

State of New Mexico  
Energy, Minerals and Natural Resources Department

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**BY ELECTRONIC MAIL ONLY**

January 6, 2021

Ms. Nancy Ho  
Superfund & Emergency Management Division  
U.S. Environmental Protection Agency, Region 6  
1201 Elm Street, Suite 500  
Dallas, TX 75270  
*Ho.Nancy@epa.gov*

**Re: Proposed Discharge Permit GW-40 for Western Refining Southwest, Inc.,  
Former Giant Bloomfield Refinery, NW/4 Section 27 & SW/4 Section 22, Township  
29 North, Range 12 West, NMPM, San Juan County, New Mexico**

Ms. Ho,

The New Mexico Oil Conservation Division (OCD), pursuant to 20.6.2.3109B NMAC, provides this response to the comments submitted by the EPA on August 10, 2020 regarding OCD's proposed discharge permit for the Western Refining Southwest, Inc. (Western) Former Giant Bloomfield Refinery. Although the OCD has not made any changes to the proposed permit in response to EPA's comments, the OCD took them into consideration during the implementation process.

*EPA Comment 1:*

*Background Concentrations (Section 12.1 Pages 13-14) – The first paragraph of this section states, "...elevated concentrations of several constituents are present due to the offsite migration of contaminants originating from the Lee Acres Landfill Superfund site."*

*EPA notes the Record of Decision for the Lee Acres Landfill site determined the Giant Bloomfield Refinery lost approximately 45,000 barrels of refined product into the soils and groundwater from 1975 to 1984. EPA notes it could be likely the elevated concentrations of several constituents at the GBR facility are due to existing historical contamination present at and from the GBR site*

*rather than offsite migration from the Lee Acres Landfill Site. Petroleum hydrocarbons are known to persist in the environment for several decades. In addition, the final Lee Acres Landfill Remedial Investigation report found the area south of GBR-24 (with wells in the northern part within this defined area as having floating product attributed to activities by GBR). Subsequent Lee Acres Landfill cover monitoring inspection historical reports including from 2019 and 2020 indicate the cover is in good condition and appears to be working properly. Please see the following studies which may also assist Marathon in determining migration of contaminants and in refining assumptions and inputs used for statistical analyses for creating “background” levels of contaminants at its facility. These studies discuss higher manganese and dissolved organic carbon concentrations near rivers; the occurrence of manganese reduction and mobilization associated with certain conditions, including reducing conditions due to biodegradation of residual crude oil causing reductive dissolution of manganese from aquifer sediments.*

***Elevated Manganese Concentrations in United States Groundwater, Role of Land Surface–Soil–Aquifer Connections***

*Peter B. McMahon, Kenneth Belitz, James E. Reddy, and Tyler D. Johnson  
Environmental Science & Technology 2019 53 (1), 29-38  
DOI: 10.1021/acs.est.8b04055*

***Reductive Dissolution and Precipitation of Manganese Associated with Biodegradation of Petroleum Hydrocarbons***

*Leslie A. Klinchuch and Thomas A. Delfino  
Environmental Geosciences 2000 Volume 7, Number 2.*

OCD Response: The available data indicates contaminants may be migrating from upgradient of the Refinery. EPA’s Record of Decision documented a significant southward-trending hydraulic gradient from the Lee Acres Landfill toward the Refinery. The landfill relies on a partial cover with monitored natural attenuation as a remedy. While this remedy may deter recharge and directs drainage away from the site, it neither eliminates the source of contamination nor prevents the migration of contamination. It is possible some of the elevated constituents detected at the Refinery may be coming from a source upgradient of GBR-50 and nearby monitor wells.

EPA Comment 2: *Section 14 – Facility Closure and Post Closure Plan – The first paragraph states that groundwater will be sampled for chemical analyses annually when the facility is in operation. The second paragraph*

***EPA Response to Marathon Petroleum Company LP (GW-40) Former Giant Bloomfield Refinery Discharge Permit***

*states “once eight consecutive quarters with groundwater contaminants below applicable standards is documented, facility closure will be requested from the NMOCD...”. EPA recommends the GBR’s chemical analyses results be below NMWQCC standards instead of*

*the currently proposed GBR Background Threshold Values as the determining factor for facility closure proposal. Furthermore, EPA recommends there be at least eight consecutive quarters from calendar year 2021 of chemical analytical data that are below NMWQCC standards instead of solely two sample sets of annual chemical analytical data prior to proposal for facility closure. Note the Bureau of Land Management will conduct a multi-year groundwater study beginning in 2020/2021 with an estimated completion before 2025 at the Lee Acres Landfill site that may have findings to assist Marathon in developing its Stage 2 Abatement Plan.*

OCD Response: OCD requires Western to demonstrate at least eight consecutive quarters of compliance with the WQCC Regulations before considering abatement to be complete.

*EPA Comment 3: Appendix A GBR Background Threshold Values: It appears the method for determining the GBR Background Threshold Values was determined by using data from wells potentially affected by petroleum hydrocarbon contamination at the site. Note the method for determining background concentrations at the Lee Acres Landfill site was determined by using sampling data from sites unaffected by activities at the landfill. This means inherently the GBR background threshold values proposed would be of higher values if data were not used solely from unaffected petroleum hydrocarbon sample sites. EPA recommends the proposed background threshold values utilized be calculated by using data from wells from locations unaffected by man-made contamination.*

OCD Response: The BTVs were measured at groundwater monitoring wells upgradient of the Refinery and may include constituents migrating onto the Refinery from the North but may not reflect contaminants generated by the Refinery itself.

*EPA Comment 4: Stage 1 Abatement Plan – Section 3.0 Current Site Conditions – The last sentence of this paragraph states, “With no active source, the residual contaminants are not likely to migrate with or without the hydraulic barrier introduced by the remediation system.” EPA notes the current plan does not consider the role of land-surface-soil aquifer connections that can cause residual contaminants to migrate. See previous studies mentioned above.*

OCD Response: OCD will require Western to address the factors causing contaminant migration during the Stage 2 Abatement Plan.

*EPA Comment 5:*

*Stage 1 Abatement Plan – Section 4.0 Recommendations – Second paragraph – LTE proposed sampling be ceased at wells that have at least eight quarters of analytical results with no exceedances of NMWQCC standards and/or background concentrations. EPA recommends the GBR’s chemical analyses results be below NMWQCC standards instead of the currently proposed GBR Background Threshold Values as the determining factor to cease sampling.*

OCD Response: See OCD’s response to Comment 2.

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*EPA Comment 6: EPA looks forward to continued coordination with NMOCD and the opportunity to review and comment on the Stage 2 Abatement Plan.*

OCD Response: OCD appreciates EPA's interest in the Stage 2 Abatement Plan and will endeavor to apprise EPA as the work progresses.

If you have any questions, please contact me at (505) 660-7923 or [CarlJ.Chavez@state.nm.us](mailto:CarlJ.Chavez@state.nm.us).

Respectfully,



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Carl J. Chavez

*Environmental Specialist*