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James C. Kenney  
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Deputy Secretary

December 27, 2019

Gregory J. McCartney  
Western Refining Southwest, Inc.  
Bloomfield Terminal  
#50 County Road 4490  
Bloomfield, New Mexico 87413

**RE: APPROVAL WITH MODIFICATIONS  
BLOOMFIELD TERMINAL (FORMER BLOOMFIELD REFINERY) RIVER TERRACE ANNUAL  
REPORT VOLUNTARY BIOVENTING/AIR SPARGING SYSTEM (JANUARY – DECEMBER  
2018)  
WESTERN REFINING SOUTHWEST, INC. - BLOOMFIELD TERMINAL  
EPA ID# NMD089416416  
HWB-WRB-19-001**

Dear Mr. McCartney:

The New Mexico Environment Department (NMED) has received Western Refining Southwest, Inc., dba Marathon Petroleum Company Bloomfield Terminal's (Western's) *Bloomfield Terminal (Former Bloomfield Refinery) River Terrace Annual Report Voluntary Bioventing/Air Sparging System (January – December 2018)* (Report), dated February 2019. NMED has reviewed the Report and hereby issues this Approval with Modifications with the following comments.

**Comment 1**

A hardcopy of the laboratory analytical reports is included in Appendix B of the Report. In all future reports, an electronic copy of the laboratory analytical reports on a disc will be acceptable.

**Comment 2**

In Section 1.1, *Site Location and Description*, page 3, paragraph 1, the owner of the facility is stated as San Juan Refining Company. However, during the May 8, 2019 meeting between the NMED and Western, Western stated that the owner had been changed to Marathon Petroleum Company. Revise the owner information for all future submittals or explain whether the facility kept the same name doing business as San Juan Refining Company.

**Comment 3**

In Section 1.1, *Site Location and Description*, page 3, paragraph 1, Western states, “[t]he former Bloomfield Refinery had an approximate refining capacity of 18,000 barrels per day. Various process units operated at the facility, including crude distillation, reforming, fluidized catalytic cracking, sulfur recovery, merox treater, catalytic polymerization, and diesel hydrotreating. Products produced at the refinery included gasoline, diesel fuels, jet fuels, kerosene, propane, butane, naphtha, residual fuel, fuel oils, and LPG.” Western does not discuss current functions of the facility as a marketing terminal. Western must include a description of the current facility operations (e.g., oil storage capacity, type of petrochemical products stored) in the next annual report and all future submittals where appropriate.

**Comment 4**

In Section 1.1, *Site Location and Description*, page 3, paragraph 2, Western states, “[t]he crude oil and product unloading areas, loading racks, maintenance buildings/90-day storage area, pipeline offices, transportation truck shop, and Class I injection well are located north of the county road (Figure 2).” In Figure 2, *Facility Site Plan*, identify all landmarks referenced in the statement and provide a revised figure in the next annual report. Include the revised figure in all future reports.

**Comment 5**

In Section 2, *Background*, page 6, paragraph 2, Western states, “[t]he barrier, which was installed into the top of the Nacimiento Formation, extends approximately 200 feet around the perimeter of the riverbank from the bluff opposite the west end of the process area to the river inlet station.” According to Figure 2, the length of the slurry barrier wall extends more than 2,000 feet. It is not clear whether the referenced barrier is the small barrier at the River Terrace or the slurry barrier that runs along Hammond Ditch. Provide a clarification in the response letter.

**Comment 6**

In Section 3.1.2, *Groundwater Field Parameters*, page 12, paragraph 4, and page 13, paragraph 1, Western states, “[i]n the past, bailers were used to purge the wells prior to sample collection. Due to detections of concentrations of metals above screening levels in some samples and the concern the detections may be related to the well purging procedures using bailers, the 2018 sampling event was conducted using low-methods [sic] consistent with NMED guidance (NMED, 2001).” Since the sampling method was changed in 2018, update the Facility-Wide Groundwater Monitoring Plan due on **July 31, 2020** to include the change.

**Comment 7**

In Section 3.3.1, *GAC Sampling*, page 13, paragraph 5, Western states, “GAC influent (GAC-Inlet) samples, lead GAC filter effluent samples (GAC-Lead) and lag GAC filter effluent samples (GAC-Lag) were collected quarterly, as required with the exception of the first quarter of 2018. A GAC-Lag sample was not collected in the first quarter. In addition, samples were collected monthly (with the exception of January, March, April, and July 2018) at the GAC Inlet, GAC lead filter, and GAC lag filter to monitor system performance.” Explain the basis for not collecting the required GAC samples in the response letter.

