Western Refining Southwest LLC
A subsidiary of Marathon Petroleum Corporation
I-40 Exit 39
Jamestown, NM 87347

March 31, 2021

Mr. Kevin Pierard, Chief
New Mexico Environmental Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505

RE: Response to Disapproval
Annual Groundwater Monitoring Report Gallup Refinery - 2019
Western Refining Southwest LLC, Gallup Refinery
EPA ID #NMD000333211
HWB-WRG-20-013

Dear Mr. Pierard,

Attached please find the response to comments contained in the New Mexico Environmental Department (NMED) Disapproval letter dated November 23, 2020. This submittal also includes two copies the revised report, two redlined copies of the report, and an electronic version of the report.

If you have any questions or comments regarding the information contained herein, please do not hesitate to contact Mr. John Moore at (505) 879-7643.

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction of supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,
Marathon Petroleum Company LP, Gallup Refinery

Robert S. Hanks
Refinery General Manager

Enclosure

cc: D. Cobrain, NMED HWB
M. Suzuki, NMED HWB
C. Chavez, NMOCD
T. McDill, NMOCD
L. King, EPA Region 6
G. McCartney, Marathon Petroleum Corporation
K. Luka, Marathon Petroleum Corporation
J. Moore, Marathon Gallup Refinery
H. Jones, Trihydro Corporation

TABLE 1. RESPONSE TO COMMENTS FROM NMED LETTER DATED NOVEMBER 23, 2020
ANNUAL GROUNDWATER MONITORING
MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

	Comments:	Response:
1	In the Executive Summary, *Group A Wells* , page 2, and Section 6.1.2, *Land Treatment Unit, MW-1, MW-2, MW-4, MW-5, SMW-2, and SMW-4* , page 30, the Permittee states, "GRO has been detected in SWM-2 above the applicable standard since 2011." According to Table 8.3.1, *SMW-2, SMW-4 General Chemistry and DRO/GRO/MRO Analytical Result Summary* , the Diesel Range Organics (DRO) concentration in the groundwater sample collected from well SMW-2 during the 2019 sampling event also exceeded the screening level of 0.0167 mg/L. However, the DRO exceedance is not discussed in the relevant sections. Correct the statement and discuss the DRO exceedance in the revised Report	The Executive Summary, page 2, and Section 6.1.2, page 30, have been revised.
2	In the Executive Summary, *Group A Wells* , page 2, the Permittee states, "[b]enzoic acid was detected in low concentrations in MW-1, MW-2, MW-4, MW-5, and SMW-4." According to Table 8.2.4, *MW-1, MW-2, MW-4, MW-5 Volatile and Semi-Volatile Organic Compound Analytical Result Summary* and Table 8.3.4, *SMW-2, SMW-4 Volatile and Semi-Volatile Organic Compound Analytical Result Summary* , benzoic acid was not detected in groundwater samples collected from wells MW-1, MW-2, MW-4, MW-5, and SMW-4 during the 2019 sampling event. Resolve the discrepancy in the revised Report.	The Report has been revised to remove the statement in the Executive Summary on page 2.
3	In the Executive Summary, *Group B Wells – NAPIS-1, NAPIS-2, NAPIS-3, and KA-3* , page 3, and Section 6.2.2, *Groundwater Monitoring Wells, NAPIS-1, NAPIS-2, NAPIS-3, and KA-3* , page 32, the Permittee states, "[i]n NAPIS-2, MTBE concentrations in 2019 did not exceed the applicable standard." According to Table 8.8, *NAPIS-1, NAPIS-2, NAPIS-3, KA-3 BTEX and MTBE Analytical Result Summary* , the MTBE concentration in groundwater sample collected from well NAPIS-2 exceeded the applicable screening level during the August 2019 sampling event. Correct the statement for accuracy in the revised Report.	The Executive Summary, page 3, and Section 6.2.2, page 32, have been revised.
4	In the Executive Summary, *Group B Wells – NAPIS-1, NAPIS-2, NAPIS-3, and KA-3* , page 3, and Section 6.2.2, *Groundwater Monitoring Wells, NAPIS-1, NAPIS-2, NAPIS-3, and KA-3* , page 32, the Permittee states, "MRO was not detected in NAPIS-2, NAPIS-3, or KA-3 wells." According to Table 8.8.1, *NAPIS-1, NAPIS-2, NAPIS-3, KA-3 General Chemistry and DRO/GRO/MRO Analytical Result Summary* , the detection limit was reported as higher than the applicable screening level for total petroleum hydrocarbon oil range organics (TPH-MRO). Section IV.J.3, Chemical Analyses, of the Permittee's RCRA Permit, states, "[a]nalyses conducted with detection limits that are greater than applicable background, screening, and regulatory cleanup levels shall be considered data quality exceptions and the reasons for the elevated detection limits shall be reported to the NMED. These data cannot be used for statistical analyses." The detections limits must be lower than the screening level; otherwise, address the concentrations where the detection limits are higher as a data gap and include the discussion in the revised Report. This comment applies to other sections of the Report, where applicable.	Where the laboratory reporting limit is greater than applicable standard has been noted in the Report. The reporting limit that the laboratory was able to meet was greater than the applicable standard due to instrument limitations.
5	In the Executive Summary, *Group B Wells – NAPIS-1, NAPIS-2, NAPIS-3, and KA-3* , page 3, and Section 6.2.2, *Groundwater Monitoring Wells, NAPIS-1, NAPIS-2, NAPIS-3, and KA-3* , page 32, the Permittee states, "[i]n NAPIS-2, 1-methlylnaphthalene and 2-methylnaphthalene were detected at concentration levels exceeding applicable standards." The phenol concentration in the groundwater sample collected from well NAPIS-2 during the April 2019 sampling event also exceeded the applicable screening level. The phenol exceedance is not discussed in the relevant sections. Correct the statement and discuss the phenol exceedance in the revised Report.	The Executive Summary, page 3, and Section 6.2.2, page 33, have been revised.
6	In the Executive Summary, *Group B Wells – East LDU, West LDU, and Oil Sump LDU* , page 3, and Section 6.2.3, *Leak Detection Units, East LDU, West LDU, and Oil Sump LDU* , page 33, the Permittee states, "[e]ast LDU samples were reported to contain benzene, DRO, and GRO concentration exceeding applicable standards," and "[w]est LDU samples were reported to contain DRO and GRO concentrations exceeding applicable standards." Since water was detected in the East and West LDUs, it seems that both the east and west bays were leaking through the secondary containment wall. Although some parts of the NAPIS were repaired in 2018, the NAPIS must be repaired or replaced. The Permittee previously informed NMED of a plan to upgrade the wastewater treatment system, including the NAPIS. However, it was not clear whether the plan will still be implemented or whether the NAPIS will be utilized under current idling status. Clarify whether the NAPIS will still be upgraded or utilized in the future. Unless the NAPIS is upgraded as planned, repair the leaks from the NAPIS or propose to install recovery wells adjacent to the NAPIS where wastewater is leaking (e.g., downgradient of the East and West LDUs) to capture the fluids leaking from the NAPIS.	Based on recent fluid measurements in the East and West LDUs, it appears that groundwater is leaking through the secondary containment and into the primary containment. The #2 API unit is now non-operational and the fluid level is approximately 13 to 15 feet below top of casing. The West LDU water level is within a few feet of the top of casing. If the API separator was leaking, it would be expected that the fluid levels would be equivalent. In addition, internal inspections have been completed of the API Unit and no leaks were identified.. Upgrades to the wastewater treatment system were not completed prior to the refinery becoming indefinitely idled and at this time MPC does not plan to upgrade the wastewater treatment system.
7	In the Executive Summary, *Group B Wells – East LDU, West LDU, and Oil Sump LDU* , page 4, and Section 6.2.3, *Leak Detection Units, East LDU, West LDU, and Oil Sump LDU* , page 33, the Permittee states, "[l]ow concentrations of the organic compounds 1,2,4-trimethylbenzene, 1-methylnaphthalene, acetone, sec-butyl benzene, and trichloroethene were detected in the West LDU." Comment 22 in NMED's *Disapproval Facility Wide Ground Water Monitoring Work Plan – Updates for 2019* , dated July 12, 2019, states, "[t]he Permittee must prepare to analyze for 1,4-dioxane using EPA Method 8270 SIM for the groundwater samples collected from all monitoring wells where chlorinated solvents have been detected within the past ten years." Although LDUs are not groundwater monitoring wells, the comment applies to the LDUs. Propose to conduct 1,4-dioxane analysis using EPA Method 8270 SIM for samples collected from the West LDU in the 2021 Facility-wide Groundwater Monitoring Work Plan.	The 2021 Facility-wide Groundwater Monitoring Work Plan will include 1,4-dioxane analysis using EPA Method 8270 SIM for the West LDU samples.

