

From: [Martinez, Cynthia, NMENV](#)
To: JMoore5@Marathonpetroleum.com
Cc: [Cobrain, Dave, NMENV](#); [Suzuki, Michiya, NMENV](#); [Chavez, Carl J, EMNRD](#); ["king.laurie@epa.gov"](mailto:king.laurie@epa.gov)
Subject: Letters to Mr. Moore
Date: Friday, December 18, 2020 12:52:24 PM
Attachments: [WRG 2020- HWB-WRG-20-001.pdf](#)
[WRG 2020-HWB-WRG-20-020.pdf](#)

Good Afternoon,
Please see attachments.

Cynthia Martinez
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Bldg.1
Santa Fe, New Mexico 87505-6313



Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

**NEW MEXICO
ENVIRONMENT DEPARTMENT**

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6313
Phone (505) 476-6000 Fax (505) 476-6030
www.env.nm.gov



James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

December 21, 2020

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

**RE: APPROVAL WITH MODIFICATIONS
FLARE KOD PUMP SODIUM HYROXIDE RELEASE INVESTIGATION WORK PLAN
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-20-020**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *Flare KOD Pump Sodium Hydroxide Release Investigation Work Plan* (Work Plan), dated November 30, 2020, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee). NMED hereby issues this Approval with Modifications with the following comments.

Comment 1

In the Scope of Activities Section, *Field Screening*, page 6 of 10, the Permittee states, "the sample will also be wetted, and a field pH will be taken." Appendix A, *Standard Operating Procedure – Soil Sampling*, indicates that a soil pH meter will be used for field screening and calibrated according to manufacturer's recommendations. Provide a more detailed description of the pH screening procedures in a response letter.

Mr. Moore
December 21, 2020
Page 2

In addition, the soil pH meter used for this investigation must be capable of reading pH values above 12.5. One of the calibration points must include pH greater than 12.5 and the linearity of the calibration curve must be demonstrated for the instrument. Otherwise, EPA Method 9045D must be used for soil pH measurement. In this case, a low-sodium-error electrode must be used to compensate for inaccurate readings associated with very high pH that may be present in the areas where sodium hydroxide was released. Include the provision in the revised Work Plan and provide replacement pages, as appropriate.

Comment 2

In the Investigation Method Section, *Sample Collection Procedures*, page 7 of 10, the Permittee states, “[s]amples will be collected in accordance with the soil sampling Standard Operating Procedure (SOP) (Appendix A) and screened in accordance with the soil screening SOP (Appendix B).” Appendix B is not included in the Work Plan. Resolve the discrepancy and provide replacement pages.

Comment 3

The Data Quality and Validation Section, page 9 of 10, provides a detailed description of quality assurance and quality control criteria. However, the criteria are presumed to be only described for total petroleum hydrocarbons analyses. Quality assurance and quality control related to pH measurements are equally important for this investigation. Accordingly, include a description of such criteria for pH measurement in the revised Work Plan and provide replacement pages.

The Permittee must address all comments above and submit a response letter, replacement pages, and an electronic version of the revised Work Plan no later than **April 30, 2021**.

This approval is based on the information presented in the document as it relates to the objectives of the work identified by NMED at the time of review. Approval of this document does not constitute agreement with all information or every statement presented in the document.

Mr. Moore
December 21, 2020
Page 3

If you have questions regarding this Approval with Modifications, please contact Michiya Suzuki of my staff at 505-476-6046.

Sincerely,

A handwritten signature in blue ink, appearing to read "D. Cobrain".

Dave Cobrain
Program Manager
Hazardous Waste Bureau

cc: M. Suzuki, NMED HWB
C. Chavez, OCD
L. King, EPA Region 6 (6LCRRC)

File: Reading File and WRG 2020 File



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Governor

Howie C. Morales
Lt. Governor

**NEW MEXICO
ENVIRONMENT DEPARTMENT**

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6313
Phone (505) 476-6000 Fax (505) 476-6030

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James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

December 15, 2020

Mr. Scott M. Denton
Environmental Manager
HollyFrontier Navajo Refining LLC
P.O. Box 159
Artesia, New Mexico 88211-0159

**RE: APPROVAL WITH MODIFICATIONS
2020 FACILITY-WIDE GROUNDWATER
MONITORING WORK PLAN, JUNE 2020
HOLLYFRONTIER NAVAJO REFINING LLC - ARTESIA REFINERY
EPA ID NO. NMD048918817
HWB-NRC-20-005**

Dear Mr. Denton:

The New Mexico Environment Department (NMED) has completed its review of the HollyFrontier Navajo Refining LLC's, Artesia Refinery (the Permittee) *2020 Facility-Wide Groundwater Monitoring Work Plan (2020 FWGMWP)*, dated June 30, 2020. NMED hereby issues this Approval with modifications.

The Permittee must address all comments in this Approval with Modifications and address comments, as applicable, in the annual groundwater monitoring report.

This approval is based on the information presented in the document as it relates to the objectives of the work identified by NMED at the time of review. Approval of this document does not constitute agreement with all information, or every statement presented in the document.

Mr. Denton
December 15, 2020
Page 2

If you have any questions regarding this letter, please contact Leona Tsinnajinnie of my staff at (505) 476-6057.

Sincerely,

Kevin M. Pierard, Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
L. Tsinnajinnie, NMED HWB
M. Suzuki, NMED HWB
C. Chavez, NMEMNRD OCD
R. Combs, HollyFrontier Navajo Refining LLC, Artesia Refinery
L. King, EPA Region 6 (6LCRRC)

File: Reading File and NRC 2020, HWB-NRC-20-005

Attachment

Mr. Denton
December 15, 2020
Attachment Page 1 of 1

Comment 1

In Section 5.0 (Monitoring Program Scope of Services), page 17, paragraph 1, the Permittee proposes to reduce the sampling frequency for volatile organic compounds (VOCs) from semi-annual to annual for the following Evaporation Pond monitoring wells: MW-2A, MW-3, MW-4A, MW-5A, MW-10, MW-18A, MW-22A, MW-70, MW-74, MW-75, MW-76, MW-79, MW-83, MW-84, MW-87, MW-88, MW-121, MW-122, MW-123, MW-124, OCD-1R, OCD-2, OCD-3, OCD-4, OCD-5, OCD-6, OCD-7AR, and OCD-8A. After reviewing the analytical data from the annual reports, NMED has determined that the VOC sampling frequency may be reduced from semi-annual to annual. However, if future analytical data reports exceedances for two consecutive sampling events, the Permittee must resume semi-annually sampling for VOCs. NMED will reevaluate the need for continued semi-annual sampling based on the data. The Permittee must continue semi-annual testing for total petroleum hydrocarbons (TPH) at the Evaporation Ponds.

Comment 2

In Section 5.0 (Monitoring Program Scope of Services), page 17, paragraph 1, the Permittee proposes to remove the following monitoring wells from the gauging schedule in the facility-wide groundwater monitoring activities: KWB-1B, MW-9, MW-19, and MW-30. NMED has determined the following:

- a. Monitoring well KWB-1B is located in the middle of the agriculture field and has similar well information as monitoring well KWB-1A. Both wells are screened at the same depth and closely located. However, there is a significant difference in the well gauging data. Monitoring at KWB-1B must remain on the gauging schedule but the frequency may be reduced from semi-annual to annual measurements.
- b. Monitoring well MW-9 is located north of the Pecan Orchard near Three Mile Ditch (TMD). Nearby monitoring wells are MW-8 and MW-21, but only MW-21 has a reported screened interval. There is no screened interval data available for MW-9. Based on the location, MW-9 may need to be utilized for modeling the effects of the injection/extraction system. MW-9 must remain on the gauging schedule and must continue to be measured semi-annually.
- c. Monitoring well MW-19 is located at the northeastern boundary of the Refinery near monitoring wells MW-53 and NCL-31. Based on the screened interval data and the gauging data, MW-19 must remain in the gauging schedule, but the frequency may be reduced from semi-annual to annual measurements.
- d. Monitoring well MW-30 is located near Eagle Draw and northeast of the South RO Reject Area. This monitoring well does not have screened interval data and there is variability with the gauging data from nearby wells. MW-30 must remain on the gauging schedule and must continue to be measured semi-annually.



