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ENTERED

October 20, 2021

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

RE: DISAPPROVAL
2020 ANNUAL GROUNDWATER MONITORING REPORT
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
MCKINLEY COUNTY, GALLUP, NEW MEXICO
EPA ID # NMD000333211
HWB-WRG-21-012

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has completed its review of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee's) *2020 Annual Groundwater Monitoring Report* (Report), dated September 1, 2021 and received September 7, 2021. NMED hereby issues this Disapproval with the following comments.

Comment 1
The hard copy of the Report included two cover pages with two different dates. The outer cover page of the binder is dated as September 1, 2021 while the other inside the binder is dated as September 3, 2021. These dates must be consistent in the revised Report.

Comment 2
The electronic copy of the Report did not include the laboratory analytical reports. Appendix C (2020 Laboratory Analytical Reports) was designated for the Report but they were not included in the Appendix. Although a hard copy of the analytical reports is unnecessary, an electronic copy of the analytical reports must be included in the revised Report.

Comment 3
The depth to water (DTW) readings are reported with a unit of feet below measuring point (bmp) throughout the Report. The Report does not indicate whether the referenced measuring

point (bmp) is the top of casing (TOC) or at the ground surface. The DTW readings must not be reported as *feet bmp*. All DTW readings must be reported with a unit of feet below ground surface (bgs). Change the units for all reported DTW readings from *feet bmp* to *feet bgs* in the revised Report. Furthermore, all DTW readings must be reported as *feet bgs* for all future submittals.

Comment 4

In the Executive Summary, page 2 of 29, bullet 1, the Permittee states, "[t]he groundwater monitoring wells screened in the Alluvial/Fluvial aquifer are consistently dry." The referenced "Alluvial/Fluvial aquifer" was previously designated as the "Upper Sand unit" and is also designated differently as the "Pot Surface – Alluvial" in Tables ES-1 and 3-1 (Fluid Level Monitoring (2020)). The designation of the aquifers must be defined and consistent throughout the Report. In addition, according to Tables ES-1 and 3-1, page 1 of 12, the groundwater elevations in wells BW-2A, BW-4A, and BW-5A recorded in 2020, indicate that groundwater was present. The statement appears to contradict the data presented on the tables. Resolve the discrepancies in the revised Report.

Comment 5

In the Executive Summary, page 2 of 29, bullet 1, and Section 6.0 (Conclusion), page 26 of 29, bullet 1, the Permittee states, "BW-2A had water detected approximately 32.93 ft below measuring point (bmp) during the third quarter of 2020." Although Appendix B-1 (Historical Fluid Level Monitoring (2014-2020)) provides multiple DTW readings since 2014, only one reading for well BW-2A is presented in Tables ES-1 and 3-1, page 1 of 12. In the previous reports (e.g., *Annual Groundwater Monitoring Report Gallup Refinery – 2019* (2019 Report), dated September 15, 2020), five data points were included with the most recent data point for comparison. Include additional data points for each well to be compared and evaluated in the revised tables. In addition, this 2020 Report did not include information regarding the construction of the wells (e.g., the screened interval depth, total well depth) and survey data (e.g., ground level elevation), which were included in the previous reports and useful. Include the missing information and additional data points in the revised Report.

Comment 6

In the Executive Summary, page 2 of 29, bullet 2, and Section 6.0 (Conclusion), page 26 of 29, bullet 2, the Permittee states, "[t]he groundwater monitoring wells screened in the Chinle/Alluvium aquifer ranged from 4.59 ft bmp (MKTF-28) to 39.86 ft bmp (BW-4B)." There appears to be a typographical error in reporting the DTW readings in the Chinle/Alluvium aquifer. According to Tables ES-1 and 3-1, the DTW readings in the wells listed under the category of "Pot Surface – Chinle" ranged from 3.61 feet bmp (MKTF-27) to 44.75 feet bmp (BW-4B). Correct the statement for accuracy in the revised Report. In addition, the Permittee must be consistent with the designations in the tables (e.g., Pot Surface – Chinle) with the designations used in the statement (e.g., Chinle/Alluvium aquifer). Revise all applicable sections of the Report and Tables to ensure consistency.