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ANNUAL GROUNDWATER MONITORING
MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

	Comments:	Response:
8	In the Executive Summary, *Group B Wells – OAPIS-1* , page 4, the Permittee states, "[a]rsenic, iron, manganese, and uranium concentrations exceeded the applicable standards in OAPIS-1." According to Tables 8.9.2 and 8.9.3, *OAPIS-1 Total [and Dissolved] Metals Analytical Result Summary* , the uranium concentrations in the groundwater sample collected from well OAPIS-1 did not exceed the applicable screening level during any 2019 sampling events. Correct the statement in the revised Report.	The Executive Summary, page 4, has been revised.
9	In the Executive Summary, *Group B Wells – STP1-NW, STP1-SW, OW-59, OW-60, and OW-62* , page 4, and Section 6.2.5, *Groundwater Monitoring Wells, STP1-NW, STP1-SW, OW-59, OW-60, and OW-62* , page 35, the Permittee states, "[a]ccess to the STP1-SW was not permitted during 2019 due to high concentrations of H_2S in the atmosphere." Wells STP1-NW and GMW-3 are closely located to well STP1-SW and were accessible during 2019. It is not clear how high concentrations of hydrogen sulfide (H_2S) gas accumulated in the proximity of STP1-SW for a long period of time. Identify the source of H_2S in the vicinity of STP1-SW, STP1-NW, and GMW-3 in the revised Report. In addition, Comment 3 in NMED's Approval with Modifications Annual Ground Water Monitoring Report Gallup Refinery – 2018, dated January 22, 2020 states, "[t]he Permittee must conduct the required sampling and change the scheduled sampling dates as necessary, if the H2S concentrations are too high to allow personnel to conduct the sampling event on the scheduled sampling timeframe." Explain whether this direction was followed in the response letter.	Hydrogen sulfide (H_2S) is often produced from the microbial breakdown of organic matter in the absence of oxygen gas, such as in sewers. This process is commonly known as anaerobic digestion, which is done by sulfate-reducing microorganisms. This process is probably ongoing in the refinery oily water sewer system. Water coming from the NAPIS potentially contains H_2S and would be in the input stream to the STP. The potential for H_2S to be present in the area has led to MPC to take the precaution that no one enters the fenced in area without supplied air and specific permission from MPC while the system is running. Since the plant is currently idled, MPC agreed to briefly shut down the system so samples could be collected during the 4th quarter 2020 sampling. However, there was not enough fluid for sample collection at STP1-SW. It is expected that sampling will be allowed in the STP area during the current idled status.
10	The Executive Summary, *Group B Wells – STP1-NW, STP1-SW, OW-59, OW-60, and OW-62* , page 4, does not provide any discussion regarding the data collected from well OW-62. Include the discussion in the revised Report.	The Executive Summary, page 4, has been revised to include discussion of OW-62 in the Report.
11	In the Executive Summary, *Group B Wells – STP1-NW, STP1-SW, OW-59, OW-60, and OW-62* , page 4, and Section 6.2.5, *Groundwater Monitoring Wells, STP1-NW, STP1-SW, OW-59, OW-60, and OW-62* , page 35, the Permittee states, "[l]ow concentrations of organic compounds acetone, bis(2-ethylhexyl) phthalate, and 1,2,4-trimethylbenzene, were detected during the monitoring events." It is not clear whether these contaminants were detected from all Group B wells. Provide a clarification in the revised Report.	The Executive Summary, page 5, and Section 6.2.5, page 36, have been revised to clarify the detections of organic compounds in the Group B wells in the Report.
12	In the Executive Summary, *Group C Wells – OW-13, OW-14, OW-29, and OW-30* , page 4, and Section 6.3.1, *Observation Wells, OW-13, OW-14, OW-29, OW-30, OW-50, OW-52, OW-53, OW-54, OW-55, and OW-56* , page 38, the Permittee states, "[a] low concentration of ethylbenzene was reported for OW-29." According to Table 8.13, *OW-13, OW-14, OW-29, OW-30 BTEX and MTBE Result Summary* , ethylbenzene in the groundwater samples collected from well OW-29 was not detected during the 2019 sampling events. Resolve the discrepancy in the revised Report. In addition, benzene was detected in the groundwater sample collected from well OW-29 during the February 2019 sampling event. However, the detection of benzene was not indicated in the Report. Include a discussion regarding the detection of benzene in the revised Report.	The Executive Summary, page 5, and Section 6.2.5, page 38, have been revised in the Report to remove the discrepancy regarding ethylbenzene and a discussion of benzene has been included.
13	In the Executive Summary, *Group C Wells – OW-50, and OW-52* , page 5, the Permittee states, "[l]ow concentrations of benzoic acid, 1,2-dichloroethane, and acetone were detected in OW-50 and OW-52." A chlorinated compound (1,2-dichloroethane) was detected in wells OW-50 and OW-52. The Permittee was previously directed to analyze 1,4-dioxane using EPA Method 8270 SIM for all monitoring wells where chlorinated solvents were detected within the past ten years. Table 8.5.4, *OW-50 thru OW-64 Semi-Volatile Organic Compound Analytical Result Summary* , lists 1,4-dioxane as an analyte; however, the table does not indicate that 1,4-dioxane was analyzed by EPA Method 8270 SIM. Clarify whether the analysis was conducted by the appropriate analytical method; otherwise, 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.	The analytical method for 1,4-dioxane was not EPA Method 8270 SIM. The 2021 Facility-wide Groundwater Monitoring Work Plan will include 1,4-dioxane analysis using EPA Method 8270 SIM for OW-50 and OW-52.
14	In the Executive Summary, *Group C Wells – OW-54, OW-55, and OW-56* , page 5, the Permittee states, "[i]ron and manganese concentrations exceeded applicable standards in OW-54." According to Table 8.5.2, *OW-50, OW-52, OW-54, OW-55, OW-56, OW-57, OW-58, OW-63, OW-64 Total Metals Analytical Result Summary* , the iron and manganese concentrations in the groundwater samples collected from well OW-54 exceeded the applicable standards. However, according to Table 8.5.3, *OW-50, OW-52, OW-54, OW-55, OW-56, OW-57, OW-58, OW-63, OW-64 Dissolved Metals Analytical Result Summary* , the iron concentrations in the groundwater samples collected from well OW-54 did not exceed the applicable standard. Although Section 6.3.1, *Observation Wells, OW-13, OW-14, OW-29, OW-30, OW-50, OW-52, OW-53, OW-54, OW-55, AND OW-56* , page 39, correctly stated the difference, the statement in the Executive Summary is misleading. Clarify the statement in the revised Report.	The Executive Summary, page 6 has been revised to match Section 6.3.1.

