Western Refining Southwest LLC
A subsidiary of Marathon Petroleum Corporation
I-40 Exit 39
Jamestown, NM 87347

June 30, 2021

Mr. Kevin Pierard, Chief
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505

RE: Response to Approval with Modifications
Sanitary Lagoon Investigation Phase II Work Plan
Western Refining Southwest LLC, Gallup Refinery
EPA ID #NMD000333211
HWB-WRG-21-005

Dear Mr. Pierard,

Attached please find the response to comments contained in the New Mexico Environment Department (NMED) *Approval with Modifications Sanitary Lagoon Investigation Phase II Work Plan*, (Work Plan) dated April 26, 2021. The Work Plan was drafted in response to Comments 1 and 14 of the "Approval with Modifications Investigation Report Sanitary Lagoon." A timeline of the report and investigation for the Sanitary Lagoon is provided below.

Investigation Report, submitted February 17, 2020

- *Approval with Modifications*, received April 24, 2020
- *Response to Approval with Modifications*, submitted November 15, 2020

Phase II Investigation Work Plan, submitted March 31, 2021

- *Approval with Modifications*, received April 26, 2021

If you have any questions or comments regarding the information contained herein, please do not hesitate to contact Mr. John Moore at (915) 775-7864.

Western Refining Southwest LLC
A subsidiary of Marathon Petroleum Corporation
I-40 Exit 39
Jamestown, NM 87347

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction of 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 LP, Gallup Refinery

Robert S. Hanks
Refinery General Manager

Enclosure

cc: D. Cobrain, NMED HWB
M. Suzuki, NMED HWB
T. McDill, NMOCD
L. King, EPA Region 6
G. McCartney, Marathon Petroleum Corporation
K. Luka, Marathon Petroleum Corporation
J. Moore, Marathon Gallup Refinery
H. Jones, Trihydro Corporation

Attachment A: Response to Comments

New Mexico Environment Department (NMED) to Marathon Petroleum Company (MPC) Comment Letter "Response to Approval with Modifications Sanitary Lagoon Investigation Phase II Work Plan" (April 26, 2021)

NMED Comment	MPC Response
Comment 1:	**Response 1:**
In Section 4.1, *Investigation*, page 8, the Permittee states, "[a] total of 6 soil borings will be located at the base of the sanitary lagoon berms in locations shown in Figure 3. The borings will be located north of SL-3, east of SL-2, and south of SL-8. Soil samples will be collected at a depth of 2.0-2.5 feet below ground surface (bgs) and tested for TPH-DRO." According to the *Investigation Report Sanitary Lagoon*, dated February 2020, the TPH-DRO concentrations in the soil samples collected from boring locations SL-2, SL-3, and SL-8 did not exceed the applicable screening levels at a depth interval of 2.0 - 2.5 feet below ground surface (bgs) where soil sampling is proposed. The exceedance of the TPH-DRO concentrations was detected between the ground surface (0.0) and 0.5 foot bgs. Propose to collect the soil samples at depths of 0.0 - 0.5 and 2.0 - 2.5 feet bgs at the proposed sample locations for TPH-DRO analysis. Revise the Work Plan and provide replacement pages as necessary.	In response to NMED's Comment 1, the Work Plan has been revised on page 8 in Section 4.1 to state, "[s]oil samples will be collected at depths of 0.0-0.5 and 2.0-2.5 feet below ground surface (bgs) and tested for TPH-DRO."
Comment 2:	**Response 2:**
In Section 4.4, *Collection and Management of Investigation Derived Waste*, page 10, the Permittee states, "[t]he soils produced from the pipeline location trenches will be temporarily placed beside the trenches. The majority of this material will be removed from above the pipeline and is not believed to be contaminated. If the soil shows potential impacts, then this soil will be managed separately and will be characterized as described below. Otherwise, non-impacted soil will be returned to the trench after the pipeline is located." The soil placed beside the trenches may potentially contaminate the surface soil. In the revised Work Plan, propose to place plastic sheeting on the ground surface where excavated soils will be placed, if it appears to be contaminated. In addition, if the soils beneath the pipeline are found to be contaminated at unacceptable levels, additional soil removal will be required to eliminate the risks associated with the contamination. The trenches must	In response to the first comment in NMED's Comment 2, the Work Plan has been revised on page 10 in Section 4.4 to state, "[i]f the soil shows visual impacts (e.g stained soils) and elevated PID readings over 20 parts per million, then this soil will be placed on plastic sheeting to avoid potentially contaminating the surface soil. The soil will be managed separately and will be characterized as described below." In response to the second comment in NMED's Comment 2, the Work Plan has been revised on pages 10 and 11 in Section 4.4 to state, " [t]he trenches will be left open until the analytical results confirm that risks associated with contamination are eliminated. If necessary, additional soils will be removed and confirmation samples will be collected from the larger trenches per analytical results."