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Michelle Lujan Grisham
Governor

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6313
Phone (505) 476-6000 Fax (505) 476-6030
www.env.nm.gov

James C. Kenney
Cabinet Secretary

Howie C. Morales
Lt. Governor

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Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

December 10, 2020

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

**RE: RESPONSE TO APPROVAL WITH MODIFICATIONS
INVESTIGATION REPORT SANITARY LAGOON
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-20-008**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *Response to Approval with Mods Investigation Report Sanitary Lagoon* (Response), dated November 15, 2020, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee). The Permittee must address the attached comments below.

If you have questions regarding this letter, please contact Michiya Suzuki of my staff at 505-476-6046.

Sincerely,

Dave Cobrain
Program Manager
Hazardous Waste Bureau

Mr. Moore
December 10, 2020
Page 2

cc: M. Suzuki, NMED HWB
C. Chavez, OCD
L. King, EPA Region 6 (6LCRRC)

File: Reading File and WRG 2020 File
HWB-WRG-20-008

Attachment

Mr. Moore
December 10, 2020
Attachment Page 1 of 1

Comment 1

The response to NMED's *Approval with Modifications* Comment 11 states, "[t]he discussion on page 6-6 has been revised to note the fact that the analyses could not detect the presence of TPH at the screening levels and that this is a data gap." The Permittee revised the Report to address the concentrations where the detection limits are higher as a data quality exception. However, note that NMED cannot defend an assertion that a site is clean without data that support the conclusion. Therefore, any future corrective action complete (CAC) requests may be disapproved based on NMED's inability to defend that a site is clean based on the Permittee's inability to demonstrate that contaminants are not present above applicable cleanup levels. The Permittee is required to utilize appropriate analytical labs and methods that are capable of achieving limits of quantitation (LOQs) below the respective screening levels. Unless a sufficient and reasonable explanation is provided, the Permittee must utilize methods capable of achieving LOQs less than the cleanup levels for future sampling events.

Comment 2

The response to NMED's *Approval with Modifications* Comment 13 states, "[a] separate discussion of exceedances of the DAF screening levels was not included pursuant to previous comments received from NMED on this same issue in earlier site investigation reports. This same issue was first commented on in regards to Solid Waste Management Unit (SWMU) No. 10 Sludge Pits Investigation Report dated December 2016 (see NMED Comment 2 below)..."

The referenced portion of NMED's comment states, "since groundwater contamination beneath the Sludge Pits originates from various upgradient sources, and contamination is already present in the aquifer, the use of a site-specific DAF is not applicable. DAF is used to determine if contaminants in soil can migrate to groundwater, and in this case, groundwater is contaminated in the area. All discussions pertaining to a site-specific DAF must be removed from the revised Report."

To clarify, the comment is specific to SWMU 10 and only pertaining to the contamination associated with petroleum hydrocarbons. There are multiple sources of petroleum hydrocarbons outside of SWMU 10. The Permittee's use of a site-specific DAF resulted in "chasing the contamination" beyond the SWMU 10 boundary, which was unnecessary for the scope of the investigation. Therefore, the comment was provided to address the issue in the June 14, 2018 Disapproval.

Since the sources of petroleum contamination in the Sanitary Lagoon are similar to those of SMWU 10 and not limited to the specific site, the comment applies to the Sanitary Lagoon investigation. However, the DAF exceedance of metals and cyanide detected in soil samples collected from the Sanitary Lagoon is specific to this site and must be addressed. The revised Report appropriately included the discussion of the DAF exceedance. No revision required.



Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

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ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6313
Phone (505) 476-6000 Fax (505) 476-6030
www.env.nm.gov



James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

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December 10, 2020

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

**RE: APPROVAL
HYDROCARBON SEEP INTERIM MEASURES 2020 THIRD QUARTER STATUS REPORT
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-20-017**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *Hydrocarbon Seep Interim Measures 2020 Third Quarter Status Report* (Report), dated November 2, 2020, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee).

In accordance with NMED's *Disapproval Interim Measures Report Hydrocarbon Seep Area*, dated April 26, 2016, the Permittee was directed to implement source control measures by extracting groundwater and separate phase hydrocarbon (SPH) from the standpipe sumps and recovery trench. However, the refinery was placed in indefinite idle as of October 9, 2020 and the Permittee was unable to fully implement the source control measures because refinery resources and personnel were operating at a reduced capacity and focused on the transition to permanent idle during the third quarter. Accordingly, only one fluid recovery event was conducted on September 1, 2020 and 198 gallons of water and two gallons of separate phase hydrocarbon (SPH) were extracted from the retention ditch. No fluid recovery was conducted at

Mr. Moore
December 10, 2020
Page 2

the standpipes during the third quarter. The reduced frequency of the recovery operations may have caused water levels to increase in many relevant MKTF wells during the third quarter. In the *Activities Planned for the Fourth Quarter 2020* Section, page 2 of 2, the Permittee states that NMED has requested that all groundwater monitoring wells will be gauged monthly and the monthly monitoring will begin in November 2020. The statement is not accurate. NMED directed to increase the gauging frequency biquarterly in order to evaluate potential effects of idling operations. Regardless, proposed monthly gauging is hereby approved for all relevant wells. The Permittee must report the gauging data in future status reports.

In addition, the Permittee proposes to resume the recovery operations at the standpipe sumps and the retention ditch and initiate evaluation of additional or alternative recovery method. NMED concurs with continuation of the current recovery operations; however, if adjustment is deemed necessary, the Permittee must contact NMED to discuss the details prior to the implementation.

The Permittee has fulfilled its obligation to implement source control measures to the extent practicable and submit a quarterly report to NMED. The Permittee must continue to implement source control measures at the site and submit quarterly status reports including the gauging data from all relevant wells. The 2020 fourth quarter status report must be submitted no later than **February 26, 2021**.

This approval is based on the information presented in the document as it relates to the objectives of the work identified by NMED at the time of review. Approval of this document does not constitute agreement with all information or every statement presented in the document.

If you have questions regarding this letter, please contact Michiya Suzuki of my staff at 505-476-6046.

Sincerely,



Dave Cobrain
Program Manager
Hazardous Waste Bureau

cc: M. Suzuki, NMED HWB
C. Chavez, OCD
L. King, EPA Region 6 (6LCRRC)

File: Reading File and WRG 2020 File



Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

**NEW MEXICO
ENVIRONMENT DEPARTMENT**

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6313
Phone (505) 476-6000 Fax (505) 476-6030
www.env.nm.gov



James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

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December 10, 2020

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

**RE: APPROVAL
14-DAY RESPONSE REPORT
WESTERN REFINING FIREBIRD TANK RELEASE
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-MISC**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *14-Day Response Report Western Refining Firebird Tank Release* (Report), dated November 12, 2020, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee).

The stained soil was discovered during the removal of the aboveground storage tank (AST) and the soil samples were collected for the analyses of petroleum hydrocarbon diesel and motor oil range organics in September 29, 2020. The total petroleum hydrocarbon motor oil range organics (TPH-MRO) in the soil sample identified as Master Dispenser is recorded as 1,700 mg/kg in Appendix D, exceeding the residential soil screening level of unknown oil (1,000 mg/kg).

Mr. Moore
December 10, 2020
Page 2

The *Remediation Actions* Section of the Report, page 6 of 6, states, "MPC plans to perform an investigation below the tank's prior location to delineate the extent of contamination within 60 days of October 28, 2020." NMED concurs with the proposed investigation and the Permittee must provide a letter report that summarizes the results of the investigation within 30 days after completion of the proposed investigation. The letter report must be submitted no later than **February 12, 2021**. The Permittee must include total petroleum hydrocarbon gasoline range organics (TPH-GRO) in addition to TPH-DRO and MRO analyses and present the analytical results in the letter report.

The Permittee has fulfilled its obligation to submit the Report and provided all information required by NMAC 20.5.119.1903 B. Accordingly, NMED hereby issues this Approval.