TABLE 1. RESPONSE TO COMMENTS FROM NMED LETTER DATED NOVEMBER 23, 2020
ANNUAL GROUNDWATER MONITORING
MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

	Comments:	Response:
15	In the Executive Summary, *Group C Wells – OW-54, OW-55, and OW-56* , page 5, the Permittee states, “[i]ron concentrations exceeded applicable standards in OW-55 and OW-56.” According to Table 8.5.2, *OW-50, OW-52, OW-54, OW-55, OW-56, OW-57, OW-58, OW-63, OW-64 Total Metals Analytical Result Summary* , the iron and manganese concentrations in the groundwater samples collected from wells OW-55 and OW-56 both exceeded the applicable standards. However, according to Table 8.5.3, *OW-50, OW-52, OW-54, OW-55, OW-56, OW-57, OW-58, OW-63, OW-64 Dissolved Metals Analytical Result Summary* , the iron and manganese concentrations in the groundwater samples collected from a single well OW-55 exceeded the applicable standards and neither iron or manganese concentrations in the groundwater samples collected from well OW-56 exceeded the applicable standards. Although Section 6.3.1, *Observations Wells, OW-13, OW-14, OW-29, OW-30, OW-50, OW-52, OW-53, OW-54, OW-55, and OW-56* , page 39, correctly stated the difference, the statement in the Executive Summary is misleading. Correct the statement for accuracy in the revised Report.	The Executive Summary, page 6 has been revised to match Section 6.3.1.
16	In the Executive Summary, *Group C Wells – OW-57, OW-58, and OW-58A* , page 5, and Section 6.3.2, Observation Wells, OW-57, OW-58, and OW-58A, page 39, the Permittee states, "OW-58A was sampled in December 2019," and "[o]bservation well OW-58A was installed during the fourth quarter 2019 as a twin well adjacent to OW-58." Although the analytical results for well OW-58A are included in the Report, the gauging data for OW-58A is not included in Table 9.1, *5-Year Historical DTB/DTW Measurements - Non MKTF Wells* . Include the gauging data collected from well OW-58A in the revised Report, if available.	The Report has been revised. The gauging data from the December 3, 2019 sampling event is not available, however, the monitoring well completion log from October 17, 2019 is provided in Appendix A. The gauging data from OW-58A from the completion date is included in Table 9.1.
17	In the Executive Summary, *Group C Wells – OW-61, OW-63, OW-64, and OW-65* , page 6, and Section 6.3.3, *Observation Wells, OW-61, OW-63, OW-64, and OW-65* , page 41, the Permittee states, "OW-61 and OW-65 contained SPH in 2019 and were not sampled. OW-64 contained SPH in the first quarter and was not sampled." The relevant analytical tables (e.g., Table 8.5) do not list wells OW-61 and OW-65. Although SPH was detected in wells OW-61 and OW-65, these wells must be included in analytical tables and the detection of SPH must be indicated. Revise the tables accordingly. This comment applies to all analytical tables where wells with SPH are not listed (e.g., MKTF-45 in Table 8.17.1).	The analytical tables in Section 8 have been revised to list wells that had detections of SPH during 2019.
18	In the Executive Summary, *Group C Wells – OW-61, OW-63, OW-64, and OW-65* , page 6, and Section 6.3.3, *Observation Wells, OW-61, OW-63, OW-64, and OW-65* , page 41, the Permittee states, "[t]he fluoride concentrations reported from OW-64 exceeded the applicable standard." Well OW-64 is located near Tanks 338, 339, and 101. It is not clear why fluoride concentrations are elevated in the vicinity of well OW-64. Explain the potential cause of the fluoride exceedance in the groundwater samples collected from well OW-64 in the revised Report.	Fluoride ions in groundwater may be naturally occurring or may be the result of refinery activities. If elevated concentrations continue MPC will conduct an investigation to determine the source of the fluoride. A statement to that effect has been added to the report.
19	In the Executive Summary, *Group C Wells – OW-61, OW-63, OW-64, and OW-55,* page 6, the Permittee states, "[i]ron and manganese concentrations exceeded applicable standards in OW-64." According to Table 8.5.2, the iron and manganese concentrations in the groundwater samples collected from well OW-64 exceeded the applicable standards. However, according to Table 8.5.3, the iron concentrations did not exceed the applicable standard. Although Section 6.3.3, *Observation Wells, OW-61, OW-63, OW-64, and OW-65* , page 41, correctly stated the difference, the statement in the Executive Summary is misleading. Correct the statement for accuracy in the revised Report.	The Executive Summary, page 6, has been revised to match Section 6.3.3.
20	In the Executive Summary, *Group C Wells – RW-1, RW-2, RW-5, and RW-6* , page 6, and Section 6.3.4, *Recovery Wells, RW-1, RW-2, RW-5, and RW-6* , page 42, the Permittee states, "[n]one of the recovery wells were gauged or sampled in 2019 due to the installation of a fluid recovery pump in each well." Section 2.7, Remediation Activities, page 20, also states, "[f]luid recovery pumps have been installed in RW-1, RW-2, RW-5, RW-6, OW-14, OW-30, OW-54, and OW-55 and limited fluid recovery was conducted." In 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 2020 Annual Groundwater Monitoring Report will include monitoring data collected from the Group C Recovery Wells.
21	In the Executive Summary, *Group D Wells – OW-1, OW-10, OW-11, and OW-12* , page 7, and Section 6.4.2, *Observation Wells, OW-1 and OW-10* , page 46, the Permittee states, "[t]he metals analysis for OW-1 and OW-10 reported uranium concentrations above the applicable standard." While some crude oil may contain uranium, the refinery is likely not a source of uranium in groundwater. The Permittee is not required to discuss analytical results of uranium in future reports. No revision required.	The 2021 Facility Wide Annual Groundwater Monitoring Plan will remove uranium analyses.
22	In the Executive Summary, *Group D Wells – OW-1, OW-10, OW-11, and OW-12* , page 7, the Permittee states, "[n]o organic compounds were detected above applicable standards in the groundwater samples collected from OW-1, OW-10, OW-11, and OW-12." According to Table 8.4.4, *OW-11, OW-12 Organic Compounds Analytical Result Summary* , 1,2-Dichloroethane (EDC) was detected below the screening level during the 2019 sampling event in the groundwater sample collected from well OW-11. Accordingly, 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.	MPC requests clarification on the NMED comment on the portion stating EDC is below the screening level. Based on the remainder of the comment, the 2021 Facility-wide Groundwater Monitoring Work Plan will include 1,4-dioxane analysis using EPA Method 8270 SIM and EDB using EPA Method 8011 for OW-11.