New Mexico Environment Department (NMED) to Marathon Petroleum Company (MPC) Comment Letter "Response to Approval with Modifications Sanitary Lagoon Investigation Phase II Work Plan" (April 26, 2021)

NMED Comment	MPC Response
be left open until the analytical results confirm that such risks are eliminated. Propose to remove additional soils and collect confirmation samples from the larger trenches, if necessary, until such risks are eliminated. Include the provision in the revised Work Plan. Furthermore, whether or not the presence of contaminants is suspected, the excavated soils along the pipeline must be appropriately characterized. Discuss how the excavated soils will be characterized in the response letter.	In response to the third comment in NMED's Comment 2, the Work Plan has been revised on page 11 in Section 4.4 to state, "[a]ll excavated soils will be appropriately characterized for disposal. Composite samples of the excavated soils will be collected and analyzed for VOCs (Method 8260, TCLP), SVOCs (Method 8270, TCLP), and RCRA 8 Metals (TCLP)."

Attachment B: Replacement Pages

MARATHON PETROLEUM CORPORATION

GALLUP REFINING DIVISION

SANITARY LAGOON INVESTIGATION PHASE II WORK PLAN

MARCH 31, 2021

REVISED MAY 18, 2021

Certification

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.

Name: Kateri Luka

Date

Title: Senior HSE Professional

3.2 Subsurface Conditions

The shallow subsurface soils consist of fluvial and alluvial deposits comprised of clay and silt with minor inter-bedded sand layers. Relatively low permeability bedrock (e.g., claystones and siltstones) underlie the surface soils and effectively form an aquitard. The Chinle Formation, which is Upper Triassic, crops out over a large area on the southern margin of the San Juan Basin. The uppermost recognized local member is the Petrified Forest and the Sonsela Sandstone Bed is the uppermost recognized regional aquifer. Aquifer test of the Sonsela Bed northeast of Prewitt indicated a transmissivity of greater than 100 square feet per day (Stone and others, 1983). The Sonsela Sandstone's highest point occurs southeast of the site and slopes downward to the northwest as it passes under the refinery. The Sonsela Sandstone forms a water-bearing reservoir with artesian conditions throughout the central and western portions of the refinery property. Groundwater within the Sonsela Sandstone flows to the northwest.

The diverse properties and complex, irregular stratigraphy of the surface soils across the site cause a wide range of hydraulic conductivity ranging from less than 10^{-2} centimeters per second (cm/sec) for gravely sands immediately overlying the Chinle Formation to 10^{-8} cm/sec in the clay soils located near the surface (Western Refining, 2009). Generally, shallow groundwater at the refinery follows the upper contact of the Chinle Formation with prevailing flow from the southeast to the northwest, with some flow to the northeast on the northeastern portion of the refinery property.

4.0 Scope of Work

The site investigation of soils will be conducted to define the nature and extent of impacts to the environment and facilitate remedy selection, as necessary. The investigation will commence upon approval of this investigation work plan by the New Mexico Environment Department.

4.1 Investigation

An investigation of soils/sediments along the north, south, and west berms of the sanitary lagoon will be conducted to define the extent of TPH-DRO impacts found within the lagoon. Additionally, soil samples will be collected from beneath the sanitary pipeline that had discharged to the lagoon. The following elements summarize the proposed sampling to be conducted near the sanitary lagoon and along the sanitary pipeline.

- A total of 6 soil borings will be located at the base of the sanitary lagoon berms in locations shown in Figure 3. The borings will be located north of SL-3, east of SL-2, and south of SL-8. Soil samples will be collected at depths of 0.0-0.5 and 2.0-2.5 feet below ground surface (bgs) and tested for TPH-DRO.
- Up to 13 trenches, at 50 ft intervals, will be completed southeast of the lagoon adjacent to the sanitary pipeline to allow for collection of soil samples beneath the pipeline.

boring will be completed in the field by a qualified person. Additional information, such as the presence of water-bearing zones and any unusual or noticeable conditions encountered during drilling, will be recorded on the logs.