Comment 7

In the Executive Summary, page 2 of 29, bullet 3, and Section 6.0 (Conclusion), page 26 of 29, bullet 3, the Permittee states, "[t]he groundwater monitoring wells screened in the Sonsela aquifer ranged from 1.45 ft bmp (OW-01) to 46.45 ft bmp (OW-12)." There appears to be a typographical error in reporting the DTW in well OW-12. According to Tables ES-1 and 3-1, the DTW readings in the well OW-12 is actually 46.49 ft bmp. Correct the statement for accuracy in the revised Report. In addition, as stated in Comment 6, the designated category in the tables (e.g., Pot Surface – Sonsela Wells) must be consistent with the designation used in the statement (Sonsela aquifer). Revise all applicable sections of the Report and Tables to ensure consistency in designations of the aquifer.

Comment 8

In the Executive Summary, page 2 of 29, bullet 4, the Permittee states, "[m]easurable SPH was detected in 39 monitoring wells during the third quarter of 2020 (Table ES-1 and Figure ES-1). The measured SPH thickness ranged from less than 0.01 ft to 6.41 ft (MKTF-33) across the site." The Separate Phase Hydrocarbon (SPH) data collected during the third quarter of 2020 is only mentioned in the Executive Summary. The SPH data collected during all quarters of 2020 must be discussed in appropriate section(s) of the revised Report. In addition, according to Figure ES-1 (SPH Thickness Map (2020) 3rd Quarter 2020), SPH was detected in 37 wells rather than 39 wells. Correct the discrepancy in the revised Report.

Comment 9

In the Executive Summary, page 2 of 29, bullet 4, Section 3.2 (SPH Detections), page 17 of 29, paragraph 6, and Section 6.0 (Conclusion), page 26 of 29, bullet 4, the Permittee states, "[g]enerally, SPH thicknesses have been decreasing at the site with the exception of wells: MKTF-13, MKTF-48, GWM-1, OW-65, and OW-61 (Figure ES-1)." The statement is not accurate. According to Tables ES-1 and 3-1, the SPH thicknesses in most wells (e.g., MKTF-01, MKTF-03, MKTF-04, MKTF-05, MKTF-06, MKTF-07, MKTF-08, MKTF-09, MKTF-11, MKTF-12, MKTF-14, MKTF-15, MKTF-19, MKTF-21, MKTF-22, MKTF-26, MKTF-33, OW-61, OW-62, OW-65, RW-1, RW-2, RW-5, and RW-6) appear to be fluctuating or increasing rather than decreasing. Furthermore, the SPH thickness in well MKTF-13 appears to have decreased rather than increased in 2020. Revise the statement for accuracy.

Comment 10

In the Executive Summary, page 2 of 29, bullet 5, and Section 6.0 (Conclusion), page 26 of 29, bullet 5, the Permittee states, "[i]n the Eastern Boundary wells [OW-14, OW-29, OW-30, OW-50, OW-52, OW-53, OW-54, OW-55, and OW-56], benzene, toluene, ethylbenzene, and total xylenes (BTEX) were not detected in the analytical data during 2020 with the exception of OW-56." Table 4-2 (Volatile Organic Compounds Analytical Data) indicates that wells OW-14, OW-30, OW-54, and OW-55 were not sampled in 2020 because the groundwater recovery system was installed. Comment 20 of the NMED's November 23, 2020 *Disapproval Annual Groundwater Monitoring Report Gallup Refinery – 2019* states, "[i]n order to evaluate the

effectiveness of the remediation system, the Permittee must continue to monitor the wells where fluid recovery pumps were installed. Halt the groundwater recovery system at least 48 hours prior to sampling or until groundwater levels equilibrate; then, gauge water level and collect samples from the wells, where SPH is absent. Report the data collected from these wells in the 2020 Annual Groundwater Monitoring Report." The groundwater recovery system must be deactivated and the groundwater samples must be collected from all of the wells, where applicable. Include the data in future groundwater monitoring reports. In addition, the benzene concentration in the sample collected from well OW-29 during the December 9, 2020 sampling event is recorded as ND (20 µg/L) in Table 4-2. The limit of detection (LOD) value is presumed to be 20 µg/L, which exceeds the screening level of benzene (5 µg/L). In this case, the presence or absence of benzene where the concentration exceeds the applicable screening level remains unknown. All data provided by analyses where the LOD values exceed the screening levels are considered data quality exceptions and cannot be used to demonstrate compliance. Furthermore, all data quality exceptions must be identified in the text, tables, or figures where the data are presented in all future submittals.

