Western Refining Southwest LLC
A subsidiary of Marathon Petroleum Corporation

I-40 Exit 39
Jamestown, NM 87347

January 31, 2023

Mr. Rick Shean, Chief
New Mexico Environmental Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505

RE: 2023 Facility-Wide Groundwater Monitoring Work Plan
Western Refining Southwest LLC, D/B/A Marathon Gallup Refinery
EPA ID #NMD000333211

Dear Mr. Shean:

Attached please find the 2023 Facility-Wide Groundwater Monitoring Work Plan.

If you have any questions or comments regarding the information contained herein, please do not hesitate to contact Mr. John Moore at (505) 879-7643.

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,
Western Refining Southwest LLC, Marathon Gallup Refinery

Timothy J. Peterkoski
Director, Environmental Auditing & Processes
Marathon Petroleum Company LP

Enclosure

cc: D. Cobrain, NMED HWB
L. Barr, NMOCD
M. Bracey, Marathon Petroleum Company
J. Moore, Marathon Gallup Refinery
L. Andress, NMED HWB
L. King, EPA Region 6
K. Luka, Marathon Petroleum Company
H. Jones, Trihydro Corporation

WESTERN REFINING SOUTHWEST LLC

D/B/A MARATHON GALLUP REFINERY

2023 FACILITY-WIDE GROUNDWATER MONITORING WORK PLAN

JANUARY 31, 2023

Executive Summary

This 2023 Facility-Wide Groundwater Monitoring Work Plan (2023 Plan) has been prepared for the implementation of the facility-wide groundwater monitoring and monitored natural attenuation (MNA) groundwater programs at the Western Refining Southwest LLC, D/B/A Marathon Gallup Refinery (Refinery). This 2023 Plan is prepared in accordance with the Resource Conservation and Recovery Act Post-Closure Permit (NMED 2017).

The Refinery annually reviews the facility-wide monitoring data and evaluates the facility-wide monitoring program. Revisions to the 2023 Plan are presented to New Mexico Environment Department (NMED) for review. These revisions may include, but are not limited to, a reduction or change in monitoring locations, monitoring frequency, and/or target constituents of concern to be analyzed. Due to delays in receiving approval on the 2022 Facility-Wide Groundwater Monitoring Work Plan update, NMED requests presented in comments in 2022 are incorporated into the 2023 Plan, when applicable. General information regarding the facility-wide monitoring program is presented in Section 3.1. The revisions proposed for the 2023 Plan are discussed in Section 4.0.

The MNA groundwater evaluation was initiated in 2020 and a work plan was developed in 2021. The following presents the historical sequence of correspondence for the MNA Plan:

- "Natural Attenuation Assessment and Proposed Workplan for the Hydrocarbon Seep Area" (MPC 2020), submitted December 15, 2020
- "Disapproval" (NMED 2021a), received January 26, 2021
- "Response to Disapproval" (Western 2021a), submitted August 27, 2021
- "Approval with Modifications (NMED 2021b), received September 28, 2021
- "Response to Approval with Modifications" (Western 2021b), submitted December 17, 2021

Per Comment 11 provided by NMED on the 2021 Facility-Wide Groundwater Monitoring Work Plan (NMED 2021c), the Refinery is including a discussion of the MNA groundwater program in the 2023 Plan. Although, the "Response to Approval with Modifications" (Western 2021b) has not been approved by NMED, the Refinery is using the information as the basis for the MNA groundwater program presented in this document. Information regarding the MNA program is provided in Section 3.2.

The Refinery has created a groundwater monitoring work plan with quality assurance practices and controls, as well as standard procedures for sampling, and a schedule of activities to monitor groundwater and surface water at select locations of the Refinery. The persons responsible for the implementation and oversight of this plan are:

