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Cabinet Secretary

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Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

February 16, 2021

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

RE: **APPROVAL WITH MODIFICATIONS**  
**DISAPPROVAL FACILITY WIDE GROUND WATER MONITORING WORK PLAN – UPDATES**  
**FOR 2020**  
**WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY**  
**EPA ID # NMD000333211**  
**HWB-WRG-20-012**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *Disapproval Facility Wide Ground Water Monitoring Work Plan – Updates for 2020* (Response), dated January 8, 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**

The response to NMED's *Disapproval* Comment 5 states, "SPH will enter the well and depress the water table as the SPH tries to equilibrate with the SPH head in the soil column outside the monitoring well," and "[t]he actual thickness of the SPH in the soil column may only be a few inches, but due to the mobility of the SPH, the thickness in the monitoring well may be several

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feet.” Note that the mobility of SPH is much less than that of groundwater and a fluctuation of the groundwater elevation may significantly affect observed SPH thickness in a well. NMED agrees that observed SPH measurements may not accurately reflect site conditions. The Permittee only discusses the condition when observed SPH thickness overestimates SPH thickness in the surrounding formation; however, does not discuss the condition when observed SPH thickness underestimates SPH thickness in the surrounding formation. For example, if the screened intervals of a monitoring well are submerged below the water table, SPH will not enter the well and the SPH thickness in the soil can be underestimated. The screened intervals of some pertinent wells are submerged below the water table and SPH thickness may be underestimated at these locations. Discuss conditions when observed SPH thickness can be underestimated in the surrounding formation in the revised Work Plan and provide replacement pages.

#### **Comment 2**

The response to NMED’s *Disapproval* Comment 11 states, “[a] reference section has been added to the revised report and individual footnotes have been removed.” The reference section is appropriately added to the Work Plan; however, the Table of Contents is not updated to include the reference section. Include the reference section in the Table of Contents and provide replacement pages.

#### **Comment 3**

The response to NMED’s *Disapproval* Comment 17 states, “[t]he referenced chromium exceedance was an incorrect entry and the actual result for chromium is <0.006 mg/l.” Provide the laboratory report that shows the result of the chromium analysis for well NAPIS-2.

In addition, although the response provides a clarification for the direction provided by Comment 12 of NMED’s *Approval with Modifications Annual Ground Water Monitoring Report Gallup Refinery – 2018*, dated January 22, 2020, it does not address other comments that directed revisions to the monitoring program. To clarify, NMED’s *Disapproval* Comment 17 states, “[r]eference all relevant NMED’s comments that directed revisions to the monitoring program and provide a discussion in the revised Work Plan,”; therefore, the Permittee must reference NMED’s relevant comments that directed revisions to the monitoring program. The following are some examples:

- a) Comment 6 in NMED’s *Disapproval Natural Attenuation Assessment and Proposed Workplan for the Hydrocarbon Seep Area*, dated January 26, 2021, states, “[p]ropose to conduct sulfide analysis for pertinent wells in the next groundwater monitoring work plan update.” Address this comment in the 2020 Work Plan.
- b) NMED’s *Approval Hydrocarbon Seep Interim Measures 2020 First Quarter Status Report, and Hydrocarbon Seep Interim Measures 2020 Second Quarter Status Report*, dated November 23, 2020, states, “the frequency of the water level measurements must be

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increased to biquarterly in order to evaluate potential effects of idling operations.” NMED’s *Approval Hydrocarbon Seep Interim Measures 2020 Third Quarter Status Report*, dated December 11, 2020, subsequently approved proposed monthly gauging for all relevant wells. Since the gauging frequency will be increased in 2020, it is appropriate to update the monitoring frequency in the 2020 Work Plan.

- c) Comment 7 in NMED’s *Disapproval Annual Groundwater Monitoring Report Gallup Refinery – 2019*, dated November 23, 2020, states, “[p]ropose to conduct 1,4-dioxane analysis using EPA Method 8270 SIM for the samples collected from the West LDU in the 2021 Facility-wide Groundwater Monitoring Work Plan.” Although Comment 7 directed the Permittee to address the comment in the 2021 Work Plan, this direction must be addressed in the 2020 Work Plan because the 2020 Work Plan requires other revisions and submittal of a revised Work Plan.
- d) Comment 13 in NMED’s *Disapproval Annual Groundwater Monitoring Report Gallup Refinery – 2019*, dated November 23, 2020, states, “propose to conduct 1,4-dioxane analysis using EPA Method 8270 SIM for wells OW-50 and OW-52 in the 2021 Facility-wide Groundwater Monitoring Work Plan.” Although Comment 13 directed the Permittee to address the comment in the 2021 Work Plan, this direction must be addressed in the 2020 Work Plan because the 2020 Work Plan requires other revisions and submittal of a revised Work Plan.
- e) Comment 22 in NMED’s *Disapproval Annual Groundwater Monitoring Report Gallup Refinery – 2019*, dated November 23, 2020, states, “propose to analyze for 1,4-dioxane using EPA Method 8270 SIM and 1,2-dibromoethane (EDB) using EPA Method 8011 for groundwater samples collected from well OW-11 in the 2021 Facility-wide Groundwater Monitoring Work Plan.” Although Comment 22 directed the Permittee to address the comment in the 2021 Work Plan, this direction must be addressed in the 2020 Work Plan because the 2020 Work Plan requires other revisions and submittal of a revised Work Plan.
- f) Comment 25 in NMED’s *Disapproval Annual Groundwater Monitoring Report Gallup Refinery – 2019*, dated November 23, 2020, states, “[p]ropose to conduct pesticide analysis for the water samples collected from pond EP-2 using EPA Method 8081 in the 2021 Facility-wide Groundwater Monitoring Work Plan.” Although Comment 25 directed the Permittee to address the comment in the 2021 Work Plan, this direction must be addressed in the 2020 Work Plan because the 2020 Work Plan requires other revisions and submittal of a revised Work Plan.
- g) Comment 26 in NMED’s *Disapproval Annual Groundwater Monitoring Report Gallup Refinery – 2019*, dated November 23, 2020, states, “[p]ropose to discontinue pesticide analysis for the samples collected from ponds EP-3, EP-12A, and EP-12B in the 2021

