



**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](http://www.env.nm.gov)

**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**



**James C. Kenney**  
Cabinet Secretary

**Jennifer J. Pruett**  
Deputy Secretary

October 31, 2019

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

**RE: APPROVAL WITH MODIFICATIONS  
[REVISED] SMW-2 AREA AND BOUNDARY WELL INSTALLATION REPORT  
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY  
EPA ID # NMD000333211  
HWB-WRG-19-008**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *[Revised] SMW-2 Area and Boundary Well Installation Report* (Report), dated September 2019, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee). NMED hereby issues this Approval with Modifications. The Permittee must address the following comments.

**Comment 1**

The Permittee's response to NMED's Comment 2 states, "[t]he water was so turbid that when the syringe was filled and evacuated thru the filter in to the sample container only about 5 drops of water were yielded into the sample container before the filter became unusable... It would take a minimum of forty filters to collect that one [dissolved metals] sample of questionable quality." Coarser paper filters with pore size more than 100 micron meters ( $\mu\text{m}$ ) may be used as an initial step of the filtration process to remove larger suspended solids. The smaller syringe filters may be used to collect the samples for dissolved metals analysis. Use the

sequential filtration process for dissolved metals sampling, where applicable. No response required.

### **Comment 2**

The Permittee's response to NMED's Comment 3 states, "[w]e do not attempt to discuss every detection in the Executive Summary of the investigation reports." To clarify, NMED's Comment 3 was not intended to direct the Permittee to discuss every detection in the Executive Summary. However, the detections of the constituents in wells BW-4B, BW-5B and BW-5C must be included in the Executive Summary because there are no groundwater monitoring wells west of these wells. The fact that the extent of groundwater contamination west of pond EP-9 is not delineated must be stated in that section and NMED's previous comments (e.g., Comment 1 in NMED's *Disapproval Annual Groundwater Monitoring Report: Gallup Refinery – 2017*, dated March 21, 2019) directing the installation of more wells must be referenced in the Executive Summary of the Report. The Permittee must revise the Report accordingly and provide a replacement page.

### **Comment 3**

The Permittee's response to NMED's Comment 4 states, "[t]he quoted discussion in Section 2.1 is referring to the historical analyses that were presented in Table 1 of the referenced Work Plan. We reviewed Table 1 and have confirmed that MTBE was not detected above the screening level in the referenced Table 1. The text is revised in Section 2.1 (page 2-1) to note the detection of MTBE above the screening level in August 2015." According to Table 1 of the *2016 Work Plan SWM-2 Area Investigation and Boundary Wells Installations*, the MTBE concentration in the groundwater sample collected from well SMW-2 on August 17, 2015 is recorded as 0.011 mg/L, which is below the applicable screening level. According to Table 8.3 of the *2017 Annual Groundwater Monitoring Report*, the MTBE concentration in the groundwater sample collected from the same well on August 18, 2015 is recorded as 1.011 mg/L, which is above the applicable screening level. Verify the accuracy of the data and clarify the discrepancy in a response letter.

### **Comment 4**

The Permittee's response to NMED's Comment 8 states, "[w]e do not find any screening levels for chloride in NMED's *Risk Assessment Guidance for Investigations and Remediation* (March 2019), nor is chloride a hazardous constituent, so possibly this comment is coming from the Oil Conservation Division (OCD)." The soil screening level for chloride applicable to the site is 500 milligram per kilogram (mg/kg) that is referenced from the EMNRD OCD action level/alternate beneficial reuse screening concentration (ABRSC). Refer to the *September and October 2016 Chloride Exceedance Excavation Report*, dated January 25, 2017 for more details. Comment 2 in the NMED's *Approval Response to Comments NMED Approval with Modifications Letter dated March 17, 2017 [Chloride Exceedance Excavation Report]*, dated May 16, 2019 states, "[s]ubmit a work plan to install soil borings to collect soil samples of the underlying native soils, pond sediments, and the upper zone waste treated within the landfarm." Explain whether the work

plan was already submitted to OCD; otherwise, provide a proposed date for submittal of the work plan to OCD and NMED in the response letter.

#### **Comment 5**

The Permittee's response to NMED's Comment 10 states, "[w]e'll not attempt to revisit or explain here the past reasons and requirements from NMED and OCD regarding the installation of the boundary monitoring wells dating back to 2003. However, we note that BW-1A and BW-3A are also dry, but do serve to help detect any potential releases from the nearby evaporation ponds." To clarify, the purpose of NMED's Comments 10 and 12 was to guide the Permittee to install new wells with appropriate screen depths to intersect groundwater. No response required.