Director, Environment Auditing and Processes

- Tim Peterkoski

Remediation Project Manager

- Kateri Luka

Table of Contents

Executive Summary 2
List of Figures 4
List of Tables 5
List of Appendices 6
List of Acronyms 7
1.0 Introduction 8
1.1 Refinery Information 8
1.2 Monitoring Groups 9
1.3 New Monitoring Wells for 2023 10
2.0 Site Conditions 11
2.1 Site Topography 11
2.2 Surface Water 11
2.3 Geology 11
2.4 Hydrogeology 12
3.0 Groundwater Monitoring Programs 13
3.1 Facility-wide Groundwater Monitoring Program 13
3.2 Monitored Natural Attenuation Program 14
4.0 Facility-wide Groundwater Monitoring Program Revisions 15
4.1 Modifications to Monitoring Locations 15
4.2 Modifications to Monitoring Frequency 15
4.3 Modifications to Target Analytes 15
4.3.1 Data Set Compilation 15
4.3.2 Data Evaluation 15
4.3.3 Miscellaneous Data Additions and Removals 16
5.0 Monitored Natural Attenuation Program Revisions 17
5.1 Modifications to Monitoring Locations 17
5.2 Modifications to Monitoring Frequency 17
5.3 Modifications to Target Analytes 17
6.0 References 18
Figures .....
Tables .....
Appendix A – Historical Overview .....

Appendix B – Investigation Methods .....
Appendix B-1 – Groundwater Sampling Methods .....
Appendix B-2 – Per- and Polyfluoroalkyl Substances Sampling Standard Operating Procedures.....
Appendix B-1 – Groundwater Sampling Methods .....
Appendix B-2 – Per- and Polyfluoroalkyl Substances Sampling Standard Operating Procedures.....
Appendix C – 2022 Analyte Evaluation .....

List of Figures

1-1. Site Location and Topographic Map, Western Refining Southwest LLC, D/B/A Marathon Gallup Refinery, Gallup, New Mexico

1-2. Facility and Well Groups 2023, Western Refining Southwest LLC, D/B/A Marathon Gallup Refinery, Gallup, New Mexico

2-1. Stormwater Catch Basins, Western Refining Southwest LLC, D/B/A Marathon Gallup Refinery, Gallup, New Mexico

3-1. MNA Well Network, Western Refining Southwest LLC, D/B/A Marathon Gallup Refinery, Gallup, New Mexico

List of Tables

3-1. MNA Groundwater Analytical List, Western Refining Southwest LLC, D/B/A Marathon Gallup Refinery, Gallup, New Mexico

4-1. 2023 Groundwater Monitoring Network and Sampling Frequency, Western Refining Southwest LLC, D/B/A Marathon Gallup Refinery, Gallup, New Mexico

4-2. 2023 Groundwater Monitoring Analyte List, Western Refining Southwest LLC, D/B/A Marathon Gallup Refinery, Gallup, New Mexico

List of Appendices

A. HISTORICAL OVERVIEW

B. INVESTIGATION METHODS

B-1. GROUNDWATER SAMPLING METHODS

B-2. PER- AND POLYFLUOROALKYL SUBSTANCES SAMPLING STANDARD OPERATING PROCEDURE

C. 2023 ANALYTE EVALUATION

List of Acronyms

%	percent
amsl	above mean sea level
COC	constituents of concern
CVOC	chlorinated volatile organic compound
EP	evaporation pond
ft	feet/foot
ft/d	feet per day
I-40	Interstate 40
LTU	land treatment unit
MKTF	Marketing Tank Farm
MNA	Monitored Natural Attenuation
MTBE	methyl tert-butyl ether
NM	New Mexico
NMED	New Mexico Environment Department
OW	observation well
RCRA	Resource Conservation and Recovery Act
Refinery	Western Refining Southwest LLC, D/B/A Marathon Gallup Refinery
SPH	separate phase hydrocarbon
STP	sanitary treatment pond
SWMU	solid waste management unit
WWTP	wastewater treatment plant

1.0 Introduction

This 2023 Facility-Wide Groundwater Monitoring Work Plan (2023 Plan) has been prepared for the implementation of the facility-wide groundwater monitoring and monitored natural attenuation (MNA) groundwater programs at the Western Refining Southwest LLC, D/B/A Marathon Gallup Refinery (Refinery). This 2023 Plan is prepared in accordance with the Resource Conservation and Recovery Act (RCRA) Post-Closure Permit (NMED 2017). Figure 1-1 presents the Refinery location.