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ANNUAL GROUNDWATER MONITORING
MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

	Comments:	Response:
23	In the Executive Summary, *Additional Sites Monitored – Evaporation Ponds EP-1 through EP-12B*, page 7, and Section 6.6.1, *Evaporation Ponds EP-1 through EP-12B*, page 51, the Permittee states, "[n]itrite concentrations exceeded the standard in evaporation ponds EP-6, EP-7, EP-8, EP-9, EP-11, and EP-12B." The nitrite concentrations in the samples collected from ponds EP-6, EP-7, EP-8, EP-9, EP-11, and EP-12B are recorded as 2.6, 52, 53, 39, 52, and 5.5 mg/L, respectively, during the April 2019 sampling event according to Table 8.15, *Evaporation Ponds (EP-1 thru EP-12B) BTEX, MTBE and General Chemistry Analytical Result Summary*. A sharp increase in nitrite concentrations was observed in ponds EP-9 and EP-11. Discuss the potential causes of the nitrite concentration increase in the revised Report.	In regard to the sharp increase in nitrite concentrations in ponds EP-9 and EP-11, review of the historical data at these locations indicates that high detection limits (i.e., <200 mg/L) preclude an accurate assessment of trends. Nitrate/nitrite chemistry can be subject to several factors, including precipitation, variation in wastewater system influent, seasonal temperature increases (which may spur biological growth and reducing conditions), and pond depth. Moreover, the very nature of the evaporation ponds will tend to increase total dissolved solids concentrations as the pond water evaporates, which may intensify these factors. The revised Report does not include the potential cause of the nitrite concentration increases due to the uncertainty of the source.
24	In the Executive Summary, *Additional Sites Monitored – Evaporation Ponds EP-1 through EP-12B*, page 7, the Permittee states, "[a]rsenic, iron, manganese, and selenium were detected in concentrations exceeding applicable standards in the ponds." The *2020 Facility-wide Groundwater Monitoring Plan* indicates that the samples collected from evaporation ponds are required to be analyzed for WQCC metals, which include the RCRA 8 metals. The analytical results of cadmium and silver were not included in Table 8.15.2, *Evaporation Ponds, (EP-1 thru EP-12B) Total Metals Analytical Result Summary*. Include the analytical results of cadmium and silver and discuss whether these metals were detected in the revised Report.	Table 8.15.2 and the Report have been revised. Historically, total silver was not analyzed for during sampling or reported in the annual groundwater reports. Total silver was added for 2018 and 2019 in Table 8.15.2. Total cadmium was not detected in the evaporation ponds during 2019. Total silver was detected in several locations but did not exceed the applicable standard.
25	In the Executive Summary, *Additional Sites Monitored – Evaporation Ponds EP-1 through EP~ 12B*, page 7, and Section 6.6.1, *Evaporation Ponds EP-1 through EP-12B*, page 52, the Permittee states, "[t]he volatile organic compound bromomethane was detected in EP-2 above the applicable standard." Since bromomethane was detected in pond EP-2, pesticides may be present. Propose 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.	Pesticides are not manufactured onsite and previous pond samples had no detections therefore, and any of pesticides by the facility would be in compliance with manufacturers recommendations and would not constitute a waste. MPC will not be adding pesticides to EP-2 analysis for 2021.
26	In the Executive Summary, *Additional Sites Monitored – Evaporation Ponds EP-1 through EP-12B*, page 7, and Section 6.6.1, *Evaporation Ponds EP-1 through EP-12B*, page 53, the Permittee states, "[p]esticides were not detected in the samples collected from EP-3, EP-12A, and EP-12B." Pesticides have not been detected in ponds EP-3, EP-12A, and EP-12B since 2018. It is not necessary to continue to monitor pesticides for these ponds. Propose to discontinue pesticide analysis for the samples collected from ponds EP-3, EP-12A, and EP-12B in the 2021 Facility-wide Groundwater Monitoring Work Plan.	The 2021 Facility-wide Groundwater Monitoring Work Plan will remove the pesticide analysis for ponds EP-3, EP-12A, and EP-12B.
27	In the Executive Summary, *Outfall STP1 to EP-2*, page 7, the Permittee states, "[b]enzene, toluene, ethylbenzene, and total xylenes were detected." The benzene concentrations in the samples collected at outfall STP1 to EP-2 exceeded the applicable screening level during the February and November 2019 sampling events according to Table 8.16, *STP-1 to EP-2 (EP-2 Inlet) BTEX, MTBE, DRO/GRO/MRO and TDS Analytical Result Summary*. Wastewater containing benzene above the screening level should not have been discharged to pond EP-2. Provide information on whether the carbon canister was replaced after the November 2019 sampling event. If so, discuss whether the replacement carbon canister has effectively lowered benzene levels at the outfall in the revised Report. If not, provide justification for not doing so. In addition, provide a plan for the discontinuation of discharging wastewater that exceeds screening levels into pond EP-2 and for the proper disposal of the wastewater.	The wastewater treatment plant's carbon treatment system was updated in March of 2020. The new system replaced the two 10,000-pound granular activated carbon (GAC) system with four 20,000-pound GAC vessels with a flow capacity of 900 gallons per minute (GPM). Two vessels are always in service with the third fresh carbon bed remaining in standby, while the fourth will be the spent carbon on standby to be replaced. The upgraded system has resolved the issue of benzene found in the outfall to EP-2. Prior to March 2020, a temporary upgraded system was in place, adding an additional 8,000-pound GAC, which addressed the benzene exceedance issue during the upgrade to the system. Because the system was upgraded in 2020, the revised Report has not been revised to include a discussion of the carbon canisters but a discussion will be included in the 2020 Groundwater Report. The replacement of the carbon canisters is now irrelevant and does not require discussion.
28	In the Executive Summary, *Outfall STP1 to EP-2*, page 8, the Permittee states, "[a]cetone, bromomethane, 2-butanone, and carbon disulfide were detected in concentrations below applicable standards." The bromomethane concentration in the sample collected at outfall STP1 to EP-2 exceeded the applicable screening level during the November 2019 sampling event according to Table 8.16.2, S*TP-1 to EP-2 (EP-2 Inlet) Volatile Organic Compounds Analytical Result Summary*. Resolve the discrepancy in the revised Report.	The Executive Summary, page 8, has been revised in the Report.
29	In Section 1.2, *Background Information*, page 12, the Permittee states, "[t]he diesel line was recommissioned and put back in service on February 3, 2014. The diesel line currently is not in service." It is not clear when nor why the diesel line was taken out of service and is no longer used. Provide the date when it was taken out of service and explain why it is no longer in use in the revised Report.	The diesel line was built by MPC and put into service on February 3rd, 2014. Due to upgrades that the Travel Center made to its facility, MPC's pipeline was no longer compatible with the Travel Center and the diesel pipeline was taken out of service by the end of 2014. The Report, page 12, has been revised.

