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

Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

June 24, 2019

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

RE: DISAPPROVAL
INVESTIGATION WORK PLAN NORTH DRAINAGE DITCH
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID# NMD000333211
HWB-WRG-19-009

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *Investigation Work Plan North Drainage Ditch* (Work Plan), dated April 2019, submitted on behalf of Marathon Petroleum Company LPC dba Western Refining Southwest Inc., Gallup Refinery (Permittee) and hereby issues this Disapproval with the following comments.

Comment 1

NMED's Disapproval Investigation Report North Drainage Ditch and OW-29 & OW-30 Areas (Report) Comment 28 stated, "[i]t does not appear that the location of the [six] temporary wells [along the landing strip] as depicted in Figure 25 makes sense based on the information provided in this Report. Explain the basis for the proposed location of temporary wells in the in the work plan proposing the additional work." Work Plan Section 4.1 (Investigation) provides the basis for the proposed temporary well locations: to determine the downgradient extent of groundwater impacts; however, the locations appear to be too far from the vicinity of the North Drainage Ditch. The proposed location must be revised to better accomplish the purpose of the investigation; the temporary wells must be installed within 200 feet downgradient of the North

Drainage Ditch and well OW-54 (see also Comment 10). Revise the location of temporary wells in the revised Work Plan accordingly.

Comment 2
In the response to NMED's Disapproval Report Comment 31, the Permittee stated that historic boring logs for borings 01117-B1, 0117-B2, 548, 643, 0649, 651, 652, 0665, 656, 657, MP-4, MP-5, MP-9, B-1, and B-3 that were depicted in several figures in the Report would be provided in this Work Plan. The Permittee did not provide the boring logs. Provide the logs for these borings in the revised Work Plan.

Comment 3
In the response to NMED's Disapproval Report Comment 33, the Permittee proposed to submit a work plan to investigate the area between the North Drainage Ditch and the Tank Farm. The Work Plan does not propose this investigation. The Permittee must propose to install a boring and/or a temporary well in the area between the North Drainage Ditch and the Tank Farm. Refer to Comment 14 for the location of the required boring (boring number 4 - within the ditch before the ditch crosses the road).

Comment 4
In Section 2.1 (North Drainage Ditch), the Permittee states, "[i]t appears any flow of surface water beyond this point would flow a short distance to the north along the east side of a dirt road before crossing over the road (pipeline easement) and continuing west to southwest toward the area formerly known as the upper stormwater basin." The upper stormwater basin is former pond EP-10 which is now overlain by the OCD Landfarm. The surface runoff from the North Drainage Ditch that potentially contains contaminants must not be introduced to the OCD Landfarm.

Comment 5
In Section 2.1 (North Drainage Ditch) the Permittee discusses historical soil sampling results with detected concentrations that exceed cleanup levels but does not specify which soil borings or which area of the North Drainage Ditch the exceedances were located. For example, on page 2-3, the Permittee states, "Motor Oil Range Organics (MRO) exceeded the residential soil screening level in one sample near the North Drainage. The sample near the North Drainage Ditch also exceed the non-residential soil screening level for MRO." Provide more specific detail regarding the soil sample locations when discussing sample analytical results. The historic groundwater sample analytical discussion must also be revised to include more specific detail regarding the identity of the wells discussed.

Comment 6
In Section 4 (Scope of Services) the Permittee states, "[t]he site investigation of groundwater will be conducted to define the down-gradient extent of observed impacts to groundwater beneath the North Drainage Ditch and in the area up-gradient of the North Drainage Ditch to help identify potential sources. The site investigation of soils will be focused in the area of the North Drainage Ditch where previous sampling did not delineate vertical impacts." While the focus can be on groundwater in one area and soils in another, data must be collected for both soil

and groundwater for each boring or well installed during the investigation. Uncoupling the collection of soil and groundwater data may result in the requirement for additional investigation to collect the data appropriate to demonstrate that the extent of potential contaminants is defined.

Comment 7
Section 4 (Scope of Services) contains an error; it starts with page number 4-3. The page number should start with 4-1. Revise the Work Plan accordingly.

Comment 8
In Section 4.1 (Investigation) the Permittee states, "[i]n particular, field screening using a photoionization detector (PID) during completion of shallow borings completed with a hand auger indicated elevated PID readings in the deepest samples at borings NDD-5, NDD-8, and NDD-9 (Table 4)." In addition to the PID readings, soil analytical results must be examined for the borings that were installed to two feet below the ground surface (bgs). Boring NDD-5 soil chemical analytical results included 270,000 mg/kg diesel range organics (DRO) and 19,000 mg/kg motor oil range organics (ORO) at two feet bgs. Boring NDD-8 soil analytical results included 6800 mg/kg DRO. The DRO and ORO concentrations in the samples collected from boring NDD-9 were below the detection limits although the PID reading was recorded highest at 1,530 parts per million. Decisions of where to install the borings in this phase of investigation must be based on previous analytical results as well as field parameters.

