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January 6, 2023

Mr. Marc Brunet
Terminal Manager
Western Refining Southwest, Inc.
Bloomfield Terminal
#50 County Road 4490
Bloomfield, New Mexico 87413

**RE: DISAPPROVAL
FACILITY-WIDE GROUNDWATER MONITORING PLAN, JANUARY 14, 2022
BLOOMFIELD TERMINAL (FORMER BLOOMFIELD REFINERY)
WESTERN REFINING SOUTHWEST, INC. - BLOOMFIELD TERMINAL
SAN JUAN COUNTY, BLOOMFIELD, NEW MEXICO
EPA ID# NMD089416416
HWB-WRB-22-001**

Dear Mr. Brunet:

The New Mexico Environment Department (NMED) has received the Western Refining Southwest, Inc., dba Marathon Petroleum Company Bloomfield Terminal (Western) *Bloomfield Terminal Facility-Wide Groundwater Monitoring Plan* (Monitoring Plan), dated January 14, 2022 and received on January 19, 2022. NMED has reviewed the Monitoring Plan and hereby issues this Disapproval with the following comments.

Comment 1

All personnel and contractors performing work for this Facility should be familiar with the July 2007 Order (Order) to provide the required information to NMED. The Monitoring Plan is subject to the requirements in Sections IV.A.1 (Facility-Wide Groundwater Monitoring Plan) and X.B (Investigation Work Plan) of the Order. Address the following:

- a. Section III.F (Notices) requires that all correspondence and documents be addressed to the Bureau Chief. Our Bureau Chief is currently Rick Shean. All other NMED staff must be CC'd on the letters. Correct the addressees in future correspondence.

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

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- b. The signature block as described in Section X.B.1 (Title Page) of the Order is missing information from the title page. It appears that this information was provided in the pages following the title page. NMED has attached an example of the title page from a past report submittal as an example. Include the information in accordance with Section X.B.1 of the Order in the upcoming Monitoring Plan.

Comment 2

In the Executive Summary, page ES-1, paragraph 1, Western's states, "[t]his Bloomfield Terminal (Former Bloomfield Refinery) Facility-Wide Groundwater Monitoring Plan was prepared in accordance with the requirements outline[d] in Section IV.A.2. of the July 2007 Consent Order (NMED, 2007) issued by the New Mexico Environment Department Hazardous Waste Bureau (NMED-HWB)." Section IV.A.2 (Facility-Wide Groundwater Monitoring Reports) of the Order details requirements for the Facility-Wide Groundwater Monitoring Reports. The Monitoring Plan is subject to the requirements outlined in Sections IV.A.1 and X.B. Correct this statement with the appropriate Order citations in the 2023 version of the Monitoring Plan.

Comment 3

In the Executive Summary, page ES-1, paragraph 2, Western states, "[t]he objective of this monitoring plan revision is to replace the April semiannual sampling event with one annual groundwater monitoring event (facility-wide) to be performed in August of each calendar year." This statement is not clear. It is NMED's understanding that Western is proposing to remove the April semiannual sampling event altogether. Clarify this statement in the 2023 version of the Monitoring Plan.

Comment 4

In the Executive Summary, page ES-1, paragraph 3, Western inconsistently describes the proposed sampling program in the Executive Summary. For example, only some of the sample locations for some constituents of concern (COCs) are described. Specifically, the sample locations for the volatile organic compounds (VOCs) are not specified. Include a discussion identifying which COCs will be collected for consistency in the 2023 version of the Monitoring Plan.

Comment 5

In Section 3 (Monitoring Plan Objectives and Justification), page 3, paragraph 3, bullet items 1 through 4, Western provides a list of justifications for revising the monitoring plan to reduce the monitoring events to one annual groundwater monitoring event to be performed in August of each year. However, the justifications require additional support and discussion to demonstrate that the groundwater monitoring sampling and collection frequency for all monitoring wells can be reduced from semiannual to annual. Evaluate the data from the previous Annual Reports and provide additional discussion in the upcoming Annual Report to support the above-mentioned proposed changes. Evaluate the data from previous annual reports to support the stated justifications as required Section X.B.11 (Tables) of the Order and

include the reasoning for why semiannual sampling was originally prescribed in the upcoming monitoring report. NMED will make a determination about the sampling frequency at that time.