TABLE 1. RESPONSE TO COMMENTS FROM NMED LETTER DATED NOVEMBER 23, 2020
ANNUAL GROUNDWATER MONITORING
MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

	Comments:	Response:
30	In Section 1.2, *Background Information* , page 12, the Permittee states, "[a] designated area is used to conduct employee firefighting training." It is possible that aqueous film foaming foam (AFFF) is used during the training. AFFF is known to yield per- and polyfluoroalkyl substances (PFAS). PFAS compounds are known to cause adverse human health effects and EPA considers PFAS to be an emerging contaminant. Requirements for the evaluation of PFAS are included in NMED's Risk Assessment Guidance for Site Investigation and Remediation (2019). The training is presumably conducted at the new fire training area adjacent to SWMU 7 and the groundwater in the vicinity of the training area may be affected. Well OW-63 is appropriately located to evaluate for the presence of PFAS in the vicinity of the training area. Propose to conduct PFAS analysis for the groundwater samples collected from well OW-63 in the 2021 Facility-wide Groundwater Monitoring Work Plan.	The 2021 Facility-wide Groundwater Monitoring Work Plan will include PFAS analysis for OW-63.
31	In Section 1.2, *Background Information* , page 12, the Permittee states, "[f]low rates up to 500 GPM can now be achieved through the carbon system." The wastewater flowrate during September 2020 was reported as approximately 60 gallons per minute due to the current idling status. In the response letter, explain whether the reduced flowrate may adversely affect effectiveness of the carbon system and discuss whether the system is cable of limiting the effluent flowrate so that the sufficient detention time is provided.	The optimal flow rate for the GAC wastewater system is at a minimum of 70 GPM. MPC has been idling the wastewater system to allow for sufficient fluid retention for optimal system operations. While the flow rate dropped below the optimal rate at 60 GPM, this will not adversely affect the effectiveness of the carbon system to handle the wastewater. However, if the system were run at suboptimal rates, over time it would shorten the lifespan of the carbon bed through channeling and creating preferential fluid pathways, if this were to begin to happen, MPC will take the necessary steps to ensure the effectiveness of the system.
32	In Section 2.1, *Monitoring and Sampling Program* , page 16, the Permittee states, "[t]he sampling frequency, analyses and target analytes vary for each area." A table listing the sampling frequency and analytical suite for each sampling location (e.g., wells and ponds) must be included in the revised Report. All deviations from the approved groundwater monitoring work plan must be discussed in a section titled "Deviations from Work Plan" of the revised Report.	Section 10 – Table 1, *Gallup Refinery – 2019 Ground Water Monitoring Schedule, is* provided in the revised report. The Report has been revised to include Section 2.8, *Deviations from Work Plan* .
33	In Section 2.2, *Sampling Methods and Procedures* , page 18, the Permittee states, "[f]ield water quality measurements must stabilize for a minimum of three consecutive readings taken at 2 to 5-minute intervals, within the following limits before purging will be discontinued and sampling may begin: dissolved oxygen (DO) (10%), specific conductance (10%), temperature (10%), and pH (10%)." The stabilization protocol was not followed. For example, the last two specific conductance readings collected from well MKTF-20 during the first quarter of 2019 are recorded as 98 mS and 70 mS according to Appendix D, *Field inspection Logs* . The readings were not stabilized with the required criterion (10%) prior to collection of the samples; however, sampling results are considered acceptable in the revised Report. Provide justification for not following the stabilization protocol in the revised Report.	The process of purging using a bailer frequently creates significant difficulties in stabilizing parameters within 10% as air and turbulence are added to the fluid each time the bailer enters the well. MPC suggests that after 3 well volumes have been extracted from a well, the well water will have been purged sufficiently to be collecting a sample representative of the the aquifer and time further spent trying to stabilize parameters is not necessary. MPC will include this process in the 2021 Facility-wide Groundwater Monitoring Work Plan.
34	In Section 2.2, *Sampling Methods and Procedures* , page 18, the Permittee states, "Table 2.1 summarizes the final water quality readings collected in 2019." Table 2.1 is not included in the Report. Provide the table in the revised Report.	Table 2.1 has been included with the revised Report.
35	In Section 2.5, *Analytical Methods* , page 20, the Permittee states, "[g]roundwater and surface water samples collected during the monitoring events were analyzed for the constituents listed in Table 1, Section 10.0," and in Section 3, *Groundwater DTW/DTP* , page 24, the Permittee states, "[g]roundwater elevation data were collected from the wells listed in Table 1, Section 10.0." Table 1 is not included in the Report. A table listing the sampling frequency and analytical suite for each sampling location (e.g., wells and ponds) must be included in the revised Report (see Comment 32).	The revised Section 10 - Table 1, *Gallup Refinery – 2019 Ground Water Monitoring Schedule,* has been included with the revised Report.
36	In Section 2.7, *Remediation Activities* , page 22, the Permittee states, "Figure 13 presents a separate phase hydrocarbon thickness map for September 2019." Figure 13, SPH Thickness August 2019, presents contour lines for observed SPH thickness, however, these contour lines are likely not accurate. There are not enough gauging data points between the lines. For example, eight contour lines are drawn between wells OW-64 and OW-65 with an increment of one-foot SPH thickness. No SPH was detected in well OW-64 while 8.55 feet of SPH was detected in well OW-65. There are no data points between ow-64 and OW-65, therefore, distribution of SPH is not understood between wells OW-64 and OW-65. Although wells RW-5 and RW-6 are located between OW-64 and OW-65, these wells were not gauged in August 2019. Remove the contour lines from Figure 13, as appropriate. In addition, the data presented in Table 9.2, 5-Year Historical DTB/BTW Measurements for Wells MKTF-01 thru MKTF-50, contradicts the data presented in Figure 13. For example, SPH in well MKTF-34 was not detected in August 2019 according to Table 9.2. However, well MKTF-34 is placed between 1- and 2-feet contour lines in Figure 13. Resolve the discrepancy in the revised Report. Finally, Figure 13 presents SPH measurement data collected in August rather than September. Correct the typographical error in the revised Report.	Figure 13 has been revised.