Comment 9
In Section 4.1 (Investigation) the Permittee states, "[a]s discussed below in Section 4.1.3, groundwater samples will be collected from temporary well completions if groundwater is encountered at these locations." Separate phase hydrocarbon (SPH) may potentially be present at the area where temporary wells are completed. Even if only groundwater enters the temporary wells initially, the temporary wells must be left open for at least 48 hours to confirm presence or absence of SPH.

Comment 10
In Section 4.1 (Investigation) the Permittee states, "[t]o help define the down-gradient extent of impacted groundwater observed at temporary wells completions in borings NDD-6, NDD-11, NDD-16, and OW-54, six new temporary wells are proposed to the west and northwest of the North Drainage Ditch (Figure 5). Two new permanent monitoring wells are proposed up-gradient of the North Drainage Ditch to evaluate potential up-gradient sources." These proposed temporary and permanent wells are not differentiated from proposed soil borings in Figure 5 (Proposed Boring Location Map). Revise the figure to distinguish between the proposed borings, proposed temporary well locations, and proposed permanent well locations. Additionally, the proposed locations to the north and west of the ditch are located along the landing strip which is greater than 300 feet from known impacts. Locations closer to the known contamination will help to better define the area affected by contaminants. See also Comments 1 and 14.

Comment 11
In Section 4.1.1 (Soil Sample Field Screening and Logging) the Permittee differentiates between soil sample collection from proposed boring locations and proposed temporary and permanent well locations. The soil sample collection must be the same for all borings installed during the investigation whether they are installed as only soil borings or for the purpose of groundwater monitoring. Revise the Work Plan to remove the separate proposed sampling protocol.

Comment 12
In Section 4.1.7 (Chemical Analyses) the Permittee proposes that groundwater and soil samples will be analyzed using SW-846 Method 8260 for VOCs and SW-846 Method 8270 for SVOCs. Since the Permittee conducted an investigation in the area previously and knows which specific compounds are constituents of concern the Permittee may narrow the scope of the analytical sampling to specific compounds that were present above the detection limit based on the analytical results presented in the Report.

Comment 13
Provide a figure that shows the locations of newly installed wells OW-62 and OW-63 and provide the logs associated with those wells in the revised Work Plan. Include other relevant data from borings or wells installed within the tank farm as well.

Comment 14
Based on NMED's review of the Report, the Permittee must examine the following areas as part of this next phase of investigation. Propose to install borings and collect soil samples at the following locations (see Attachment 1 for a figure depicting the approximate locations):

1. Between boring NDD-8 and NDD-11 and south of the drainage ditch [it appears that the soil contamination (other than manganese and cobalt) does not reach as far as the line of borings NDD-10/-11/-12 and it appears that the contaminants are located primarily on the south side of the ditch];
2. South of NDD-9 along the south side of the ditch;
3. On the south side of the ditch near NDD-6A; and
4. Within the ditch before it crosses the road.

Comment 15
Figure 2 (Investigation Area), depicts the location of pipelines that carry crude oil. However, the destination of these pipelines is incomplete, indicating the pipelines terminate in middle of the field. Revise the figure to indicate the destination of these pipelines or provide an explanation for where they are connected.

The Permittee must address all comments in this Disapproval letter and submit a revised Work Plan. Provide NMED with two hard copies with electronic versions of the revised Work Plan. Include a red-line strikeout version, in electronic format, showing where all the revisions to the Work Plan have been made. The revised Work Plan must be accompanied with a response letter that details where all the revisions to the Work Plan have been made, cross-referencing NMED's

numbered comments. The revised Work Plan must be submitted to NMED by no later than **September 27, 2019.**