Comment 11

In the Executive Summary, pages 2 and 3 of 29, bullet 5, Section 4.1 (Eastern Boundary Wells Analytical Results), page 18 of 29, paragraph 6, and Section 6.0 (Conclusion), page 26 of 29, bullet 5, the Permittee states, "OW-56 has historically had low level concentrations of benzene (less than 2.5 micrograms per liter [µg/L]), however, during 2020 benzene concentrations were detected at 547 µg/L during the fourth quarter of 2020. OW-56 will continue to be monitored quarterly and reported." Groundwater recovery conducted at wells OW-54 and OW-55 may be facilitating migration of dissolved phase hydrocarbon constituents toward the direction of well OW-56. The Permittee must collect groundwater samples from wells OW-54 and OW-55 to evaluate the possibility and must include a discussion in the next annual report (see also Comment 10).

Comment 12

In the Executive Summary, page 3 of 29, bullet 5, Section 4.1 (Eastern Boundary Wells Analytical Results), page 19 of 29, paragraph 1, and Section 6.0 (Conclusion), page 26 of 29, bullet 5, the Permittee states, "MTBE detections and screening level exceedances are generally consistent with historical monitoring data [in the Eastern Boundary monitoring wells]." The statement is not accurate. According to Table 4-2, the MTBE concentrations in the groundwater samples collected from OW-56 notably increased from 11 µg/L (October 2019) to 70.8 µg/L (December 2020). Revise the statement for accuracy.

Comment 13

In the Executive Summary, page 3 of 29, bullet 6, and Section 6.0 (Conclusion), page 26 of 29, bullet 6, the Permittee states, "BTEX and MTBE in the Tank Farm monitoring wells were detected. Benzene and ethylbenzene exceeded the screening level during all monitoring events during 2020 in the Tank Farm monitoring wells, which is consistent with historic monitoring."

Although the statement is true, it is also potentially misleading because constituents other than BTEX and MTBE (e.g., 1,2,4-trimetylbenzene) were detected in the Tank Farm monitoring wells above the screening levels according to Table 4-2. These detections and/or exceedances are not discussed in the Report. In addition, SPH was detected in some Tank Farm monitoring wells (e.g., OW-61) and groundwater samples were not collected from wells where SPH was present. The Tank Farm monitoring wells where SPH was present in 2020 must also be identified in the statement. Revise the Report to include a discussion of all constituents that had detections/exceedances and also identify the monitoring wells where groundwater samples were not collected due to the presence of SPH. All future submittals must include this information in the appropriate section(s) of the annual reports.

Comment 14

In the Executive Summary, page 3 of 29, bullet 9, and Section 6.0 (Conclusion), page 27 of 29, bullet 9, the Permittee states, "BTEX and MTBE were not detected in the solid waste management unit (SWMU) 1 monitoring wells during 2020. These monitoring wells historically have not had detections or exceedances of BTEX." According to Table 4-2, page 24 of 42, SPH was detected in wells GWM-2 and GWM-3 in the first quarter of 2020. Furthermore, Section 4.5 (SWMU 1 Area Analytical Results), page 20 of 29, also states that wells GWM-2 and 3 were not sampled due to the presence of SPH during the first quarter of 2020. However, the statement is misleading because wells GWM-2 and 3 have previously been recorded as dry since 2013 and no groundwater samples would have been collected from 2013 through the first quarter of 2020. Clarify the statement and verify the data in Table 4-2 is correct, or discuss the possible cause of SPH appearance in wells GWM-2 and 3 in the revised Report. In addition, according to Table ES-1, page 1 of 12, wells GWM-2 and 3 were recorded as dry throughout all of the 2020 gauging events. Resolve the discrepancy in the revised Report.