This approval is based on the information presented in the document as it relates to the objectives of the work identified by NMED at the time of review. Approval of this document does not constitute agreement with all information or every statement presented in the document.

If you have questions regarding this letter, please contact Michiya Suzuki of my staff at 505-476-6046.

Sincerely,



Dave Cobrain
Program Manager
Hazardous Waste Bureau

cc: M. Suzuki, NMED HWB
C. Chavez, OCD
L. King, EPA Region 6 (6LCRRC)

File: Reading File and WRG 2020 File



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Governor

Howie C. Morales
Lt. Governor

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ENVIRONMENT DEPARTMENT**

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6313
Phone (505) 476-6000 Fax (505) 476-6030
www.env.nm.gov



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Deputy Secretary

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December 10, 2020

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

**RE: APPROVAL
ASSESSMENT REPORT FOR AOC 30 – LABORATORY
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-20-018**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *Assessment Report for AOC 30 – Laboratory (Report)*, dated November 15, 2020, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee). The Report was submitted in accordance with the requirements of the January 2017 Consent Order (Consent Order).

The purpose of the Consent Order is to determine whether areas of concern (AOCs) listed in Attachment 1 of the Consent Order require investigation or if the Permittee can provide sufficient information to determine that no further investigation or remediation is necessary.

Consent Order Section IV.B requires NMED to review the Report and determine whether the report "approved, disapproved, or disapproved in part ... " The Permittee provided information required by Consent Order Section IV.C (Contents of AOC Assessment Report). NMED reviewed the Report and hereby issues this Approval.

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Mr. Moore
December 10, 2020
Page 2

As specified by the Consent Order Section IV.D (NMED Determination of AOC Entry or Elimination), NMED will make a determination of whether or not AOC 30 should be restored to the RCRA Permit or eliminated from corrective action requirements when NMED receives the last Assessment Report.

If you have questions regarding this correspondence, please contact Michiya Suzuki of my staff at 505-476-6046.

Sincerely,



Dave Cobrain
Program Manager
Hazardous Waste Bureau

cc: M. Suzuki, NMED HWB
C. Chavez, OCD
L. King, EPA Region 6 (6LCRRC)

File: Reading File and WRG 2020 File



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Hazardous Waste Bureau

Michelle Lujan Grisham
Governor

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6313
Phone (505) 476-6000 Fax (505) 476-6030
www.env.nm.gov

James C. Kenney
Cabinet Secretary

Howie C. Morales
Lt. Governor

Jennifer J. Pruett
Deputy Secretary

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December 10, 2020

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

**RE: APPROVAL
ASSESSMENT REPORT FOR AOC 26 – PROCESS UNITS
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-20-019**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *Assessment Report for AOC 26 – Process Units* (Report), dated November 19, 2020, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee). The Report was submitted in accordance with the requirements of the January 2017 Consent Order (Consent Order).

The purpose of the Consent Order is to determine whether areas of concern (AOCs) listed in Attachment 1 of the Consent Order require investigation or if the Permittee can provide sufficient information to determine that no further investigation or remediation is necessary.

Consent Order Section IV.B requires NMED to review the Report and determine whether the report "approved, disapproved, or disapproved in part ... " The Permittee provided information

Mr. Moore
December 10, 2020
Page 2

required by Consent Order Section IV.C (Contents of AOC Assessment Report). NMED reviewed the Report and hereby issues this Approval.

As specified by the Consent Order Section IV.D (NMED Determination of AOC Entry or Elimination), NMED will make a determination of whether or not AOC 26 should be restored to the RCRA Permit or eliminated from corrective action requirements when NMED receives the last Assessment Report.

If you have questions regarding this correspondence, please contact Michiya Suzuki of my staff at 505-476-6046.

Sincerely,



Dave Cobrain
Program Manager
Hazardous Waste Bureau

cc: M. Suzuki, NMED HWB
C. Chavez, OCD
L. King, EPA Region 6 (GLCRRC)

File: Reading File and WRG 2020 File



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Hazardous Waste Bureau

Michelle Lujan Grisham
Governor

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6313
Phone (505) 476-6000 Fax (505) 476-6030
www.env.nm.gov

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Cabinet Secretary

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Lt. Governor

Jennifer J. Pruett
Deputy Secretary

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December 10, 2020

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

**RE: APPROVAL WITH MODIFICATIONS
RESPONSE TO DISAPPROVAL
REVISED ANNUAL GROUNDWATER MONITORING REPORT GALLUP REFINERY - 2016
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-17-008**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *Response to Disapproval Revised Annual Groundwater Monitoring Report Gallup Refinery – 2016* (Response), dated November 13, 2020, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee). NMED hereby issues this Approval with Modifications with the following comments.

Comment 1

The Permittee’s response to NMED’s Disapproval Comment 20 states, “[a]n examination of historical water analyses for samples collected at the STP-1 to EP-2 outfall before 2016 indicates that benzene was discharged in the past and possibly that could explain the low detections observed in 2016.” Wastewater containing benzene above the screening level was discharged from the STP-1 to EP-2 outfall in 2019 and the benzene concentration in the sample collected from Pond EP-2 exceeded the applicable standard. Acknowledge that the discharge is

Mr. Moore
December 10, 2020
Page 2

not merely an historical incident but was on-going when the refinery was in operation. Comment 27 in NMED's *Disapproval Annual Groundwater Monitoring Report Gallup Refinery – 2019*, dated November 23, 2020, states, "[w]astewater 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."

Comment 2

The Permittee's response to NMED's Disapproval Comment 29 states, "[t]he reference to "groundwater" in the discussion in Section 7.2 (page 51) has been removed so that the text only notes there may be inflow through an opening in the liner without identification of an actual source." If water is present in an LDU, the source would likely be wastewater leaking from the NAPIS. Comment 6 in NMED's November 23, 2020 *Disapproval* states, "[s]ince 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 is 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."

Comments 1 and 2 above must be addressed in the response to the November 23, 2020 Disapproval and the response must be submitted no later than **March 31, 2021**. No response is required to this letter.

This approval is based on the information presented in the document as it relates to the objectives of the work identified by NMED at the time of review. Approval of this document does not constitute agreement with all information or every statement presented in the document.

Mr. Moore
December 10, 2020
Page 3

If you have questions regarding this Approval with Modifications, please contact Michiya Suzuki of my staff at 505-476-6046.

Sincerely,



Dave Cobrain
Program Manager
Hazardous Waste Bureau

cc: M. Suzuki, NMED HWB
C. Chavez, OCD
L. King, EPA Region 6 (6LCRRC)

File: Reading and WRG 2020
HWB-WRG-17-008



Michelle Lujan Grisham
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Lt. Governor

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Cabinet Secretary

Jennifer J. Pruett
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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

February 15, 2021

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

**RE: WESTERN REFINING FIREBIRD TANK RELEASE
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-MISC**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) reviewed the *14-Day Response Report Western Refining Firebird Tank Release*, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee), and issued an approval letter on December 10, 2020.

The approval letter states, "NMED concurs with the proposed investigation and the Permittee must provide a letter report that summarizes the results of the investigation within 30 days after completion of the proposed investigation. The letter report must be submitted no later than **February 12, 2021...**" The Permittee first submitted the same *14-Day Response Report* to the Petroleum Tank Storage Bureau (PSTB) rather than the Hazardous Waste Bureau (HWB). The PSTB subsequently directed the Permittee to submit a separate investigation work plan which was not required by HWB's approval.

In order to avoid duplication of investigation work, the Permittee is no longer required to

Mr. Moore
February 15, 2021
Page 2

submit the letter report by February 12, 2021, as required by the December 10, 2020 approval. However, the Permittee must submit a letter report with form C-141 to the HWB and Oil Conservation Division (OCD) that summarizes the results of the investigation and cleanup in accordance with the OCD requirements for release reporting that also meets the applicable reporting requirements included in Permit Section II.C.2.c.ii.

Note that the Facility operates under a RCRA subtitle C permit; therefore, the Permittee must first contact the HWB and OCD to discuss whether or not the involvement of other bureaus is necessary in the future.

If you have questions regarding this letter, please contact Michiya Suzuki of my staff at 505-476-6046.