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ANNUAL GROUNDWATER MONITORING
MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

	Comments:	**Response:**
37	Section 2.7, *Remediation Activities* , pages 22 and 23, and Section 6.2.5, *Groundwater Monitoring Wells, STP1-NW, STP1-SW, OW-59, OW-60, and OW-62* , pages 35 and 36, discuss an effort to find the source of the hydrocarbon discovered in the STP-1 French drain. Section 7.3, *Group C – Groundwater Monitoring* , page 58, also states, "[a]n investigation into the potential source of SPH detected in RW-5 and RW-6 is on-going." Comment 1 in NMED's *Response to Comments January 29, 2020 Approval with Modifications OW-61 through OW-65 Well Installation Report,* dated March 26, 2020, states, "[i]t is critical to investigate the source of SPH in a timely manner to prevent expansion of contamination. With the understanding that the COVID-19 epidemic could influence the schedule, provide an anticipated submittal date for the report that summarizes the result of the LIF study in a response letter." The response letter is due to be submitted no later than **December 31, 2020**. This comment serves as a reminder that a response to the January 29, 2020 comment is due to NMED at the end of the year. No response required.	The *Response to Approval with Modifications OW-61 through OW-65 Well Installation Report* was submitted to NMED on December 18, 2020.
38	In Section 5, *Groundwater Figures* , page 26, the Permittee states, "[g]eologic profiles and groundwater elevations are depicted in the following maps in Section 11." Hard copies of the figures were not provided although figures were included in an electronic copy. The Permit Section IV.L.1 requires two hard copies of the Report. Submit two hard copies of the revised Report that includes all tables and figures.	Two hard copies of the revised Report are included with this letter.
39	In Section 6, *Groundwater Monitoring Results* , page 27, the Permittee states, "[d]ue to requirements for field preservation of samples, some samples have the results for nitrite and nitrate reported as a single value of nitrogen." In the *Response to Approval with Modifications Revised Facility Wide Groundwater Monitoring Work Plan 2018 - Updates for 2018* , dated November 28, 2018, the Permittee acknowledged that separate nitrate and nitrite analyses would be conducted. Most general chemistry data present nitrate and nitrite concentrations separately in the Report. Provide a clarification in the revised Report.	The Report Tables, Section 8, has been revised. The analytical results have been highlighted blue in the tables to indicate where the analysis was only completed as a single value rather than separate results. Historically, the nitrite and nitrate results were reported as a single value because of laboratory constraints. The holding time for analyzing nitrite and nitrate separately is 48 hours, analyzing the two together has a holding time of 28 days allowing for the laboratory to have enough time to report accurate results. MPC has coordinated with the lab to analyze the samples within 48 hours for nitrite and nitrate.
40	In Section 6.1.1, *Boundary Wells* , BW-1A/1B/1C, BW-2A/2B/2C, BW-3A/3B/3C, BW-4A/4B, and BW-5A/5B/5C, *Groundwater Monitoring Results* , pages 28 and 29, the Permittee states, "MTBE was detected in the samples collected from BW-5B and BW-5C in all four quarters in 2019," and "GRO exceeded the applicable standard in BW-5C in the second quarter 2019." The extent of MTBE and GRO contamination west of BW-5B/5C must be delineated. In the *Work Plan 2015 Annual Groundwater Report Comments* , dated October 2019, the Permittee states, "[a] new shallow monitoring well will be installed adjacent to EP-9 on the south side of the pond for the purpose of leak detection. In addition, a new Sonsela well will be installed west of OW-1. If saturation is encountered in the alluvium deposits above the Chinle Group during the drilling of the new Sonsela well west of OW-1, then up to two "shallow" wells will be completed adjacent to the new Sonsela well consistent with those recently installed at locations BW-4A, BW-4B, BW-5A, and BW-5B." The proposed Sonsela well west of OW-1 will likely be useful in delineating the extent of MTBE and GRO contamination west of BW-5B/5C. Explain whether the well is already installed or provide a date when the well will be installed in the revised Report. In addition, the Work Plan 2015 Annual Groundwater Report Comments also propose to install a well south of pond EP-9. Explain whether the well was installed in the response letter. If the well is not installed, the well will not be required during the current idling status because the volume of wastewater discharge is expected to decrease with the current idling status.	The proposed Sonsela well west of OW-1 and the well south of pond EP-9 were not installed. The proposed Sonsela well west of OW-1 will be installed during the summer of 2021. The well south of pond EP-9 will not be installed at this time but will be considered when the refinery comes out of its indefinite idled status.
41	In Section 6.2.1, *Groundwater Monitoring Wells, GWM-1, GWM-2, and GWM-3* , page 31, the Permittee states, "SPH was found to be present in GWM-1 during all four quarterly gauging events in 2019 with the maximum thickness recorded in the first quarter (0.48 feet)." *The Investigation Work Plan [SMW-2] and [GWM]-1 Areas* , dated August 2018 states that [a] new shallow monitoring well will be installed to the west of GWM-1, approximately halfway between the former Aeration Basin and EP-2. NMED approved the work plan in July 1, 2020. The proposed well will help delineate the extent of SPH west of well GWM-1. The July 1, 2020 *Approval* directs the Permittee to implement field investigation in accordance with the approved work plan and submit an investigation report summarizing the results of the investigation no later than **July 31, 2021**. This comment serves as a reminder. No response required.	This comment is acknowledged.
42	In Section 6.3.3, *Observation Wells, OW-61, OW-63, OW-64, and OW-65* , page 41, the Permittee states, "OW-61 and OW-65 contained SPH in 2019 and were not sampled." Well OW-61 is located close to the north boundary of AOC 26 (Process Units); therefore, SPH may potentially be present beneath AOC 26 where the area is likely to be inaccessible for sampling during normal operations. The current idling period likely allows investigation of AOC 26. Evaluate accessibility of a drill rig for locations where soil borings can be advanced in the vicinity of AOC 26. Propose to submit a letter work plan for the investigation of AOC 26, if this investigation makes sense under the current refinery idle status.	The currently idling period will allow for an investigation of AOC 26. A laser induced fluorescence (LIF) investigation during February 2021 included investigation in the process unit area. Results of the LIF investigation will be included in the LIF investigation report dated March 31, 2021.