**Comment 8**

In Section 3.3.1, *GAC Sampling*, page 14, paragraph 1, Western states that “[a]fter the detections in the August and September events, the results were non-detect in October, November and December.” Explain whether the filter was replaced prior to the October sampling event; otherwise, explain the basis for the breakthrough of contaminants from the GAC lag filter in the August and September sampling events and provide information regarding measures taken to prevent breakthrough of contaminants from the GAC lag filter in the response letter. Additionally, explain how frequently the GAC filters are replaced and whether the timing of the breakthrough was predicted in the response letter.

**Comment 9**

In Section 4.1.1, *Groundwater Monitoring*, page 15, paragraph 4, Western states, “[t]he analyses for lead were all below the screening level with one exception at DW-2, where lead slightly exceeded the screening level of 0.015 mg/l with a concentration of 0.016 mg/l. In comparison, there were seven samples with concentrations exceeding the screening level in 2017 with reported concentrations ranging from 0.0068 mg/l to 0.068 mg/l. The decrease in reported concentrations in 2018 is attributed to the change in collecting samples using low-flow procedures instead of using a bailer.” The presence of sediment in the samples may have caused previous lead detections from some wells. The low-flow sampling procedures must be used for all groundwater monitoring wells where metals analysis is required at the facility.

Include the provision in the upcoming Facility-Wide Groundwater Monitoring Plan. In addition, explain the basis for the lead detections in the groundwater samples collected from the River Terrace wells in relation to the lead concentrations in groundwater samples collected from the wells located on the river side of the slurry wall (e.g., lead in the river water) in the response letter.

**Comment 10**

In Section 4.1.1, *Groundwater Monitoring*, page 15, paragraph 5, and page 16, paragraph 1, Western states, “[a] significant drop in reported concentrations of ethylbenzene and xylenes was also observed at TP-5, which had the highest concentrations of all locations in 2017. Ethylbenzene decreased from 0.670 mg/l to 0.069 mg/l and xylenes decreased from 3.1 mg/l to 0.085 mg/l. Similar concentrations of ethylbenzene were observed in the past from 2011 through 2015; however, the concentration of xylenes is the lowest reported since sampling began in 2005. The concentration of TPH-DRO remained consistent at TP-5 with 1.7 mg/l detected in 2018 in comparison to 1.6 mg/l in 2017.” The air sparging system may effectively be reducing the concentrations of volatile organic compounds. However, constituents in TPH-DRO are generally not eliminated by air sparging. Western may need to explore the possibility of an additional remediation system to abate the TPH-DRO concentrations exceeding the screening level in addition to the groundwater recovery from wells DW-2 and DW-3 at the River Terrace.

**Comment 11**

Figure 5, *Groundwater BTEX Concentration Map*, does not include the concentrations of TPH-GRO. Include the concentrations of TPH-GRO on the figure in all future reports for those sample locations where data are available. No revision is required to the Report.

**Comment 12**

According to Appendix B, *Analytical Reports*, the detection limits for TPH-DRO and TPH-GRO are shown as 630 ug/L and 24 ug/L, respectively. These detection limits are higher than the screening levels of TPH-DRO (16.7 ug/L) and TPH-GRO (10.1 ug/L) indicated in the 2019 Guidance. Western must select analytical laboratories that can achieve detection limits that are lower than the screening levels in the future. No revision is required to the Report.

Western must address all comments in this Approval with Modifications and submit a response letter no later than **February 28, 2020**.

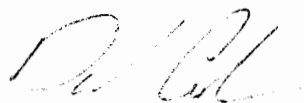
This approval is based on the information presented in the document as it relates to the objectives of the work identified by NMED at the time of review. Approval of this document

Mr. McCartney  
December 27, 2019  
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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 505-476-6059.

Sincerely,



Dave Cobrain  
Program Manager  
Hazardous Waste Bureau

cc: K. Van Horn, NMED HWB  
L. Tsinnajinnie, NMED HWB  
M. Suzuki, NMED HWB  
C. Chavez, EMNRD OCD  
K. Robinson, Western Refining Southwest, Inc., Bloomfield Terminal

File: Reading File and WRB 2019 File  
HWB-WRB-19-001