Comment 15

In the Executive Summary, page 4 of 29, bullet 12, and Section 6.0 (Conclusion), page 27 of 29, bullet 12, the Permittee states, "BTEX has continued to be non-detect in the Western Boundary monitoring wells. MTBE was detected in monitoring wells BW-5B and BW-5C above the screening level during 2020. These results are consistent with previous monitoring events." According to Table 4-2, page 35 of 42, the MTBE concentrations in the samples collected from well BW-5B did not exceed the screening level of 14 µg/L during the 2020 sampling events. In addition, Table 4-2 indicates that well BW-4B was not sampled due to the presence of SPH during the third quarter of 2020. SPH was not previously detected in well BW-4B. Verify whether the statement contains typographical errors in reporting the MTBE exceedance in well BW-5B in Table 4-2 and if SPH was present in BW-4B. If so, correct the error in the revised Report; otherwise, evaluate and discuss the possible cause of SPH presence in well BW-4B in the revised Report. Furthermore, it appears that the MTBE concentrations detected in well BW-5C are increasing. The extent of the MTBE plume west of well BW-5C must be delineated, as originally directed in NMED's January 28, 2019 *Disapproval Work Plan 2015 Annual Groundwater Report Comments*. The Permittee's response to Comment 40 in NMED's March

31, 2021 *Response to Disapproval Annual Groundwater Monitoring Report Gallup Refinery – 2019* states that "[t]he proposed Sonsela well west of OW-1 will be installed during the summer of 2021." State whether the well has been installed and provide the installation date in the revised Report.

Comment 16

In the Executive Summary, page 4 of 29, bullet 13, Section 4.9 (Deep Monitoring Wells Analytical Results), page 22 of 29, paragraph 5, and Section 6.0 (Conclusion), page 27 of 29, bullet 13, the Permittee states, "[b]enzene and ethylbenzene were detected above the screening level[s]. OW-12 is located downgradient of the tank farm and will continue to be monitored for BTEX." According to Table 4-1 (2020 Sampling Frequency), page 4 of 4, well OW-12 has been sampled annually. However, since benzene and ethylbenzene have been detected more frequently above the screening levels, the Permittee must increase the sampling frequency for the well to monitor the changes in concentrations. Well OW-12 must be monitored and sampled on a semi-annual basis. Propose the change the sampling frequency for well OW-12 in the upcoming Facility Wide Ground Water Monitoring Work Plan 2022 Update.

Comment 17

In Section 1.2.1 (Geological Characteristics), page 12 of 29, paragraph 3, the Permittee states, "[t]he regional stratigraphy around the Refinery is shown on Figure 1-2." There is a typographical error in referencing the correct figure number. Figure 1-2 (Site Plan) does not present the regional stratigraphy around the Refinery. Provide the correct figure number or remove the statement from the revised Report.

Comment 18

In Section 2.0 (Monitoring Program), page 14 of 29, paragraph 1, the Permittee states, "[g]roundwater sampling, fluid level measurements, and surface water samples are completed in accordance with the "Approval with Modifications, Disapproval Facility Wide Ground Water Monitoring Work Plan – Updates for 2020" (2020 Work Plan) (MPC 2021a) with the exception of deviations noted in Section 2.3, [and t]he monitoring program analyses were completed to provide a comprehensive understanding of the dissolved phase contamination under the Refinery. These analyses are also included in Table 2-1." The comments included in the NMED's February 16, 2021 *Approval with Modifications Disapproval Facility Wide Ground Water Monitoring Work Plan – Updates for 2020* (February 2021 letter) were not addressed in the Report because the letter was not issued until February 2021 and the field work was already completed in 2020. However, the comments included in the February 2021 letter remain valid and the items listed below must be addressed in the 2021 Report that is to be submitted no later than **September 1, 2022**. This comment serves as a reminder; no revision required.

a. Comment 3a of the NMED's February 2021 letter requires the Permittee to propose to conduct sulfide analysis for pertinent wells in the 2020 Work Plan. Include the sulfide analytical data collected from pertinent wells in the 2021 Report.

b. Comment 3b of the NMED's February 2021 letter requires the Permittee to update the monitoring frequency for wells where the proposed monthly gauging was approved. Address the provision in the 2021 Report.

c. Comment 3c of the NMED's February 2021 letter requires the Permittee to propose to conduct 1,4-dioxane analysis using EPA Method 8270 SIM for the samples collected from the West LDU in the 2020 Work Plan. Include the 1,4-dioxane analytical data collected from the West LDU in the 2021 Report.

d. Comment 3d of the NMED's February 2021 letter requires the Permittee to propose conduct 1,4-dioxane analysis using EPA Method 8270 SIM for samples collected from wells OW-50 and OW-52 in the 2020 Work Plan. Include the 1,4-dioxane analytical data collected from the wells in the 2021 Report.