Sincerely,



Dave Cobrain
Program Manager
Hazardous Waste Bureau

cc: M. Suzuki, NMED HWB
C. Chavez, OCD
L. King, EPA Region 6 (6LCRRC)

File: Reading File and WRG 2021 File



Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

**NEW MEXICO
ENVIRONMENT DEPARTMENT
Hazardous Waste Bureau**

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6313
Phone (505) 476-6000 Fax (505) 476-6030
www.env.nm.gov



James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

February 16, 2021

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

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

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *Disapproval Facility Wide Ground Water Monitoring Work Plan – Updates for 2020* (Response), dated January 8, 2021, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee). NMED hereby issues this Approval with Modifications with the following comments.

Comment 1

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

Mr. Moore
February 16, 2021
Page 2

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

Comment 2

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

Comment 3

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

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

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

Mr. Moore
February 16, 2021
Page 3

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

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

Mr. Moore
February 16, 2021
Page 4

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

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

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

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

This approval is based on the information presented in the document as it relates to the objectives of the work identified by NMED at the time of review. Approval of this document

Mr. Moore
February 16, 2021
Page 5

does not constitute agreement with all information or every statement presented in the document.

If you have questions regarding this Approval with Modifications, please contact Michiya Suzuki of my staff at 505-690-6930.

Sincerely,



Dave Cobrain
Program Manager
Hazardous Waste Bureau

cc: M. Suzuki, NMED HWB
C. Chavez, OCD
L. King, EPA Region 6 (6LCRRC)

File: Reading File and WRG 2021 File



Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

NEW MEXICO
ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6313
Phone (505) 476-6000 Fax (505) 476-6030

www.env.nm.gov



James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

February 11, 2021

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

**RE: APPROVAL WITH MODIFICATIONS
RESPONSE TO DISAPPROVAL
INVESTIGATION WORK PLAN NO. 2 AREA OF CONCERN 35
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-20-009**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *Response to Disapproval Investigation Work Plan No. 2 Area of Concern 35* (Response), dated January 4, 2021, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee). NMED hereby issues this Approval with Modifications with the following comments.

Comment 1

The response to NMED's *Disapproval Comment 1* states, "[t]his comment is acknowledged, and the report has been revised. Figure 6 has been renumbered to Figure 7 to account for additional document revisions." Although the Work Plan appropriately addressed NMED's *Disapproval Comment 1*, the Permittee's response does not identify the sections of the Work Plan where revisions are made to address the comment. For example, NMED's *Disapproval*

Mr. Moore
February 11, 2021
Page 2

Comment 1 states, “[p]ropose to determine the screened interval of well MKTF-45 in the revised Work Plan.” Sections 2.1 and 4.1 of the Work Plan were revised to state, “[a] camera scope that can access the well will be used to determine the screened interval of well MKTF-45,” and “[t]his will be completed using a down hole camera to determine the screened interval.” These statements are appropriate; however, the response does not include these statements. Additionally, NMED’s *Disapproval* Comment 1 states, “propose to install a well at the location of well MKTF-17 to intercept the water table.” Section 4.1 of the Work Plan was revised to state, “[t]he second well will be installed in close proximity to Well MTKF-17. The screened interval of MTKF-17 is submerged below the water table and underestimates the SPH thickness. Therefore, the proposed well will be installed to intercept the water table, which will be more accurate in evaluating SPH thickness.” This statement is also appropriate; however, the response does not include such statement. Furthermore, NMED’s *Disapproval* Comment 1 states, “[r]evise the location of the proposed well to be approximately 100 feet west of well MKTF-17.” Section 4.1 of the Work Plan was revised to state, “[t]he first monitoring well is proposed to be located approximately 100 ft west of MTKF-17.” This statement is necessary in the response even though the response references the relevant figure where the comment is addressed. In all future response to comments letters, each response must include the statements that address the corresponding comment and reference the relevant sections of the document where revisions were made, where applicable. No revisions are required to the Work Plan.

Comment 2

The response to NMED’s *Disapproval* Comment 5 states, “[w]hen SPH is present, a sample will be collected and analyzed to determine the nature of contamination and identify the contaminants potential origin.” Provide the proposed method for SPH analysis to identify the contaminants potential origin. NMED’s *Disapproval* Comment 6 states, “collect SPH samples for fingerprint analysis...” Clarify whether fingerprint analysis (e.g., PIANO Analysis) will be conducted for SPH, if encountered. Provide replacement pages, as appropriate.

Comment 3

The response to NMED’s *Disapproval* Comment 11 states, “[n]itrite analysis will be completed by the laboratory. The revised Work Plan includes the method for analysis.” Section 4.6, *Chemical Analyses*, states that nitrate analysis will be conducted by an off-site laboratory; however, it does not specify the same for nitrite analysis. Clarify that both nitrate and nitrite analysis will be conducted by an off-site laboratory in the revised Work Plan and provide replacement pages.

The Permittee must address all comments above and submit a response letter, replacement pages, and an electronic version of the revised Work Plan no later than **May 31, 2021**. This approval is based on the information presented in the document as it relates to the objectives of the work identified by NMED at the time of review. Approval of this document

Mr. Moore
February 11, 2021
Page 3

does not constitute agreement with all information or every statement presented in the document.

If you have questions regarding this Approval with Modifications, please contact Michiya Suzuki of my staff at 505-690-6930.

Sincerely,

A handwritten signature in blue ink, appearing to read "Dave Cobrain".

Dave Cobrain
Program Manager
Hazardous Waste Bureau

cc: M. Suzuki, NMED HWB
C. Chavez, OCD
L. King, EPA Region 6 (6LCRRC)

File: Reading File and WRG 2021 File



Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

**NEW MEXICO
ENVIRONMENT DEPARTMENT**

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6313
Phone (505) 476-6000 Fax (505) 476-6030
www.env.nm.gov



James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

January 26, 2021

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

**RE: APPROVAL WITH MODIFICATIONS
SOLID WASTE MANAGEMENT UNIT 1 REVISED INVESTIGATION REPORT
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-20-010**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *Solid Waste Management Unit 1 Revised Investigation Report* (Report), dated January 5, 2021, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee). NMED hereby issues this Approval with Modifications with the following comments.

Comment 1

In the response to NMED's *Disapproval Comment 2*, the Permittee states, "[e]xcavation will be followed by laboratory confirmation sampling of excavation vertical and horizontal extent." A detailed method for post-excavation confirmation sampling and the anticipated horizontal and vertical extent of excavation for each aeration lagoon and Evaporation Pond 1 must be described in the work plan required by NMED's *Disapproval Comment 14*.

Mr. Moore
January 26, 2021
Page 2

In addition, the work plan must include a provision to remove additional soils where contaminant concentrations exceed the applicable screening levels in the confirmation samples and the collection of additional confirmation samples from the areas where additional excavation was conducted.

Furthermore, a contingency measure addressing contaminated groundwater below the water table, where applicable, must be developed and included in the work plan. For example, chemical oxidants or biological amendments may be placed on the excavation floors, where groundwater is detected. Amendments may also migrate with groundwater flow and aid in degrading contaminants. Additionally, sheet(s) of impermeable liner (e.g., high density polyethylene (HDPE) liner) may be placed above the excavation floor to eliminate potential seepage of groundwater into the backfill.

Comment 2

In the response to NMED's *Disapproval* Comment 3, the Permittee states, "[w]hile equipment blanks were not collected, MPC does not believe the integrity of the samples was compromised." The Permittee must propose to collect equipment blanks at a frequency of ten percent of the samples collected in the future. No revision required.

Comment 3

In the response to NMED's *Disapproval* Comment 4, the Permittee states, "[a]lthough the mercury soil analyses exceeded the holding times for the EPA Method 7471, this analysis was not proposed in the approved investigation work plan and was requested later to provide additional information on mercury concentrations across the ponds." The Permittee's response does not justify the acceptability of analytical data acquired outside the holding time. The analysis should have been conducted within the holding time. However, the Permittee also states, "[t]he TCLP mercury samples, which were proposed in the approved investigation work plan, were analyzed within the holding time," and "TCLP mercury results for all samples (berm and pond) were several orders of magnitude below the Code of Federal Regulations (CFR) TCLP screening level of 0.2 milligram per liter (mg/L)." The results of the TCLP mercury analysis indicate that the mercury exceedance in the soil samples is not likely. Accordingly, the Permittee is not required to recollect soil samples for mercury analysis. No revision required.