Comment 6

Section 3, page 3, bullet item 2 states, “[o]f the 32 monitoring wells currently sampled during the semiannual event and 97 monitoring wells sampled annually, 18 semiannual monitoring wells (or 56%) and 44 annual monitoring wells (or 48%), are not sampled due to either being dry or the presence of phase separated hydrocarbons (PSH). Given this low sample collection rate, the semiannual sampling event could be eliminated as histori[cal] conditions in these wells have not changed (Facility-Wide annual report) (Western, 2020).” This statement is confusing. Based on the numbers provided, it appears that there are either a total of 129 wells that are sampled (both annually and semiannually), or only 67 of the 129 wells are sampled (both annually and semiannually). Furthermore, this statement does not specify if the wells from the River Terrace monitoring wells, temporary piezometer wells, bioventing wells, and GAC sampling points are included in the total number of wells for this evaluation. The number of wells previously mentioned also appear not to align with the number of wells sampled according to the most recent reports, with or without the River Terrace sample locations. Recent years’ monitoring reports indicate the number of wells sampled have not remained consistent. It would be helpful for future monitoring plans to state the total number of monitoring wells for each area in the appropriate section(s) and table(s). Make the clarifications and corrections as required in the upcoming Monitoring Plan. Furthermore, the Permittee must also include the following monitoring wells in the upcoming Monitoring Plan: MW-71, MW-72, MW-73, MW-74, MW-75, MW-76, and MW-77. These monitoring wells are located in the Process Area and were installed during the Group 9 investigation and proposed to be included in the monitoring program in the 2015 Monitoring Plan.

Comment 7

Section 5.3 (San Juan River Terrace Monitoring), page 7, paragraph 3, states, “[i]n a letter from NMED dated June 15, 2015, Western received approval to discontinue sampling at TP-3, TP-10, TP-11, TP-12, and TP-13 (NMED, 2015b). However, depth-to-groundwater data continues to be collected at these locations.” Although Western adequately explained why the select temporary piezometer wells were not included for sample analyses, there was no explanation why monitoring well MW-8 and recovery RW-28 were not included for sample analyses in the Monitoring Plan. Provide an explanation for why the above referenced wells were not selected for sampling in the response letter with the 2023 version of the Monitoring Plan.

Comment 8

Section 6.1 (Sampling Locations), pages 7 and 8, provides a list of wells that are proposed to be sampled annually at the Terminal Area and River Terrace. However, there appears to be typographical errors in Table 4 (Facility-Wide Monitoring Plan Summary – Terminal Area) that suggest analytical testing will not be conducted on monitoring well MW-50. Also, collection well CW 5+95 is not listed in Table 1 (Terminal Area Monitoring Wells) or Table 4. Provide an

explanation for the decision to not collect samples from MW-50 and explain why CW 5+95 is not listed in Table 1 or Table 4 in a response letter with the 2023 version of the Monitoring Plan.

Comment 9

In Section 6.2 (Soil Gas Sampling), page 9, paragraph 1, Western states “[t]he soil gas samples will be analyzed for BTEX and TPH-GRO (Table 5) as described in Section 7 below.6).” The statement contains a typographical error. The statement ends with “as described in Section 7 below.6).” Remove “6).” from the statement to correct this error in the 2023 version of the Monitoring Plan.

Comment 10

Section 7.1.3 (Well Purging), page 10, paragraph 1, states “[g]roundwater field parameters (temperature, pH, conductivity, dissolved oxygen (DO), oxidation-reduction potential (ORP), and total dissolved solids (TDS) will be collected after purging one well volume (via hand bailing) or in accordance with NMED’s Low Flow sampling guidance. Total purge volume purged will be determined by monitoring groundwater pH, electrical conductance, and temperature parameters until they have stabilized to within 10 percent for three measurements.” Section 6 (Low-Flow Sampling Procedure), page 8, bullet item 7 of NMED’s Low Flow sampling guidance states that “[t]he well is considered to be stable when indicator parameters have stabilized over three consecutive readings spaced a minimum of 5 minutes apart and when the indicator parameters fall within the ranges [in] Table 1 (Indicator Parameter Stabilization). These parameters are: ± 0.5 pH, $\pm 10\%$ specific conductance, $\pm 10\%$ temperature, $\pm 10\%$ dissolved oxygen, and $\pm 10\%$ turbidity. Revise the statement to include this information from NMED’s low flow sampling guidance in the revised Monitoring Plan and explain why parameters may be collected after only one well volume is purged via hand bailing rather than beginning after purging one purge volume. Also, it is not clear if DO will be included in the monitoring of the groundwater field parameters. Clarify the statement in the 2023 version of the Monitoring Plan.

Comment 11

Section 7.1.5 (Soil Gas Collection) contains multiple tense changes and an incomplete sentence in paragraph 3 of the section. For example, “[t]he temporary piezometers and bioventing wells will be equipped with an air-tight well cap for sample extraction through a sample port/opening at the top of the well casing. Flexible poly tubing connects to the underside of the cap and extends down into the well casing to approximately one foot above the water table.” Review the current Monitoring Plan and correct the grammatical errors in the 2023 version of the Monitoring Plan.