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Facility-wide Groundwater Monitoring Work Plan.” Although Comment 26 directed the Permittee to address the comment in the 2021 Work Plan, this direction must be addressed in the 2020 Work Plan because the 2020 Work Plan requires other revisions and submittal of a revised Work Plan.

- h) Comment 30 in NMED’s *Disapproval Annual Groundwater Monitoring Report Gallup Refinery – 2019*, dated November 23, 2020, states, “[p]ropose to conduct PFAS analysis for the groundwater samples collected from well OW-63 in the 2021 Facility-wide Groundwater Monitoring Work Plan.” Although Comment 30 directed the Permittee to address the comment in the 2021 Work Plan, this direction must be addressed in the 2020 Work Plan because the 2020 Work Plan requires other revisions and submittal of a revised Work Plan.
- i) Comment 52 in NMED’s *Disapproval Annual Groundwater Monitoring Report Gallup Refinery – 2019*, dated November 23, 2020, states, “[t]he Permittee must continue to conduct 1,4-dioxane analysis using EPA Method 8270 SIM for groundwater sample collected from well SMW-4. Propose to continue the analysis in the 2021 Facility-wide Groundwater Monitoring Work Plan...” Although Comment 52 directed the Permittee to address the comment in the 2021 Work Plan, this direction must be addressed in the 2020 Work Plan because the 2020 Work Plan requires other revisions and submittal of a revised Work Plan.
- j) Comment 52 in NMED’s *Disapproval Annual Groundwater Monitoring Report Gallup Refinery – 2019*, dated November 23, 2020, states, “[t]he Permittee must continue to conduct 1,4-dioxane analysis using EPA Method 8270 SIM for groundwater sample collected from well SMW-4. Propose to continue the analysis in the 2021 Facility-wide Groundwater Monitoring Work Plan.” Although Comment 52 directed the Permittee to address the comment in the 2021 Work Plan, this direction must be addressed in the 2020 Work Plan because the 2020 Work Plan requires other revisions and submittal of a revised Work Plan.

Address the comments above and all other relevant NMED’s comments that directed revisions to the 2020 monitoring program. Section 6.0 and all relevant tables must be updated and replacement pages must be provided.

The Permittee must address all comments above and submit a response letter, laboratory report, replacement pages, and an electronic version of the revised Work Plan no later than **March 31, 2021**.

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

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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 505-690-6930.

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

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**State of New Mexico**  
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**Oil Conservation Division**  
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COMMENTS

Action 19479

**COMMENTS**

|                                |                              |              |        |                |              |
|--------------------------------|------------------------------|--------------|--------|----------------|--------------|
| Operator:                      |                              |              | OGRID: | Action Number: | Action Type: |
| WESTERN REFINING SOUTHWEST, IN | 6700 Jefferson NE, Suite A-1 | Albuquerque, | 705791 | 19479          | DISCHARGE    |
| NM87109                        |                              |              |        |                | PERMIT       |

|            |                              |              |
|------------|------------------------------|--------------|
| Created By | Comment                      | Comment Date |
| cchavez    | NMED 2020 FWGWMWP 2-16-2021. | 03/02/2021   |

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**Santa Fe, NM 87505**

CONDITIONS

Action 19479

**CONDITIONS OF APPROVAL**

|  |  |                  |                         |                                     |
|--|--|------------------|-------------------------|-------------------------------------|
| Operator:<br>WESTERN REFINING SOUTHWEST, IN<br>NM87109 | 6700 Jefferson NE, Suite A-1<br>Albuquerque, | OGRID:<br>705791 | Action Number:<br>19479 | Action Type:<br>DISCHARGE<br>PERMIT |
| OCD Reviewer<br>cchavez                                | Condition<br>None                            |                  |                         |                                     |