Comment 4

In the responses to NMED's *Disapproval* Comments 6 and 10, the Permittee states, "[a]n FID is designed to detect a broader range of compounds such as long-chained hydrocarbons, also known as SVOCs, in addition to the VOCs. Because both AL-1 and AL-2 are aeration lagoons, most of the lighter VOCs had volatilized or degraded during aeration leaving the heavier SVOCs in the sludge and hydrocarbon that infiltrated the underlying clay liner," and "an additional functional FID unit will be kept on-site." However, the FID instrument did not work properly because FID flame did not stay lit. The problem may be caused by high moisture content in the samples and may recur. A combustible gas indicator (e.g., Bacharach TLV Sniffer), while less

Mr. Moore
January 26, 2021
Page 3

sensitive at low concentrations, is known to be more effective in screening soils that contain high moisture content. Evaluate an applicability of the use of a combustible gas indicator as a backup soil screening tool for future sampling events in SWMU 1 and provide a discussion in the work plan required by NMED's *Disapproval* Comment 14.

Comment 5

In the response to NMED's *Disapproval* Comment 7, the Permittee states, "[b]ased on the berm sampling results shown in Table 7, shallow berm soils can likely be segregated in the field during excavation and composite sampled to determine suitability as backfill." The TPH-DRO concentrations in the samples collected from locations SWMU 1-19 (berm) (2.5 ft), SWMU 1-22 (berm) (2.5 ft), SWMU 1-15 (berm) (2.5 ft), and SWMU 1-16 (berm) (2.5 ft) are recorded as 6,300 mg/kg, 2,100 mg/kg, 20,000 mg/kg, and 32,000 mg/kg, respectively, and exceed the applicable soil screening levels (SSLs) according to Table 7, *SWMU-1 Berm Sample Results*. The berm soils excavated at depths more than 2.5 feet below ground surface (bgs) must not be used as a backfill. However, the berm soils excavated at depths less than 1.5 feet bgs can be segregated and composite samples may be collected to evaluate a suitability for backfill use. Include the provision in the work plan required by NMED's *Disapproval* Comment 14.

Comment 6

In the responses to NMED's *Disapproval* Comments 9 and 13, the Permittee states, "[t]his standing water is likely from precipitation, with a possible contribution from shallow groundwater seepage (< 6 ft in depth)," and "[p]onded water observed in AL-1 and AL-2 is likely perched water trapped by the clay layer which underlies the ponds and results from precipitation and possible shallow groundwater seepage from the east and south." The water observed in the ponds likely originates from groundwater since wastewater discharge was discontinued in 2013 and the precipitation is minimal at the site; yet water persists in the ponds. The clay liner may have been contaminated with the groundwater beneath the ponds. Similarly, the sludge and hydrocarbons accumulated above the liner may have seeped into the groundwater through the liner. Accordingly, it is appropriate to completely remove the clay liner and excavate soils to a depth below the historic water table for ponds AL-1 and AL-2. Include the provision in the work plan required by NMED's *Disapproval* Comment 14.

Comment 7

In the response to NMED's *Disapproval* Comment 14, the Permittee states, "MPC will revise the report to state that a separate work plan will be submitted for future remedial excavation of the SWMU." NMED's *Disapproval* Comment 14 states, "NMED will establish a due date for the work plan upon approval of this Report." NMED hereby issues this Approval with Modifications. The Permittee must submit a separate work plan that describes all proposed activities related to removal of the Aeration Lagoons and Evaporation Pond 1 that includes a schedule for implementation of the approved work plan for NMED's review no later than **April 30, 2021**.

Mr. Moore
January 26, 2021
Page 4

The Permittee must address all comments in this letter in the work plan required by Comment 7 above.

This approval is based on the information presented in the document as it relates to the objectives of the work identified by NMED at the time of review. Approval of this document does not constitute agreement with all information or every statement presented in the document.

If you have questions regarding this Approval with Modifications, please contact Michiya Suzuki of my staff at 505-476-6046.

Sincerely,



Dave Cobrain
Program Manager
Hazardous Waste Bureau

cc: M. Suzuki, NMED HWB
C. Chavez, OCD
L. King, EPA Region 6 (6LCRRC)

File: Reading File and WRG 2021 File



Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

**NEW MEXICO
ENVIRONMENT DEPARTMENT**

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6313
Phone (505) 476-6000 Fax (505) 476-6030
www.env.nm.gov



James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

January 26, 2021

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

**RE: DISAPPROVAL
NATURAL ATTENUATION ASSESSMENT AND PROPOSED WORKPLAN FOR THE
HYDROCARBON SEEP AREA
FRENCH DRAIN SOIL SAMPLING INVESTIGATION WORK PLAN
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-20-023**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *Natural Attenuation Assessment and Proposed Workplan for the Hydrocarbon Seep Area* (Report), dated December 15, 2020, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee). NMED hereby issues this Disapproval with the following comments.

Comment 1

The Report does not present data that support the evidence of natural attenuation potential.

Mr. Moore
January 26, 2021
Page 2

For example, although the Evaluation of Current MNA Conditions Section, pages 5 and 6, provides a list of the site conditions that are favorable for anaerobic biodegradation of chlorinated compounds, the supporting data that demonstrate such conditions are not provided. All relevant groundwater monitoring wells where chlorinated compounds were previously detected must individually be evaluated to support the evidence. In order to evaluate such evidence, all pertinent parameters for natural attenuation (e.g., ORP, dissolved oxygen (DO), electron acceptors and donors, released chlorinated compounds and their daughter products, pH, and temperature) must be tabulated and compared, and the potential for biodegradation to occur in each well must be evaluated and discussed.

In addition, although the potential of MTBE degradation was also required to be evaluated in accordance with the NMED's February 1, 2018 letter, the evaluation was not included in the Report. Include the evaluation in the revised Report.

Comment 2

In the Hydrogeology Section, *Subsurface Conditions*, page 3, the Permittee states, "[i]n the Hydrocarbon Seep Area, three-dimensional geological modeling using available boring log information strongly suggests that the swale in the area of the hydrocarbon seep area is underlain by a corresponding swale in the shallow alluvium that likely influences shallow groundwater flow in this area. This is shown in Figure 3." Figure 3, *3D Modeling of Local Geology in the Hydrocarbon Seep Area*, includes a magnified image of the subsurface conditions in the hydrocarbon seep area; however, the depths where the subsurface features are located are not indicated. Include this information in the revised Report. In addition, the location of the swale is not clear from the figure. The swale is presumably a stringer of relatively coarse sediments; however, such channel does not appear to be present in the magnified image. Indicate the location of the swale and provide a description of the location in the revised Report.

Comment 3

In the Natural Attenuation Section, page 4, the Permittee states, "[a] generalized diagram of typical hydrocarbon groundwater plume redox conditions is shown Figure 4," and "[i]n general, the sequence of electron acceptor use is as follows:

$O_2 > NO_3^- > Mn(III) \text{ or } Mn(IV) > Fe(III) > SO_4^{2-}$ "

Figure 4, *Reducing Regimes in a Typical Hydrocarbon Groundwater Plume*, indicates that the least aerobic regime is methanogenic. However, the electron acceptors under methanogenic conditions are not included in the statement above. Include the information for consistency in the revised Report.

Mr. Moore
January 26, 2021
Page 3

Comment 4

In the Evaluation of Current MNA Conditions Section, page 4, the Permittee states, "Table 2 presents oxidation reduction potential (ORP) field data from quarterly sampling from quarters 1, 3 and 4 in 2016 (Western 2017)." Although Table 1, *MNA Analytical Data*, presents the most recent data, Table 2, *2016 ORP Field Data*, presents the data collected in 2016. It is not clear why the 2016 ORP data is presented rather than the most recent data. Provide an explanation or revise the Report to include the most recent data.