Comment 12

Section 7.1.5 (Soil Gas Collection), page 11, paragraph 2, states, “[t]he vacuum pump is operated at a low flow rate (approximately liter per minute) to purge stagnant air out

of the soil gas sampling assembly. The well volumes will be calculated and approximately three purge volumes are withdrawn from the well casing prior to sample collection.” Address the following:

- a. There appears to be a typographical error in the statement because a numerical value was not provided for the vacuum pump low flow rate. State the low flow rate that will be applied during soil gas sampling in the 2023 version of the Monitoring Plan.
- b. The purge volume was not defined. State the purge volume in the 2023 version of the Monitoring Plan.
- c. Section VIII.A.8 (Subsurface Vapor-phase Monitoring and Sampling) of the Order states, “[t]he well shall be purged of a minimum of five well volumes prior to collection of samples or field measurements.” If Western changes the number of well volumes to be purged during the monitoring event prior to collecting field measurements and samples, Western must discuss the reason for the change in the Annual Report. If Western intends to keep the changes, they must propose the change in the 2023 version of the monitoring plan and explain why the change should be permanent. Western must receive prior approval from NMED before implementing it in future monitoring events.

Comment 13

In Section 7.1.6 (Sample Handling), page 12, paragraph 6, the Respondent states, “[a]t a minimum, all samples will be submitted to the laboratory within 48 hours after their collection.” Samples can be submitted to the laboratory the same day they are collected. However, it is not clear from the statement if the samples are being held for 48 hours and then being shipped, or if there are other factors involved that do not allow the samples to be submitted on the day they are collected. Clarify the statement in the 2023 version of the Monitoring Plan.

Comment 14

Section 7.2.1 (Field Documentation), page 14, paragraph 1, bullet item 9, “Photo log (if needed).” Based on NMED’s review of the River Terrace Annual Report Voluntary Bioventing/Air Sparging System (January – December 2020), Western has demonstrated a need to provide field documentation. Although the Photo Log can remain “as needed,” Western must include copies of the field logbooks with the monitoring reports. Revise the 2023 version of the Monitoring Plan to include the field notes in all future monitoring reports.

Comment 15

In Table 1 (Terminal Area Monitoring Wells), under Background Wells for monitoring well MW-BCK2 (row 2), the columns labeled *Depth to Nacimiento Formation (ft bgs)* and *Elevation of Nacimiento Surface (ft above msl)* state “See Log”. However, the logs have not been provided in the Monitoring Plan. Western should have this information and must include it in the table. Revise Table 1 to include the missing data and provide a note at the end of the table that states

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“See well logs for more information” in the 2023 version of the Monitoring Plan.

Comment 16

Table 4 (Facility-Wide Monitoring Plan Summary – Terminal Area) depicts the laboratory testing performed on samples collected from specific wells located in the Terminal Area. Although monitoring well MW-50 is included in Table 4, analytical testing has not been selected for this monitoring well. If samples will not be collected for monitoring well MW-50, provide a statement similar to the Sump Wells in Table 4 of the 2023 version of the Monitoring Plan. See also Comment 8.

Comment 17

Western submitted a letter to NMED dated March 8, 2022 that requested to “discontinue operation of the Bioventing and Air Sparging system at the River Terrace because “the system components have become outdated and are in need of repair.” Though this request was submitted to NMED after the Monitoring Plan was submitted, the Monitoring Plan fails to mention the inadequacies of the bioventing and air sparging system, and how Western plans to address the needed repairs should NMED require its continued operation. Include a discussion about the inadequacies of the bioventing and air sparging system, and how Western plans to address the needed repairs in the 2023 version of the Monitoring Plan.

Western must address all comments in this Disapproval in the 2023 version of the Monitoring Plan. The upcoming Monitoring Plan must be accompanied by a response letter that details where all comments have been addressed, cross-referencing NMED's numbered comments. Submittal of the 2023 Monitoring Plan with NMED's addressed comments will satisfy the requirements for the 2022 Monitoring Plan, therefore a 2022 Monitoring Plan is not required.

If you have any questions regarding this letter, please contact Cristina Eads at (505) 690-5808.

Sincerely,



Rick Shean
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
L. Tsinnajinnie, NMED HWB
C. Eads, NMED HWB
L. Barr, EMNRD OCD
K. Luka, Marathon Petroleum Company

File: Reading File and WRB 2022 File