The Refinery annually evaluates the facility-wide monitoring program. Annual revisions to the work plan are presented to New Mexico Environment Department (NMED) for review. These revisions may include, but are not limited to, a reduction or change in monitoring locations, monitoring frequency, and/or target constituents of concern (COC) to be analyzed. Because the 2022 Facility-Wide Groundwater Monitoring Work Plan (2022 Plan) was not approved before sampling began in 2022, NMED requests presented in "Approval with Modifications, 2022 Facility Wide Groundwater Monitoring Work Plan" (NMED 2022) are incorporated into the 2023 Plan, when applicable. General information regarding the facility-wide monitoring program is presented in Section 3.1. The revisions proposed for the 2023 Plan are discussed in Section 4.0.

The MNA groundwater evaluation was initiated in 2020 and a work plan developed in 2021. The MNA work plan was approved by NMED via email on May 5, 2022. Per Comment 11 in the "Second Disapproval, [Revised] Facility Wide Groundwater Monitoring Work Plan – Updates for 2021" (NMED 2021c), the Refinery is including a discussion of the MNA groundwater program in the 2023 Plan. Information regarding the MNA program is provided in Section 3.2. Any future changes to the MNA work plan will be addressed in future Facility-Wide Groundwater Monitoring Work Plans.

1.1 Refinery Information

Built in the 1950s, the Refinery is located within a rural and sparsely populated area east of Gallup, New Mexico (NM). The nearest population centers are the Pilot Flying J Travel Center refueling plaza, the Interstate 40 (I-40) corridor, and a small cluster of residential homes located on the south side of I-40 approximately 2 miles southwest of the Refinery (Jamestown).

The Refinery is indefinitely idled as of October 9, 2020. During operation, the Refinery was a crude oil refining and petroleum products manufacturing facility. There were no organic chemicals, plastics, or synthetic fibers manufactured that contributed to the process flow of wastewater. The Refinery did not manufacturer lubricating oils. As a result of the processing steps, the Refinery produced a wide range of petroleum products including propane, butane, unleaded gasoline, diesel, residual fuel, and commercial products of fertilizer and solid elemental sulfur.

Historically, the Refinery primarily received crude oil via two 6-inch diameter pipelines, which entered the Refinery property from the north (Four Corners Area). In addition, the Refinery also received natural gasoline feedstock via a 4-inch diameter pipeline that came in from the west along the I-40 corridor from the Western Refining Southwest LLC – Wingate Plant, which is also indefinitely idled. Crude oil and

other products also arrived at the Refinery via railroad cars. These feed stocks were then stored in tanks until refined into products.

Additional background information on regulatory status, historical operations, and environmental investigations and assessments are provided in Appendix A.

1.2 Monitoring Groups

This 2023 Plan divides the Refinery into nine geographic groups for periodic monitoring. The groups were chosen to reflect site conditions and better track dissolved constituents and separate phase hydrocarbon (SPH) within the footprint of the Refinery. The groups are presented on Figure 1-2 and described below:

1. The **Eastern Boundary Wells** group includes observation wells (OWs) located on the northeast section of the plant and recovery wells from which small quantities of free product have been removed.
2. The **Tank Farm Wells** group includes monitoring wells within the tank farm north of the process area.
3. The **Marketing Tank Farm (MKTF) Wells** group includes monitoring wells installed to delineate a hydrocarbon plume associated with a seep discovered west of the crude tank (Tank 101).
4. The **Solid Waste Management Unit (SWMU) 1 Wells** group consists of a cluster of monitoring wells and leak detection units for the New American Petroleum Institute Separator at the aeration basin, the wastewater treatment plant (WWTP), and the sanitary treatment pond (STP). The SWMU 1 wells and WWTP wells were combined due to the proximity of the two areas (NMED 2021d).
5. The **Land Treatment Unit (LTU) Wells** group includes the monitoring wells surrounding the RCRA-permitted LTU.
6. The **Evaporation Ponds (EPs)** group includes surface sampling locations for the EPs and for the effluent from the STP.
7. The **Western Boundary Wells** group consists of the nested wells situated along the northwest and west side of the Refinery.
8. The **Deep Wells** group include five OWs. Three OWs are located in the south-southwest section of the Refinery property and two are located north of the tank farm.
9. The **Production Wells** include PW-2, PW-3, and PW-4; the wells are located south of, west of, and within the MKTF area, respectively. The Production Wells were segregated from the Deep Wells in the 2022 Plan as requested by NMED to better reflect the screened intervals of the Production Wells (NMED 2021d).