e. Comment 3e of the NMED's February 2021 letter requires the Permittee to 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 2020 Work Plan. Include the required analytical data collected from well OW-11 in the 2021 Report.

f. Comment 3f of the NMED's February 2021 letter requires the Permittee to propose to analyze pesticide analysis for the water samples collected from pond EP-2 using EPA Method 8081 in the 2020 Work Plan. Include the pesticide analytical data collected from pond EP-2 in the 2021 Report.

g. Comment 3h of the NMED's February 2021 letter requires the Permittee to propose to conduct PFAS analysis for the groundwater samples collected from well OW-63 in the 2020 Work Plan. Include the PFAS analytical data collected from OW-63 in the 2021 Report.

Comment 19

In Section 2.1 (Groundwater Monitoring Network and Surface Sample Locations), page 14 of 29, paragraph 2, the Permittee provides a list that arranges the monitoring well locations into nine groups. However, the Permittee did not address Comments 1 and 2 from NMED's August 17, 2021 *Direction [Figure for the] Proposed Groundwater Well Groupings* that required (a) PW and OW wells not be included in the same group, and (b) suggested that the former grouping Group B may be more representative of the overall general area. NMED is also of the opinion that the proposed division of the wells is unnecessary because the wells formerly included in Group B may be more representative of the overall general area. Address Comments 1 and 2 from NMED's August 17, 2021 letter in the 2021 Report or explain how the current grouping of the monitoring wells properly represents the areas defined in the response letter. No revision required.

Comment 20

Although Section 2.2 (Regulatory Criteria), pages 14 and 15, includes a discussion of four groundwater screening levels that are compared to the analytical monitoring results, a selection method for determining which groundwater screening levels are applicable to the Facility is not discussed. The selection method is clearly described in Permit Section IV.D.1; therefore, the description must also be included in the text of the revised Report. In addition, Tables 4-2 (Volatile Organic Compounds Analytical Data), 4-3 (Semi-volatile Organic Compounds Analytical Data), 4-4 (Metals (Total) Analytical Data), 4-5 (Metals (Dissolved) Analytical Data), and 4-6 (General Chemistry and Total Petroleum Hydrocarbon Analytical Data) list the four screening levels (i.e., NMED GW Cleanup Levels, 40 CFR 141.62, NMED Tap Water, and USEPA RSL Tap Water HQ 1.0) for each analyte. However, the Permittee does not identify which screening level is applicable to the associated analyte. Revise the tables to Identify the applicable screening level for each analyte (e.g., use yellow highlighted value; refer to the analytical data tables in the 2019 Report).

Comment 21

In Section 2.3 (Deviations from Work Plan), page 15 of 29, bullet 6, the Permittee states, "[a]nalytical results with reporting limits greater than their respective screening levels are noted in Tables 4-2 through 4-7 in italics." It appears that reporting limits greater than any of four screening levels are identified by italicizing the results in the tables. For example, according to Table 4-2, page 36 of 42, all non-detected trichloroethene (TCE) concentrations in the samples collected from the Deep Well Groups are italicized and recorded as "*ND(1)*". Table 4-2 identifies the screening levels for TCE as (a) 5 µg/L in accordance with (IAW) NMED Groundwater Cleanup Levels, New Mexico Administrative Code 20.6.2.3103, (b) "Not Applicable" IAW Code of Federal Regulations, Chapter 40, Section 141.62 Maximum Contaminant Levels, (c) 2.59 µg/L IAW NMED, Risk Assessment Guidance, Table A-1, Tap Water, March 2017, and (d) 0.49 µg/L IAW US EPA Regional Screening Levels, Hazard Quotient 1.0, November 2019. The TCE concentration was reported as "*ND(1)*" because the Permittee chose the reporting limit (1 µg/L) that exceeded the EPA Regional Screening Level (0.49 µg/L) in Table 4-2. However, according to Permit Section IV.D.1, the applicable screening level for TCE is determined to be 5 µg/L (EPA MCL and NMED Groundwater Cleanup Levels). Therefore, the reporting limit for TCE (1 µg/L) did not exceed the applicable screening level of 5 µg/L and the TCE concentrations do not have to be italicized in this case. Correct all sections and tables, where this issue is identified, in the revised Report. Furthermore, the distinction between regular and italic fonts is difficult to distinguish because the font size in the analytical data tables are very small. Use a different method (e.g., red font color or highlighting cells) to identify data quality exceptions in the revised tables.