Comment 5

In the Evaluation of Current MNA Conditions Section, page 5, the Permittee states, "[e]vidence for conditions favorable for anaerobic biodegradation of chlorinated compounds includes [d]etection of vinyl chloride, which is typically a byproduct of TCE degradation." The accumulation of vinyl chloride is likely occurring based on the site's groundwater conditions. Indicate wells where vinyl chloride concentrations are detected in the revised Report and provide figures (concentrations versus time plots) that present trends for vinyl chloride concentrations at the wells in the revised Report.

Comment 6

In the Evaluation of Current MNA Conditions Section, page 5, the Permittee states, "[e]vidence for conditions favorable for anaerobic biodegradation of chlorinated compounds includes [d]epleted sulfate in wells with elevated benzene (e.g. MKTF-10, MKTF-16, MKTF-17), indicating reducing conditions and sulfate reduction to sulfite [sic] as part of anaerobic biodegradation." The concentrations of chlorinated compounds are consistent in these wells according to Table 1. Although the Permittee states that favorable conditions for anaerobic biodegradation of chlorinated compounds exist, the chlorinated compounds do not appear to be degrading in the wells. Resolve the discrepancy or provide clarification in the revised Report.

In addition, an analysis for the end product of sulfate reduction (sulfide) is not being conducted under the current groundwater monitoring work plan. The increase in sulfide levels may provide direct evidence of sulfate reduction. Propose to conduct sulfide analysis for pertinent wells in the next groundwater monitoring work plan update.

Comment 7

In the Evaluation of Current MNA Conditions Section, page 6, the Permittee states, "[t]o date, insufficient monitoring well analytical data is available to perform a statistical analysis of concentration trends. As more data become available, contaminant trend plots can be developed and statistical analysis can be performed." A total of fifty MKTF wells has been installed in the vicinity of the hydrocarbon seep area since 2014. There appear to be a sufficient number of wells. Relevant analytical data have been collected since 2014 for most wells. There appears to be sufficient data. Provide information regarding the insufficient data that are

Mr. Moore
January 26, 2021
Page 4

necessary to conduct such statistical analysis or include the analysis using available historical data in the revised Report.

Comment 8

In the Proposed Workplan for Natural Attenuation Evaluation for Future Annual Reports Section, page 6, the Permittee states, "MPC proposes that a natural attenuation evaluation section be completed on an annual basis using the existing quarterly sampling analyte list as shown in Table 3 as lines of evidence," and "[t]ables will be added to future annual reports with these analytes, and a new section will be added to present these key data and to summarize natural attenuation progress, including trends in contaminant concentrations and key MNA indicators." It is not appropriate to include the natural attenuation evaluation section in an annual groundwater monitoring report. Rather, a separate letter report that focuses on the evaluation of natural attenuation in the hydrocarbon seep area must be prepared and submitted. Submit the separate natural attenuation evaluation letter report that includes the data collected in year 2021 no later than **March 31, 2022**.

Comment 9

The Proposed Workplan for Natural Attenuation Evaluation for Future Annual Reports Section, page 6, states, "MPC proposes that a natural attenuation evaluation section be completed on an annual basis using the existing quarterly sampling analyte list as shown in Table 3 as lines of evidence. These lines of evidence will include:

- Benzene, MTBE, 1,1-DCA, 1,2-DCA, TCE, and vinyl chloride analytical results
- Inorganic analyses including dissolved/total analyses for iron and manganese, nitrate/nitrite, pH and sulfate to determine their availability as terminal electron receptors and the redox state. A table of the results will be prepared.
- Field measurements conducted during quarterly sampling and well purging (pH, ORP and dissolved oxygen)
- As more data become available, and trends become evident, a Mann-Kendall statistical analysis will be performed to quantify contaminant concentration trends."

Resolve the issues listed below and/or provide clarification in the revised Report:

- a) Table 3, *Existing Groundwater Quarterly Sampling Analyses and MNA Applicability*, lists BTEX, 1,1-DCA, 1,2-DCA, TCE, and vinyl chloride data to be monitored while the statement proposes benzene, MTBE, 1,1-DCA, 1,2-DCA, TCE, and vinyl chloride data to be monitored. These monitoring parameters must be consistent. Include BTEX in the revised Report.

Mr. Moore
January 26, 2021
Page 5

- b) All released chlorinated compounds and their daughter products (e.g., PCE, cis-DCE) that were historically detected in the pertinent wells must be included as natural attenuation monitoring parameters in the revised Report.
- c) The degradation products of MTBE (e.g., tert-butyl alcohol) must be monitored to demonstrate MTBE natural attenuation in pertinent wells. Propose to conduct the analyses of the degradation products of MTBE in the next groundwater monitoring work plan update.
- d) The daughter products of vinyl chloride (e.g., ethene) must be monitored to evaluate vinyl chloride natural attenuation in pertinent wells. Propose to conduct the analyses of the daughter products of vinyl chloride in the next groundwater monitoring work plan update.

Comment 10

Table 1, *MNA Analytical Data*, does not provide important natural attenuation evaluation parameters such as DO concentrations. Include all important parameters necessary to evaluate natural attenuation potential. Table 1 must list the wells with data relevant to the natural attenuation of chlorinated compounds; remove wells where chlorinated compounds were not Fr

In addition, prepare a separate table that lists parameters necessary to evaluate natural attenuation of MTBE in the revised Report. The table must list the wells with data relevant to the natural attenuation of MTBE.

Furthermore, each table must provide a score for each well to weigh the potential for natural attenuation of chlorinated compounds and MTBE based on the data listed in the table. The revised Report must include a section to discuss how the scoring system is developed. Such scoring system may be referenced from a technical guidance such as EPA's *Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water*, 1998. It should be noted that natural attenuation is not a remedial option for the sites where SPH or high concentrations of contaminants are present. This evaluation must focus on the fate of chlorinated compounds and MTBE.

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 **August 2, 2021**.

Mr. Moore
January 26, 2021
Page 6

If you have questions regarding this Disapproval, please contact Michiya Suzuki of my staff at 505-476-6046.

Sincerely,

A handwritten signature in blue ink, appearing to read "Dave Cobrain".

Dave Cobrain
Program Manager
Hazardous Waste Bureau

cc: M. Suzuki, NMED HWB
C. Chavez, OCD
L. King, EPA Region 6 (6LCRRC)

File: Reading File and WRG 2021 File



Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

**NEW MEXICO
ENVIRONMENT DEPARTMENT**

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6313
Phone (505) 476-6000 Fax (505) 476-6030

www.env.nm.gov



James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

January 13, 2021

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

**RE: APPROVAL
RESPONSE TO COMMENTS APPROVAL WITH MODIFICATIONS OW-61
THROUGH OW-65 WELL INSTALLATION REPORT
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-19-020**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *Response to Comments Approval with Modifications OW-61 through OW-65 Well Installation Report* (Response), dated December 18, 2020 submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee). NMED hereby issues this Approval.

In the response to NMED's Comment 3, the Permittee states, "[h]and augering in roadways is a difficult and labor-intensive process, especially in areas of compacted road base or gravel fill. As an alternative to hand-augering, MPC proposes using hydro-excavation to clear a V-shaped trench with the boring location within the V, so that the undisturbed shallow soil can be evaluated." The proposed excavation method is approved as long as potential residual shallow soil contamination (e.g., above 10 feet below ground surface) can be evaluated without the disturbance caused by hydro-excavation. However, the description of the proposed method is not clear. A figure or photograph that supplements the description of the excavation method

Mr. Moore
January 13, 2021
Page 2

must be provided in the LIF investigation report. The investigation report must be submitted to NMED no later than **March 31, 2021**, as stated.

This approval is based on the information presented in the document as it relates to the objectives of the work identified by NMED at the time of review. Approval of this document does not constitute agreement with all information or every statement presented in the document.

If you have questions regarding this Approval, please contact Michiya Suzuki of my staff at 505-476-6046.