Quality Assurance/Quality Control samples will be collected to monitor the validity of the soil sample collection procedures as follows:

- Field duplicates will be collected at a rate of 10 percent or at least one per day.
- Equipment blanks will be collected from all reusable sampling apparatus at a frequency of one per day.

4.3 Sampling Activities

Starting approximately 50 feet south of the sanitary lagoon, a maximum of 13 exploratory trenches will be dug using a track hoe to determine the depth of the pipeline and collect soil samples from 2 feet to 4 feet beneath the pipeline. The trenches will be spaced approximately every 50 feet along the length of the pipeline as shown in Figure 4. The equipment will be properly decontaminated before starting each trench and equipment blanks will be collected at a rate of 10 percent or at least one per day. For safety reasons, the soil sampling will be conducted using a decontaminated hand auger once the excavation reaches the target depth beneath the pipeline. The hand auger will have extensions reaching up to 15 ft and should be sufficient to collect the samples without entering the trench. If the sample cannot be directly obtained with a hand auger, then a discrete sample will be collected directly from the track hoe bucket.

During excavation of the trenches, the condition of the pipeline and any evidence of seeping (e.g., soil saturation levels) from the up-stream location where the pipeline was plugged will be recorded. If the pipeline is damaged, then the pipeline will be plugged upstream of the damaged section.

Known site features and/or site survey grid markers will be used as references to locate each boring. The boring locations will be measured to the nearest foot and locations will be recorded on a scaled site map upon completion of each boring.

4.4 Collection and Management of Investigation Derived Waste

The soils produced from the pipeline location trenches will be temporarily placed beside the trenches. The majority of this material will be removed from above the pipeline and is not believed to be contaminated. If the soil shows visual impacts (e.g. stained soils) and elevated PID readings over 20 parts per million, then this soil will be placed on plastic sheeting to avoid potentially contaminating the surface soil. The soil will be managed separately and will be characterized as described below. The trenches will be left open until the analytical results confirm that risks associated with contamination

are eliminated. If necessary, additional soils will be removed and confirmation samples will be collected from the larger trenches per analytical results. Otherwise, non-impacted soil will be returned to the trench after the pipeline is located.

Drill cuttings, excess sample material and decontamination fluids, contaminated soil, and all other investigation derived waste (IDW) associated with soil borings will be contained and characterized using methods based on the boring location, boring depth, drilling method, and type of contaminants suspected or encountered. All excavated soils will be appropriately characterized for disposal. Composite samples of the excavated soils will be collected and analyzed for VOCs (Method 8260, TCLP), SVOCs (Method 8270, TCLP), and RCRA 8 Metals (TCLP). IDW management plan is included as Appendix A.

4.5 Field Equipment Calibration

Field equipment requiring calibration will be calibrated to known standards, in accordance with the manufacturers' recommended schedules and procedures. At a minimum, calibration checks will be conducted daily and the instruments will be recalibrated, if necessary. Calibration measurements will be recorded in the daily field logs. If field equipment becomes inoperable, its use will be discontinued until the necessary repairs are made. In the interim, a properly calibrated replacement instrument will be used and noted in the field logs.

4.6 Documentation of Field Activities

Daily field activities, including observations and field procedures, will be recorded in a field log book. Copies of the completed forms will be maintained in a bound and sequentially numbered field file for reference during field activities. Indelible ink will be used to record all field activities. Photographic documentation of field activities will be performed, as appropriate.

4.7 Chemical Analyses

All samples collected for laboratory analysis will be submitted to an accredited laboratory. The laboratory will use the most recent standard Environmental Protection Agency (EPA) and industry-accepted analytical methods for target analytes as the testing methods for each medium sampled. Chemical analyses will be performed in accordance with the most recent EPA standard analytical methodologies and extraction methods.

Soil/sediment samples collected from beneath the pipeline will be analyzed for the constituents listed in Table 1. Soil samples collected from the sanitary lagoon will be sampled and analyzed for TPH-DRO by SW-846 method 8015B.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 34451

CONDITIONS

Operator: Western Refining Southwest LLC 539 South Main Street Findlay, OH 45840	OGRID: 267595
	Action Number: 34451
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

CONDITIONS

Created By	Condition	Condition Date
jburdine	Accepted for Record Retention Purposes-Only	11/22/2022