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	Comments:	**Response:**
43	In Section 6.4.1, *Process Wells, PW-2, PW-3, and PW-4* , page 45, the Permittee states, "[t]he causes of the VOC and SVOC detections is unknown in PW-2, PW-3, and PW-4," and "[p]ipeline coatings, valves/packers and gaskets may be leaching these constituents into the water that is being transported from the well to the point of usage." Evaluate whether the materials used to construct the wells cause detections of VOC and SVOC. If the well construction materials are found to be causing the detections, propose to replace the wells with appropriate materials to eliminate the source of the contamination.	Regardless of the source of the VOC and SVOC detections, the detections are sporadic and well below USEPA drinking water standards. MPC will continue to monitor the process wells semiannually. In addition, MPC had a well company complete an integrity evaluation of PW-3 and the well company determined there was not significant degradation of the casing that would warrant replacement at this time.
44	In Section 6.5, *Constituent Levels in Group E Monitoring Wells* , page 47, and Section 7.5, *Group E – Groundwater Monitoring* , page 60, the Permittee states, "[t]he following wells contained SPH during the [2019] monitoring events: ▪MKTF-1, MKTF-3, MKTF-5, MKTF-6, MKTF-7, MKTF-8, MKTF-12, MKTF-14, MKTF-26, and MKTF-45 - All four quarters; ▪MKTF-15 - First, third and fourth quarters; ▪MKTF-18 - Third quarter; ▪MKTF-23 - Second and third quarter; ▪MKTF-36 - Fourth quarter, and ▪MKTF-37 - Second, third, and fourth quarter." According to Table 9.2, 5-Year Historical DTB/DTW Measurements for Wells MKTF-01 thru MKTF-50, SPH were detected in the following wells during the 2019 sampling event. ▪MKTF-17 - Fourth quarter, and ▪MKTF-19 - Fourth quarter. Correct the discrepancy in the revised Report.	Section 6.5, page 48, has been revised to include MKTF-17 and MKTF-19 containing SPH during the 2019 monitoring events in the revised Report.
45	In Section 6.5, *Constituent Levels in Group E Monitoring Wells* , page 47, the Permittee states, "[SPH was detected in] MKTF-1, MKTF-3, MKTF-5, MKTF-6, MKTF-7, MKTF-8, MKTF-12, MKTF-14, MKTF-26, and MKTF-45 [during] all four quarters." The SPH thickness in wells MKTF-5, MKTF-7, MKTF-8, MKTF-17, MKTF-19, MKTF~36, and MKTF-45 that are located in the vicinity of the Main Truck Loading Rack and Retail Fuel Tanks significantly increased in 2019 due to the October 27, 2019 gasoline release. Comment 1 in the NMED's *Disapproval Investigation Work Plan No. 2 Area of Concern 35* , dated August 31, 2020, provided direction to investigate the extent of the SPH plume. The revised work plan must be submitted to NMED no later than **December 31, 2020**. This comment serves as a reminder of the work plan requirement. No revision required.	The *Response to Disapproval Investigation Work Plan No.2 Area of Concern 35* was submitted to NMED on January 4, 2021.
46	In Section 6.5, *Constituent Levels in Group E Monitoring Wells* , page 48, the Permittee states, "[t]he highest benzene concentration (21 mg/L) occurred in well MKTF-16 during the first quarter 2019." High benzene levels have persisted in well MKTF-16 since the process sewer line release was discovered near the Heat Exchanger Bundle Cleaning Pad in 2013. The benzene concentrations have not decreased even though the leak was repaired in 2013. The 2013 repair may not have stopped the leak from the process sewer line completely and/or other locations in the sewer line near MKTF-16 may be leaking. The vicinity of the Heat Exchanger Bundle Cleaning Pad may be more accessible under current refinery idle status. Submit a letter work plan to investigate integrity of the process sewer lines in the vicinity of the Heat Exchanger Bundle Cleaning Pad, and repair or replace them, as appropriate, no later than **April 30, 2021**.	The current idling period will allow for an investigation of the Heat Exchanger Bundle Cleaning Pad. MPC plans to investigate the bundle pad integrity by completing a hydrostatic test in the sump and drain trough. The sewer lines in the area were visually inspected in 2019 and no obvious breaks in the line were noted and were found to be in good condition. In addition, it should be noted that several releases have occurred in the vicinity of MKTF-16 over the past several years. The 2017 sour naphtha release is to the northwest MKTF-16 and the Heat Exchanger Bundle Cleaning Pad and the 2019 Marketing tank farm release is to the south of MKTF-16. MPC will submit the requested investigation for the sour naphtha release, as requested in the Disapproval letter, dated February 21,2020, and will include additional soil sampling towards MKTF-16.
47	In Section 6.6, *Constituent Levels for Evaporation Ponds and Effluents,* page 50, the Permittee states, "[e]vaporation ponds EP-7, EP-8, EP-11, Ep-12A, and EP-12B are also separated by dikes and are located on the northwest corner of the refinery." One of the wastewater flow paths follows from ponds EP-6 to EP-9 and the other follows from ponds EP-12B to EP-12A, EP-7 and EP-8 according to Figure 21, Evaporation Ponds Flow Path of Wastewater and Sampling Locations. Figure 21 does not depict pond EP-11. NMED's record indicates that pond EP-11 is located between ponds EP-12A and EP-8. Correct the figure to depict the location of pond EP-11 in the revised Report.	Figure 21 has been revised.