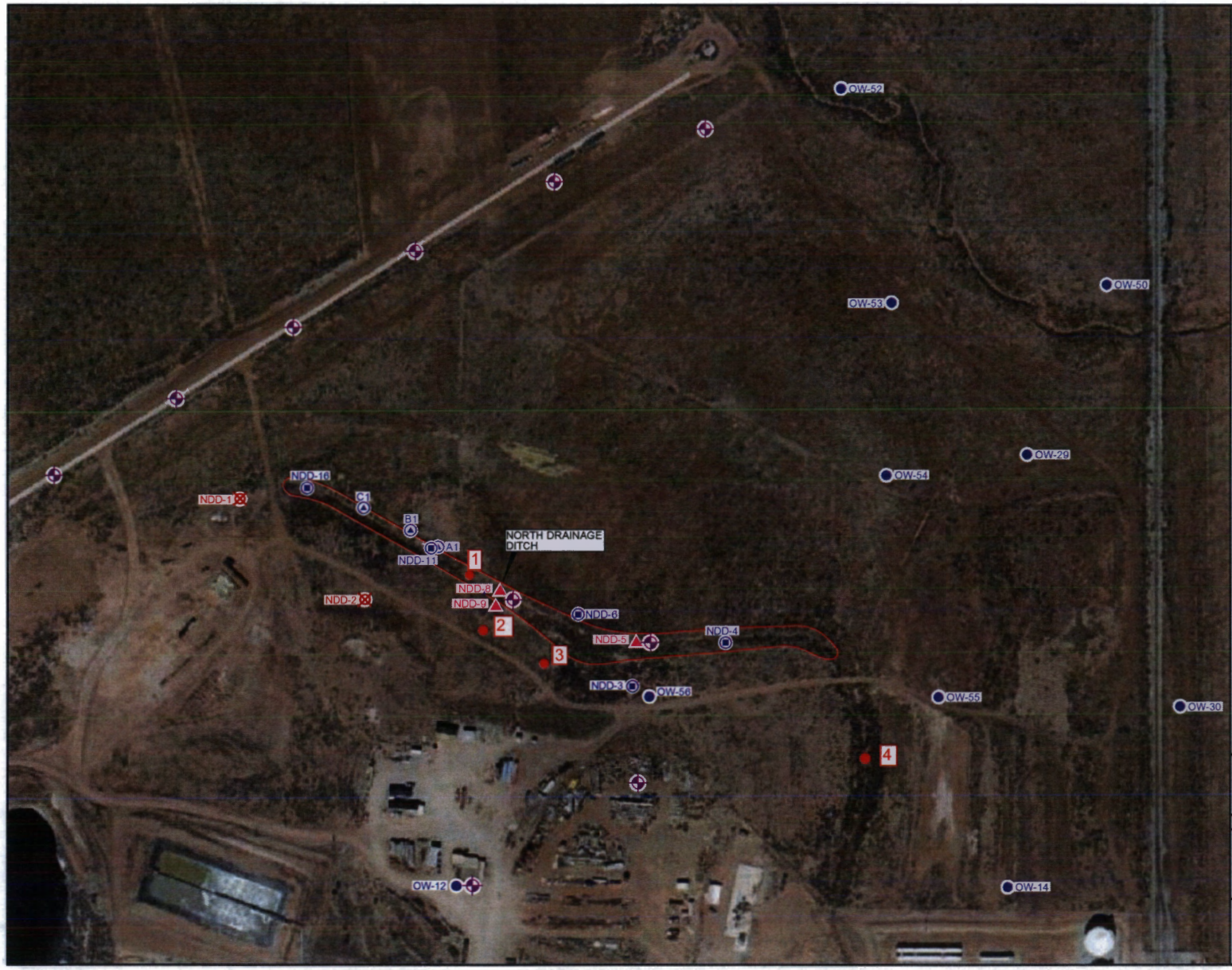
If you have any questions regarding this letter, please contact Kristen Van Horn at (505) 476-6046.

Sincerely,

John E. Kieling
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
K. Van Horn, NMED HWB
M. Suzuki, NMED HWB
C. Chavez, EMNRD OCD
B. Moore, Marathon
L. King, EPA

File: WRG 2019 and Reading
HWB-WRG-19-009



Aerial Map Source: Google Map, 03/18/2016.

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SCALE IN FEET

NEW MEXICO

GALLUP SITE LOCATION

LEGEND

- PROPOSED SOIL BORING LOCATION
- NDD-1: SOIL BORING LOCATION AND IDENTIFICATION NUMBER
- A1: SURFACE WATER SAMPLE LOCATION AND IDENTIFICATION NUMBER
- NDD-1: TEMPORARY MONITORING WELL LOCATION AND IDENTIFICATION NUMBER
- OW-14: ALLUVIUM / CHINLE GP MONITORING WELL LOCATION AND IDENTIFICATION NUMBER
- NDD-5: HAND AUGER LOCATION AND IDENTIFICATION NUMBER
- NMED SUGGESTED LOCATION

MARATHON PETROLEUM COMPANY
GALLUP REFINERY

PROJ. NO.: Marathon | DATE: 4/23/19 | FILE: Mathon-dB213

ATTACHMENT 1
ADDITIONAL BORING LOCATIONS