Sincerely,



Dave Cobrain
Program Manager
Hazardous Waste Bureau

cc: M. Suzuki, NMED HWB
C. Chavez, OCD
L. King, EPA Region 6 (6LCRRC)

File: Reading File and WRG 2021 File



Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

NEW MEXICO
ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6313
Phone (505) 476-6000 Fax (505) 476-6030
www.env.nm.gov



James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

January 8, 2021

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

**RE: APPROVAL WITH MODIFICATIONS
FRENCH DRAIN SOIL SAMPLING INVESTIGATION WORK PLAN
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-20-022**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *French Drain Soil Sampling Investigation Work Plan (Work Plan)*, dated December 15, 2020, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee). NMED hereby issues this Approval with Modifications with the following comments.

Comment 1

In the Background Section, pages 5 and 6, the Permittee states, “[h]and excavations completed on the northwest sides of Tanks 569, 570, 571, and 572 showed no visible evidence of a release. Fluid levels were monitored in Tanks 570, 571, and 345 to determine if a potential leak was responsible for the release. A static level test of Tank 570 in 2019 showed a loss of product, which lead to the tank being taken out of service. There were no indications of leaks in Tanks 571 and 345.” If the locations of the hand excavations are known, identify the locations in

Mr. Moore
January 8, 2021
Page 2

Figure 3, *Proposed Soil Boring Location*, and provide a replacement figure. In addition, Figure 3 does not depict any proposed soil borings in the vicinity of Tank 570 to investigate presence or absence of contamination associated with the leaks. Provide a justification for why soil borings are not proposed in the vicinity of Tank 570 or propose to investigate potential contamination associated with the leaks and provide replacement pages. Furthermore, explain whether some of these tanks are still in use under the current idle status in a response letter.

Comment 2

In the Background Section, page 6, the Permittee states, “[o]n March 5, 2019, six deep soil borings were installed throughout the tank farm and north of STP-1: SB-FD-1, OW-61, OW-62, OW-63, OW-64, and OW-65. These locations are shown on Figure 2 of this report and boring/well logs can be found in Appendix A.” Appendix A, *Well Logs*, does not include a boring log for SB-FD-1. In addition, Figure 3 does not depict any proposed borings north of STP-1 to investigate presence or absence of contamination associated with the French Drain release. Provide a boring log for SB-FD-1 and discuss whether (1) hydrocarbons were detected at location SB-FD-1 and (2) soil investigation is warranted north of STP-1 in the response letter.

Comment 3

In the Background Section, page 6, the Permittee states, “[h]ydrocarbon impacts were identified at OW-61 at depths ranging from 10 to 26 ft bgs. Elevated photoionization detector (PID) readings were identified at OW-62 (18-20 ft bgs), OW-63 (18-24 ft bgs), OW-64 (10-24 ft bgs), and OW-65 (14-20 ft bgs) which could suggest hydrocarbon contamination in the area.” Comment 4 in NMED’s *Approval with Modifications OW-61 through OW-65 Well Installation Report*, dated January 29, 2020, states, “[t]here was no data to evaluate presence or absence of contamination above 10 feet bgs, because hydro-excavation was used during the installation of the soil boring.” Hydrocarbons are likely present at depths less than ten feet below ground surface (bgs) in the vicinity of wells OW-61 and OW-64. Provide a justification for why borings are not proposed in the vicinity of the wells or propose to investigate potential contamination from the ground surface to ten feet bgs in the vicinity of wells OW-61 and OW-64 and provide replacement pages.

Comment 4

In the Scope of Activities Section, page 7, the Permittee states, “[b]ased upon prior investigations completed by MPC, hydrocarbon impacts around the STP-1 French Drain area were observed at approximately 8 ft bgs,” and “[a]nalytical results will be screened by comparison to NMED Industrial Soil Screening Levels (SSLs).” Since industrial soil screening levels (SSLs) are applicable to the exposure of soils ranging from the ground surface to one foot bgs and the contamination is expected to be found outside the range, it is more appropriate to use residential and/or construction worker SSLs for comparison. Revise the Work Plan accordingly and provide replacement pages.

Mr. Moore
January 8, 2021
Page 3

Comment 5

In the Scope of Activities Section, page 7, the Permittee states, “[a] Geoprobe drill rig will be used to advance soil borings and up to two discrete soil samples will be collected at each boring location,” and “[t]o delineate vertical distribution, soil borings will be advanced to at least 5 ft below the deepest detected contamination based on PID field screening and field observation results.” Comment 3 in the NMED’s *Approval with Modifications OW-61 through OW-65 Well Installation Report*, dated January 29, 2020, states, “[a] minimum of three soil samples should have been collected from each boring at the vadose zone with the highest PID reading, at the water table, and the boring termination depth.” If the borings are advanced below the water table, collect soil samples from the vadose zone from the depth with the highest PID reading, at the water table, and from the boring termination depth; otherwise, collect soil samples at the vadose zone with the highest PID reading and the boring termination depth. Revise the Work Plan accordingly and provide replacement pages.

Comment 6

In the Scope of Activities Section, page 7, the Permittee states, “[s]oil samples will be analyzed for hydrocarbon impacts via Method 8270 (semi-volatile organic compounds [SVOCS]), Method 8260 (volatile organic compounds [VOCs]), and Method 8015M (total petroleum hydrocarbons [TPH] gasoline range organics [GRO] and diesel range organics [DRO]).” Provide an explanation for why soil samples are not proposed to be analyzed for TPH motor oil range organics (MRO) in the response letter or propose to include TPH-MRO analysis in the revised Work Plan and provide replacement pages.

Comment 7

In the Investigation Methods Section, page 7, the Permittee states, “[t]he proposed sampling locations are shown on Figure 3. The proposed locations include six boreholes around the STP-1 French Drain area.” The proposed sampling locations shown on Figure 3 are anticipated to delineate the extent of hydrocarbon contamination detected at BH-1, BH-2, and Excavation #9; however, do not appear adequate to delineate the extent of hydrocarbon contamination detected at BH-3 and potential hydrocarbon contamination northwest of the French Drain. Two additional soil borings as shown in the figure below must be proposed in the revised Work Plan. The suggested boring locations below may be adjusted based on the accessibility of the site. Revise the figure accordingly.

Mr. Moore
January 8, 2021
Page 4



■ Suggested Additional Boring Locations

Comment 8

In the Investigation Methods Section, *Sample Frequency*, page 8, the Permittee states, “[s]oil sample collection will be taken at a frequency in accordance with the RCRA Post-Closure Permit Section IV.J.2.d.ii (Soil and Rock Sampling) and will include the following applicable intervals and depths:

- At the surface of the proposed boring locations;
- At 2.5-ft intervals;
- At the maximum depth of each boring; and
- At intervals suspected of being source or contaminated zones.”

The Scope of Activities Section, page 7, states, “[a] Geoprobe drill rig will be used to advance soil borings and up to two discrete soil samples will be collected at each boring location.” Resolve the discrepancy in the revised Work Plan and provide replacement pages. The sampling frequency must follow the direction provided by Comment 5 above. In addition, if exceedances are detected in confirmation samples, additional step-out borings must be installed five feet from the original locations. Include the provision in the revised Work Plan and provide replacement pages.

Comment 9

In Appendix B, *Standard Operating Procedure – Soil Sampling, Section 3, Preparation*, page 1, states, “[f]or Soil sampling, the only field monitoring equipment used will be the Photoionization detection (PID) meter.” However, Section 4, *Equipment*, page 2, lists Flame Ionization detection meter (FID) as an equipment to be used rather than PID meter. Resolve the discrepancy in the revised Work Plan and provide replacement pages.

Mr. Moore
January 8, 2021
Page 5

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

This approval is based on the information presented in the document as it relates to the objectives of the work identified by NMED at the time of review. Approval of this document does not constitute agreement with all information or every statement presented in the document.

If you have questions regarding this Approval with Modifications, please contact Michiya Suzuki of my staff at 505-476-6046.

