



May 8, 2019

Mr. John E. Kieling, Chief
New Mexico Environmental Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

**Re: Response to Approval With Modifications
Interim Groundwater Recovery System Work Plan
Marathon Petroleum Company LP, Gallup Refinery
(dba Western Refining Southwest, Inc.)
EPA ID# NMD000333211
HWB-WRG-18-006**

Dear Mr. Kieling:

Attached please find the response to comments contained in the New Mexico Environmental Department Approval with Modifications letter dated May 1, 2019.

If you have any questions or comments regarding the information contained herein, please do not hesitate to contact Mr. Brian Moore at 505-726-9745.

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

Sincerely,
Marathon Petroleum Company – Gallup Refinery

Robert S. Hanks
Refinery General Manager

Cc: C. Chavez (OCD)

92 Giant Crossing Road
Jamestown, NM 87347

NMED Comment 1:

In the first paragraph of the Work Plan, the Permittee states, "[t]his system will be operated on an interim, seasonal basis to address groundwater impacts at the site until such time as an engineered system can be presented to the NMED for review and approval." In the March 20, 2019 meeting between the Permittee and NMED, the Permittee stated that the recovery system will also address the increasing groundwater elevation in the area. The Work Plan does not discuss this. In the response letter, state the secondary purpose of the groundwater recovery system.

MPC Response 1:

While it is true that the primary purpose of the groundwater recovery system is to mitigate the migration of both dissolved phase and non-aqueous phase contaminants, a secondary and serendipitous benefit of the system will be to address the rising groundwater levels in the area immediately surrounding the groundwater recovery pumps. As discussed in the March 20, 2019 meeting, Marathon presented data to the NMED documenting rising water levels in monitoring wells at the site. The data presented at the meeting was extracted from annual groundwater monitoring reports that were previously submitted to the NMED. This interim groundwater recovery system will most certainly have an effect in reducing local water levels while MPC addresses potential sources of water contributing to the rising water levels.

NMED Comment 2:

In the section titled "Proposed Location of initial Recovery Wells", the Permittee states, "[t]he initial proposed recovery system will consist of recovery wells RW-1, RW-2, RW-5, RW-6, and monitoring wells OW-14, OW-58, OW-30, and OW-55." The screened intervals of some wells are submerged below the water table (RW-2, OW-14, OW-30 and OW-58); therefore, these wells are not suitable to address groundwater impacts. However, the Permittee may extract groundwater from all proposed wells for the purpose of lowering the water level and controlling contaminant migration. During the extraction of groundwater, the inlet of the pneumatic pumps must not be set more than two feet lower than the lowest groundwater level historically recorded. This measure will prevent separate phase hydrocarbon (SPH) from contaminating soils it has not previously impacted. Include the provision in the response letter.

MPC Response 2:

The purpose of this interim system is to simply take advantage of wells that already exist at the site in order to have an impact on both dissolved phase and non-aqueous phase liquids in the area without the need for lengthy review and comment periods regarding the design of new recovery well depth, screened intervals, spacing, etc.. While it is true that not all wells have free product in them, the dissolved phase extends to areas far beyond that occupied by the free product. To limit the pumping interval of a recovery system is to continue to allow dissolved phase constituents to migrate unabated. Additionally, even though the screened interval in some of the proposed wells are "submerged" at this time, once we start removing water from them, the screened intervals will no longer be submerged as the cone of depression caused by the pump will gradually move well below the top of the screened interval.

Additionally, when the source(s) of excess water in the subsurface at the site have been removed, the water level will naturally decrease which will allow dissolved phase to migrate downward at

whatever location it is currently in as the water level subsides. As the water level continues to subside, dissolved phase constituents will adhere to the soil horizon particulate matter. For this reason, it would make sense to stop the migration of dissolved phase constituents sooner, rather than later, when it will potentially occupy much more area. Therefore, MPC requests that the pumps be allowed to extract water from bottom of the screened interval which will have a greater impact on both dissolved phase and free product. It is also noted that the previous pumps that were installed in the recovery wells were also set at the bottom of the existing recovery wells.

Additionally, if MPC does nothing to mitigate the migration of dissolved phase contaminants, it will eventually cross into adjacent properties that are currently not impacted. It is in everyone's best interest to address the non-aqueous and dissolved phase impacts at the same time.

NMED Comment 3:

Twin well OW-58, with a screen that crosses the water table, was previously proposed to be installed. Once the twin well is complete, the Permittee must use the well to extract groundwater. Switch extraction from the original well to the new well. Include the provision in the response letter.

MPC Response 3:

See the response to Comment 2 above.

NMED Comment 4:

Well OW-55 is located further north of the source area. Presumably, well OW-55 is included to address the increasing water levels and to prevent acceleration of further contaminant migration in that direction. Well OW-57 is located closer to production well PW-3 and the water level in the well is increasing. Groundwater extraction from well OW-57 may more effectively reduce contaminant migration. Groundwater must also be extracted from well OW-57 or provide justification for not extracting groundwater from well OW-57 in the response letter.

MPC Response 4:

Wells OW-14, OW-58, OW-30 and OW-55 are situated in a more easterly location that is closer to the property boundary of the refinery to minimize the opportunity for offsite migration. Additionally, the concentration of constituents are lower in OW-57 than in the proposed wells. The overriding factor in well selection for these wells was boundary control.

Additionally, the groundwater sampling forms for well OW-57 indicate that it purges dry after developing approximately 1.75 gallons of fluid. The forms indicate that the recovery rate is so slow that it must be sampled the next day. It is probable that the effects of pumping this well would be minimal.

NMED Comment 5:

In the section titled "Proposed Recovery Well Design", the Permittee states, "[each recovery well will be operated as an independent, closed system." The proposed remediation is limited to the northeast quadrant of the refinery. However, the same recovery system may be proposed in other areas of the refinery where SPH is persistently present (e.g., GWM-1, NAPIS-1 and

MKTF wells) since each recovery system is independently operated and appears portable. In the future, evaluate the applicability of the proposed remedial approach in other areas of the refinery.

MPC Response 5:

At such time as MPC is able to install and stabilize the operation of the interim system proposed herein, consideration could be given to operating similar systems in other areas. The urgency of the Group C Area is that it is near a property boundary.

NMED Comment 6:

The inlet of the pneumatic pump must not be set more than two feet lower than the lowest groundwater level recorded in each well (see Comment 2). Provide a table showing all proposed recovery wells with the depths to pump inlet, screened intervals, and the most current and the lowest recorded SPH/groundwater levels in the response letter.

MPC Response 6:

See response to Comment 2.