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	Comments:	Response:
48	In Section 6.6.4, *Outfall BW to EP-2* , page 53, the Permittee states, "[t]he reverse osmosis water no longer discharges to EP-2 and has been rerouted back into the units for reuse. No samples were collected in 2019." The *Response to Comments Approval - Hydrocarbon Seep Interim Measures 2019 Second Quarter Status Report* , dated September 5, 2019, states that [t]his brings us to the current day where the RO Reject is again discharged to Pond 9 while design is currently being conducted for total replacement. The reverse osmosis water was discharged to Pond 9 in 2019 and the samples should have been collected from the outfall. If the reverse osmosis water is currently discharged to any evaporation ponds, the Permittee must collect the samples for the required analyses and report the results in the future reports.	The refinery is currently idled and the discharge of reverse osmosis (RO) reject water from the Boiler House to the Evaporation Ponds has ceased. Previously, RO reject water was discharged to Pond-9. Last year due to upgrades in piping, the RO reject water was redirected to Pond-6. When the plant first idled in April 2020, all RO reject water was redirected and processed through the wastewater facility, as the wastewater facility needed additional water to function efficiently. Presently, the only water being discharged to the Evaporation Ponds is from STP-1. When the refinery starts up again, NMED will be provided a detailed description of how the RO reject water is discharged at the facility.
49	In Section 7.5, *Group E – Groundwater Monitoring, Recommendations,* page 60, the Permittee states, "MKTF wells identified as having an SPH level, begin a routine hydrocarbon recovery effort to evaluate recharge rate and record volumes of water and SPH recovered." The proposed SPH recovery for the MKTF wells is approved. The recovery data must be reported in the 2020 Annual Groundwater Report.	The 2020 Annual Groundwater Report will include the SPH recovery data for the MKTF wells.
50	According to the tables that summarize DRO/GRO/MRO Analytical Results, the reported detection limits were higher than the applicable groundwater screening levels of total petroleum hydrocarbon gasoline range organics (TPH-GRO), diesel range organics (TPH-DRO), and oil range organics (TPH-MRO). The detection limits must be lower than the screening levels because detection limits higher than the screening levels do not allow evaluation of the risk associated with the compounds. Solicit analytical laboratories capable of achieving the detection limits lower than the screening levels and resolve the recurring issue. Otherwise, address the concentrations where the detection limits are higher as a data gap and include the discussion in the revised Report (see Comment 4). All analytes whose limit of quantitation (LOQ) values are higher than the applicable screening levels are considered data quality exceptions and must be identified as such in all tables and figures in the revised Report.	MPC reached out to several laboratories to determine if reporting limits lower than the screening level are achievable. TPH-GRO reporting limits can be met using the current laboratory method and will be incorporated into future reports. The laboratory will attempt to meet the TPH-MRO reporting limits with the next sampling event and if achievable will be included in future reports. The laboratory is unable to achieve reporting limits for TPH-DRO below the NMED screening level with the current available method. MPC will review available methods annually to determine if the screening levels can be met. The analytes whose limit of quantitation (LOQ) values are higher than the applicable screening levels have been identified in all the tables and figures with a notation of * and italics to indicate the LOQ discrepancy.
51	According to Table 8.3.1, *SMW-2, SMW-4 General Chemistry and DRO/GRO/MRO Analytical Result Summary* , DRO concentration exceeded the applicable screening level during the 2019 sampling event. However, the exceedance is not highlighted. Correct the table in the revised Report.	Table 8.3.1 has been revised.
52	According to Table 8.3.4, *SMW-2, SMW-4 Volatile and Semi-Volatile Organic Compound Analytical Result Summary* , the 1,4-dioxane concentration in the groundwater sample collected from well SMW-4 exceeded the applicable screening level during the December 6, 2018 sampling event. However, 1,4-dioxane was not analyzed during the 2019 sampling event. The 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 and provide a justification for why it was not analyzed in 2019 in the revised Report.	SMW-4 was not analyzed during the third quarter of 2019 because it was inadvertently left off the chain-of-custody for the laboratory. 1,4-Dioxane was sampled for during the third quarter of 2020 and the 2021 Facility-wide Groundwater Monitoring Work Plan will include 1,4-dioxane analysis using EPA Method 8270 SIM for SMW-4.
53	According to Table 8.8.2, *NAPIS-1, NAPIS-2, NAPIS-3, KA-3 Total Metals Analytical Result Summary* , the mercury concentration in the groundwater sample collected in well KA-3 during the October 2019 sampling event is reported as 0.0000 mg/L. The reported value is misleading. It is not clear whether or not mercury is detected from the sample. According to Appendix H, 2019 Analytical Data, the mercury concentration is reported as 0.000043 mg/L. Correct the table to indicate the positive detection of mercury in the revised Report and present the data in appropriate units (e.g., µg/L) so that significant digits are visible.	Table 8.8.2 has been revised. The mercury results have been changed from mg/L to µg/L so that the detections are appropriate for the results.
54	According to Table 8.16, *STP-1 to EP-2 (EP-2 Inlet) BTEX, MTBE, DRO/GRO/MRO and TDS Analytical Result Summary* , benzene concentrations exceeded the applicable screening level during the February and November 2019 sampling events. However, these exceedances are not highlighted. Correct the table in the revised Report.	Table 8.16 has been revised.
55	According to Table 8.16.2, *STP-1 to EP-2 (EP-2 Inlet) Volatile Organic Compounds Analytical Result Summary* , the bromomethane concentration exceeded the applicable screening level during the November 2019 sampling event. However, the exceedance is not highlighted. Correct the table in the revised Report.	Table 8.16.2 has been revised.

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 22549

CONDITIONS

Operator: Western Refining Southwest LLC 539 South Main Street Findlay, OH 45840	OGRID: 267595
	Action Number: 22549
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

CONDITIONS

Created By	Condition	Condition Date
scwells	Accepted for Record Retention Purposes-Only	11/21/2022