Comment 22

In Section 3.0 (Fluid Level Results), page 16 of 29, paragraph 1, the Permittee states, "[f]luid level data and SPH measurements collected during 2020 are summarized in Table 3-1." Tables ES-1 and 3-1 are identical tables that report the same information. Remove one of the tables

from the revised Report and correct the references to the table in the appropriate section(s) of the revised Report.

Comment 23

In Section 3.2 (SPH Detections), page 16 of 29, paragraph 6, the Permittee states, "[i]n the first quarter of 2020, 23 monitoring wells had measurable SPH. During the annual monitoring event during the third quarter of 2020, 39 monitoring wells had measurable SPH. During the fourth quarter of 2020, 38 monitoring wells had measurable SPH." The increase of SPH detection at the site is presumably caused by the October 2019 gasoline release from the truck loading rack. Evaluate and discuss the cause of the increased SPH detection in the revised Report.

Comment 24

In Section 4.0 (Sampling Results), page 18 of 29, paragraph 3, the Permittee states, "[g]enerally, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), total and dissolved metals, and general chemistry analyses were performed, as discussed in the following sub-sections." The 2020 sampling results are categorized and discussed by the nine groups (e.g., Eastern Boundary Wells, Tank Farm Wells, Marketing Tank Farm Wells, Wastewater Treatment Area, SWMU 1 Area, LTU Area, Evaporation Ponds, Western Boundary Wells, and Deep Monitoring Wells) in the Report. However, the discussion regarding chemical analyses only focuses on the detection of benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tert-butyl ether (MTBE), which is insufficient because other contaminants of concern (COCs) are present at the site. Provide a discussion for each analyte (e.g., BTEX/MTBE, other VOCs (e.g., chlorinated solvents, 1,4-dioxane), SVOCs, metals, anions, total petroleum hydrocarbons, and separate phase hydrocarbons) and include the discussions under each section of the revised Report (e.g., Section 4.1.1 for BTEX/MTBE, 4.1.2 for other VOCs). In addition, referencing tables or figures (e.g., Tables 4-2 to 4-6) without including a discussion about the evaluation of the analytical results is not appropriate. Include more detailed discussion of the analytical results in the revised Report.

Comment 25

In Section 4.1 (Eastern Boundary Wells Analytical Results), page 18 of 29, paragraph 5, the Permittee states, "[t]he 2020 detected analytical results for the Eastern Boundary monitoring wells that exceeded the screening levels are noted in Tables 4-2 through 4-6 as bolded results. Non-detected sampling results with reporting limits greater than the applicable screening levels are noted with italics in the applicable tables." The Permittee must identify all analytes (in addition to BTEX and MTBE) whose concentrations and reporting limits exceeded the applicable screening levels within the appropriate sections of the Report, as well as providing a table that summarizes such analytes and identifies the well locations sampled. This comment also applies to all pertinent sections of the Report (Sections 4.1 through 4.9).

Comment 26

In Section 4.9 (Deep Monitoring Wells Analytical Results), page 22 of 29, paragraph 6, the

Permittee states, "[p]roduction well PW-2 was sampled in both the third and fourth quarters of 2020. The analytical data for the fourth quarter of 2020 for PW-2 was rejected based on data qualifiers as described in Section 4.10. However, the fourth quarter 2020 monitoring event was not required per the 2020 Work Plan (MPC 2021a)." Explain why well PW-2 was sampled in the fourth quarter of 2020 even though it was not required in the revised Report. In addition, Section 4.10 does not explain why this particular data was rejected. Also explain why the data collected from well PW-2 was rejected in the revised Report.

Comment 27

In Section 5.0 (Remediation Activities), page 25 of 29, paragraphs 1 and 3, the Permittee states, "free phase SPH is recovered on-site from monitoring wells with SPH greater than 0.5 inches [and r]ecovery data for 2020 is presented in Table 5-1." Although Table 5-1 (Recovery Well Data) provides the recovery data from the standpipes and retention ditch, it does not include any recovery data collected from the monitoring wells that contained SPH where the measured thickness was greater than 0.5 inches. Since the recovery activities for the monitoring wells are discussed in Section 5.0, Table 5-1 must be revised to include the relevant data from the monitoring wells that contained a SPH thickness greater than 0.5 inches.