Sincerely,



Dave Cobrain
Program Manager
Hazardous Waste Bureau

cc: M. Suzuki, NMED HWB
C. Chavez, OCD
L. King, EPA Region 6 (GLCRRC)

File: Reading File and WRG 2021 File



**NEW MEXICO
ENVIRONMENT DEPARTMENT**



Hazardous Waste Bureau

Michelle Lujan Grisham
Governor

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6313
Phone (505) 476-6000 Fax (505) 476-6030
www.env.nm.gov

James C. Kenney
Cabinet Secretary

Howie C. Morales
Lt. Governor

Jennifer J. Pruett
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

January 8, 2021

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

**RE: APPROVAL
ASSESSMENT REPORT FOR AOC 29 – EQUIPMENT YARD AND DRUM STORAGE AREA
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-20-021**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *Assessment Report for AOC 29 – Equipment Yard and Drum Storage Area (Report)*, dated December 15, 2020, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee). The Report was submitted in accordance with the requirements of the January 2017 Consent Order (Consent Order).

The purpose of the Consent Order is to determine whether areas of concern (AOCs) listed in Attachment 1 of the Consent Order require investigation or if the Permittee can provide sufficient information to determine that no further investigation or remediation is necessary.

Consent Order Section IV.B requires NMED to review the Report and determine whether the report "approved, disapproved, or disapproved in part ... " The Permittee provided information required by Consent Order Section IV.C (Contents of AOC Assessment Report). NMED reviewed the Report and hereby issues this Approval.

Mr. Moore
January 8, 2021
Page 2

As specified by the Consent Order Section IV.D (NMED Determination of AOC Entry or Elimination), NMED will make a determination of whether or not AOC 29 should be restored to the RCRA Permit or eliminated from corrective action requirements when NMED receives the last Assessment Report.

If you have questions regarding this correspondence, please contact Michiya Suzuki of my staff at 505-476-6046.

Sincerely,

A handwritten signature in blue ink, appearing to read "Dave Cobrain".

Dave Cobrain
Program Manager
Hazardous Waste Bureau

cc: M. Suzuki, NMED HWB
C. Chavez, OCD
L. King, EPA Region 6 (6LCRRC)

File: Reading File and WRG 2021 File

From: [Martinez, Cynthia, NMENV](#)
To: JMoore5@Marathonpetroleum.com
Cc: [Cobrain, Dave, NMENV](#); [Suzuki, Michiya, NMENV](#); [Chavez, Carl J, EMNRD](#); ["king.laurie@epa.gov"](mailto:king.laurie@epa.gov)
Subject: Letters to Mr. Moore
Date: Friday, December 18, 2020 12:52:24 PM
Attachments: [WRG 2020- HWB-WRG-20-001.pdf](#)
[WRG 2020-HWB-WRG-20-020.pdf](#)

Good Afternoon,
Please see attachments.

Cynthia Martinez
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Bldg.1
Santa Fe, New Mexico 87505-6313



**NEW MEXICO
ENVIRONMENT DEPARTMENT**



Hazardous Waste Bureau

Michelle Lujan Grisham
Governor

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6313
Phone (505) 476-6000 Fax (505) 476-6030
www.env.nm.gov

James C. Kenney
Cabinet Secretary

Howie C. Morales
Lt. Governor

Jennifer J. Pruett
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

December 21, 2020

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

**RE: APPROVAL WITH MODIFICATIONS
EVAPORATION PONDS NOS. 6, 7, AND 9 RESPONSE TO APPROVAL WITH
MODIFICATIONS
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-20-001**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *Evaporation Ponds Nos. 6, 7, and 9 Response to Approval with Modifications* (Response), dated November 18, 2020, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee). NMED hereby issues this Approval with Modifications with the following comments.

Comment 1

The response to NMED's *Approval with Modifications* Comment 1 states, "[a]fter recent discussions with a Marathon representative, it is our understanding that the ponds were constructed in the late 1950's and no synthetic liners were used in the construction of the ponds." However, the Executive Summary of the *Geotechnical Engineering Report – Revised* (revised Report), dated November 17, 2020, page 1, states, "[t]he ponds are lined with HDPE or

Mr. Moore
December 21, 2020
Page 2

clay." The statement is misleading. Revise the statement for accuracy and provide a replacement page.

Comment 2

The response to NMED's *Approval with Modifications* Comment 6 states, "[i]t is our understanding that, at this point in time Marathon is temporarily suspending the use of the ponds and the pond water levels have been reduced. Once the ponds are placed back in service, Marathon intends to contact Terracon to prepare a monitoring plan to report piezometer readings, taken quarterly, and reported for future annual periodic groundwater reports." Assuming a reduction in the pond level and corresponding reduction in piezometric level modeled in stability analyses has occurred in conjunction with the ponds having been taken out of service, NMED agrees that monitoring can be implemented once ponds are placed back into service; however, if Pond 6 water/piezometric level cannot be demonstrated to be below the level shown in the stability analysis presented in Appendix D, Exhibit D-1, *Pond 6 - Slope Stability Analysis*, of the revised Report, which indicates a minimum factor of safety of 1.5, monitoring must be continued until the level is below the analyzed piezometric level and the pond remains out of service.

Comment 3

The response to NMED's *Approval with Modifications* Comment 8 states, "[t]he rapid drawdown condition was analyzed as if the ponds have been completely emptied with a rapid draw down water condition at the face of face of [sic] the slopes and with fully saturated conditions. The results of these rapid draw down analyses are included and discussed in the updated report." A minimum factor of safety of 1.3 for rapid drawdown is recommended in several guidance documents. The Geotechnical Opinions and Considerations Section, page 9, suggests that although operations are suspended at Pond 7, the current water level is relatively unchanged inside the pond and no maintenance is being conducted to require a drawdown. Based on the calculated factor of safety under a rapid drawdown condition for Ponds 6 and 7 presented in the Stability Evaluation Results Section, page 8, an operational constraint limiting a rapid drawdown condition for Ponds 6 and 7 is necessary because the calculated values are both below 1.3. If maintenance or operations at the facility require a rapid drawdown, a re-evaluation of the rapid drawdown condition must be resubmitted to NMED based on updated data and piezometric levels. No revision required to the revised Report.

The Permittee must address the comments above and submit the required replacement page no later than **March 27, 2021**.

This approval is based on the information presented in the document as it relates to the objectives of the work identified by NMED at the time of review. Approval of this document does not constitute agreement with all information or every statement presented in the document.

Mr. Moore
December 21, 2020
Page 3

If you have questions regarding this Approval with Modifications, please contact Michiya Suzuki of my staff at 505-476-6046.

Sincerely,



Dave Cobrain
Program Manager
Hazardous Waste Bureau

cc: M. Suzuki, NMED HWB
C. Chavez, OCD
L. King, EPA Region 6 (6LCRRC)

File: Reading File and WRG 2020 File
HWB-WRG-20-001

District I
 1625 N. French Dr., Hobbs, NM 88240
 Phone:(575) 393-6161 Fax:(575) 393-0720

District II
 811 S. First St., Artesia, NM 88210
 Phone:(575) 748-1283 Fax:(575) 748-9720

District III
 1000 Rio Brazos Rd., Aztec, NM 87410
 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV
 1220 S. St Francis Dr., Santa Fe, NM 87505
 Phone:(505) 476-3470 Fax:(505) 476-3462

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

COMMENTS

Action 18662

COMMENTS

Operator: WESTERN REFINING SOUTHWEST, IN NM87109	6700 Jefferson NE, Suite A-1 Albuquerque,	OGRID: 705791	Action Number: 18662	Action Type: DISCHARGE PERMIT
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Created By	Comment	Comment Date
cchavez	NMED Letters Manually Entered Into Admin. Record by OCD.	02/23/2021

District I
 1625 N. French Dr., Hobbs, NM 88240
 Phone:(575) 393-6161 Fax:(575) 393-0720

District II
 811 S. First St., Artesia, NM 88210
 Phone:(575) 748-1283 Fax:(575) 748-9720

District III
 1000 Rio Brazos Rd., Aztec, NM 87410
 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV
 1220 S. St Francis Dr., Santa Fe, NM 87505
 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 18662

CONDITIONS OF APPROVAL

Operator: WESTERN REFINING SOUTHWEST, IN NM87109		6700 Jefferson NE, Suite A-1 Albuquerque,		OGRID: 705791	Action Number: 18662	Action Type: DISCHARGE PERMIT
OCD Reviewer cchavez				Condition None		