#### **Comment 6**

The Permittee's response to NMED's Comment 11 states, "[t]he term 'sampling' is replaced with drilling on pages 4-3..." Note that the collection of soil samples with the highest PID reading from every soil boring is required at the vadose zone, at the top of saturation, and the termination depth. No response required.

#### **Comment 7**

The Permittee's response to NMED's Comment 13 provides detailed explanation for why well BW-5B was installed across the Chinle/Alluvial Interface, rather than the Sonsela. However, the Permittee did not provide any explanation regarding the higher groundwater elevation observed in well BW-5B. In the response letter, explain why well BW-5B exhibits higher groundwater elevations that are typically seen in the Sonsela.

#### **Comment 8**

The Permittee's response to NMED's Comment 21 states, "[s]imilarly, to the response to Comment 20, as sulfate is not a hazardous constituent and not regulated by NMED Hazardous Waste Bureau, MPC will work with OCD to address sulfate." NMED's Comment 21 states, "Pond EP-10 that underlies the landfarm may be the source of the sulfate contamination in groundwater; thus, the soils below the landfarm also must be investigated for sulfate contamination (see Comment 20)." To clarify, the purpose of NMED's Comments 20 and 21 is to provide a direction for the source investigation of chloride and sulfate exceedances. Although NMED is not a regulatory authority for these constituents, Pond EP-10 is part of solid waste management unit (SWMU) 2 regulated under the Resource Conservation and Recovery Act (RCRA). Include both OCD and NMED direction and include both agencies in correspondence.

#### **Comment 9**

The Permittee's response to NMED's Comment 22 states, "[t]he comment is acknowledged." NMED's Comment 22 states, "NMED issued a disapproval for the work plan [*Investigation Work Plan [SMW-2] and [GWM]-1 Areas*, dated August 2018] on February 20, 2019 and required a revised work plan by August 9, 2019." Neither the revised work plan nor extension request

letter for the submittal has been submitted. Submit either the work plan or the extension request no later than **November 12, 2019**.

**Comment 10**

The Permittee's response to NMED's Comment 23 states, "neither SWM-2 (sic) nor MW-4 were used to prepare the contours, as they not believed (sic) to be screened at the contact of the Alluvium/Chinle Formation as are the other wells on Figure 5." According to the 2016 Annual Groundwater Monitoring Report, wells SMW-2 and MW-4 were drilled to the Alluvium/Chinle Interface/the Upper Sands and the Sonsela, respectively. Well MW-4 was clearly not screened across the Alluvium/Chinle contact; thus, it is appropriate to exclude the data from the contour map. However, the screened interval of well SMW-2 appears to be in contact with the Alluvium/Chinle and the groundwater elevation is consistent with the surrounding wells that were drilled to the Alluvium/Chinle. For example, wells OW-59 and OW-60 closely located upgradient of well SMW-2 were screened within the Alluvium/Chinle to the depths of 20 – 35 feet below ground surface (bgs) and 25 – 45 feet bgs, respectively. The groundwater elevations in wells OW-59 and OW-60 are recorded as 6,865.43 feet and 6,877.06 feet, respectively in Figure 5. Well SMW-2 is screened to the depth of 34.31 - 54.31 feet bgs similar to that of well OW-60. The groundwater elevation in well SMW-2 is recorded as 6,859.18 feet bgs in Figure 5. The groundwater elevations of OW-60, OW-59, and SMW-2 allow the contours to be drawn consistently with the expected groundwater flow direction. Although a steep gradient exists between wells OW-59 and SMW-2, this is not uncommon at the site. The Permittee further states, "SMW-2 is screened in upper sands as described in the LTA Subsurface Conditions evaluation completed by Precision Engineering, Inc. in 1996." According to Appendix G (LTA Subsurface Conditions [provided by Precision Engineering]), SMW-2 derives water from the lower sandy zone below the 30 feet bgs extending from the southwest corner of the Land Treatment Area (LTA) to the northeast corner. The screened depth and location of well OW-59 suggests that the well was also screened across the same lower sandy zone as described in Appendix G. Revise Figure 5 to include the groundwater elevation of SMW-2 and provide a replacement figure.

The Permittee must address all comments in this Approval with Modifications and submit a response letter, a replacement page and figure no later than **December 31, 2019**.

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  
October 31, 2019  
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If you have questions regarding this letter, please contact Kristen Van Horn of my staff at 505-476-6046.

Sincerely,



John E. Kieling  
Chief  
Hazardous Waste Bureau

cc: K. Van Horn, NMED HWB  
D. Cobrain, NMED HWB  
M. Suzuki, NMED HWB  
C. Chavez, OCD  
L. King, EPA Region 6 (6LCRRC)  
B. Moore, WRG

File: Reading File and WRG 2019 File  
HWB-WRG-19-008