Comment 28

In Section 5.0 (Remediation Activities), page 25 of 29, paragraph 2, the Permittee states, "[i]n addition to fluid recovery, the SWMU 1 investigation was conducted during the week of January 13, 2020 which included sediment sampling to determine sediment volume and chemical characterization." The activities and discussion regarding the SWMU 1 investigation are not relevant to the groundwater remediation activities at the site. Remove the discussion from the revised Report.

Comment 29

According to Tables ES-1 and 3-1 (Fluid Level Monitoring (2020)), the product thickness reading in well GWM-1 during the July 1, 2020 gauging event is recorded as – (negative) 0.45 feet. There appears to be a typographical error in reporting the product thickness. Similarly, the hydrograph for GWM-1 included in Appendix B-2 depicts the SPH as under the water table. Correct the error in the revised Report.

Comment 30

Table 2-1 (Groundwater Monitoring Program) provides information regarding the sampling frequency, fluid level measurement, water quality parameters, and analyses for each well. Table 4-1 (2020 Sampling Frequency) also provides the same information regarding the sampling frequency for each well. The purpose of Table 4-1 is unclear and appears to be redundant. Explain the relevance of Table 4-1 in the Report or remove Table 4-1 from the revised Report, as appropriate.

Comment 31
Tables 4-2 (Volatile Organic Compounds Analytical Data), 4-3 (Semi-volatile Organic Compounds Analytical Data), 4-4 (Metals (Total) Analytical Data), 4-5 (Metals (Dissolved) Analytical Data), and 4-6 (General Chemistry and Total Petroleum Hydrocarbon Analytical Data) list four screening levels (a) NMED Groundwater Cleanup Levels, New Mexico Administrative Code 20.6.2.3103, (b) Code of Federal Regulations, Chapter 40, Section 141.62 Maximum Contaminant Levels, (c) NMED, Risk Assessment Guidance, Table A-1, Tap Water, March 2017, and (d) US EPA Regional Screening Levels, Hazard Quotient 1.0, November 2019 for each analyte. However, the Permittee did not reference the most recent versions of the screening levels. NMED updated the Risk Assessment Guidance in February 2019. Similarly, USEPA updated Regional Screening Levels in May 2021. Revise the tables to include the most recent screening levels and compare the site concentrations as described in Permit Section IV.D.1. Note that the Permittee is only required to use most recent screening levels available at the time the data was collected and analyzed.

Comment 32
The top 1/3 of the background images provided in the hard copy of Figures ES-1 (SPH Thickness Map (2020) 3rd Quarter 2020), 1-2 (Site Plan), 2-1 (Well Groups), 3-2 (Chinle/Alluvium Interface Aquifer Potentiometric Surface Map (2020)), and 3-4 (SPH Thickness (2020) 3rd Quarter 2020) is blank. However, the same issue is not found in any of the electronic copies. Provide replacement pages for these figures with the revised Report.

Comment 33
Figures ES-1 and 3-4 (SPH Thickness (2020) 3rd Quarter 2020) are identical figures. Explain the relevance of the identical figures or remove one of the figures from the revised Report. Revise all appropriate sections of the Report, as necessary.

Comment 34
Appendix B-2 (Hydrographs) includes three sections divided by page numbers (i.e., the first, second, and third sections include pages 1 through 5, 1 through 90, and 1 through 13, respectively) but does not identify each section. It is NMED's observation that each section presumably categorizes hydrographs for the wells installed in three separate aquifers (i.e., upper sand unit, Chinle/alluvium interface, and Sonsela). Label each section in the revised Report.

Comment 35
Appendix B-2 (Hydrographs) includes the groundwater elevation data collected in 2021. Since this Report pertains to the data collected in 2020, it is not necessary to present the data collected in 2021. In addition, the data collected in 2021 was not part of the evaluation or discussed in the Report. Remove the data from the Report.

The Permittee must submit a revised Report that addresses all comments contained in this

letter. Two hard copies and an electronic version of the revised Report must be submitted to the NMED. The Permittee must also include a redline-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 all revisions have been made, cross-referencing NMED's numbered comments. The revised Report must be submitted to NMED no later than **March 1, 2022**.

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