the investigation report.

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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 any questions regarding this letter, please contact Kristen Van Horn at (505) 476-6046.

Sincerely,



John E. Kieling
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
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