Designated wells and sample points are monitored on a quarterly, semiannual, and/or annual basis following the procedures presented in this 2023 Plan, as described in Section 4.0 and Appendix B.

1.3 New Monitoring Wells for 2023

No new permanent monitoring wells were installed during 2022. Therefore, no new monitoring wells will be added to the 2023 sampling list.

2.0 Site Conditions

The Refinery is located within a rural and sparsely populated section of McKinley County, NM. It is situated in the high desert plain on the western flank of the Continental Divide approximately 17 miles east of Gallup, NM (Figure 1-1). The surrounding land is comprised primarily of public and private lands used for cattle and sheep grazing.

2.1 Site Topography

Local topography consists of a gradually inclined down-slope from high ground in the southeast to a lowland fluvial plain in the northwest. The highest point on Refinery property is located at the southeast corner boundary (elevation approximately 7,040 feet [ft] above mean sea level [amsl]) and the lowest point is located at the northwest corner boundary (elevation approximately 6,860 ft amsl). Surface soils within most of the area of investigation are primarily Rehobeth silty clay loam. The Refinery is located on a flat man-made terrace.

2.2 Surface Water

Surface water in the Refinery consists of the man-made EPs and aeration basins (Figure 2-1). There are several storm water conveyance ditches located throughout the Refinery. These ditches are discharged into contained basins where storm water is collected and allowed to evaporate or discharged into two designated outfalls. The outfalls are located on the east and west section of the property, identified as Outfall 001 and Outfall 002. Outfall 001 is located directly south of EP-8 on the western edge of the Refinery's property boundary and Outfall 002 is located north of the railroad loading rack on the eastern section of the Refinery.

Directly west of the crude tank area, there is a concrete barrier with a control valve that discharges from a culvert, which carries storm water flow from the Truck Loading Rack area. The control valve is kept closed. This concrete barrier is located downstream of the "hydrocarbon seep area." The flow from this concrete barrier continues in a north-northwest direction alongside the southern bermed areas of EP-3, EP-4, EP-5, and EP-6 and towards the Outfall 001 area. At the WWTP, there are three storm drains located on the south, southwest, and west side. These drains are connected to an underground storm culvert that exits on the northwest section of STP-1 into a conveyance ditch along the northern edge of EP-2 and into a holding pond equipped with manual flow valves, located north of EP-3. The valves are normally closed but would be opened if the water in the holding pond becomes high. The discharge from this holding pond then flows north-northwest towards the Outfall 001 area.

2.3 Geology

Site boring logs indicate that subsurface fluvial and alluvial soils are primarily comprised of clays and silts with discontinuous inter-bedded sand layers. Very low permeability bedrock (e.g., claystones and siltstones) underlie the surface soils. The Chinle Group, from the Upper Triassic period, crops out over a

large area south of the Refinery. The uppermost subunit within the Chinle Group is the Petrified Forest Formation, which is also sometimes referred to as the Petrified Forest Member. Inter-bedded within the Chinle Group is the Sonsela Sandstone bed, which lies within and parallels the dip of the Chinle Group. Its high point is located southeast of the Refinery and slopes downward to the northwest as it passes under the Refinery. Due to the hydraulic confinement of the Petrified Forest Formation aquitard, the Sonsela Sandstone bed acts as a water-bearing reservoir and is artesian at its lower extremis. Artesian conditions exist through much of the central and western portions of the Refinery.

2.4 Hydrogeology

Groundwater flow within the shallow alluvium and the upper Chinle Formation is highly variable due to the presence of complex and irregular stratigraphy including sand stringers, cobble beds, and dense clay layers. Hydraulic conductivity ranges from 30 ft per day (ft/d) for gravel-like sands immediately overlying the Petrified Forest Formation to 3×10^{-5} ft/d in the clay soils located near the surface. Groundwater flow within the Lower Chinle Formation is extremely slow and typically averages less than 2.83×10^{-7} ft/d (i.e., less than 0.01 ft per year).

Water level data are collected routinely at the Refinery. Wells at the Refinery have been categorized based on the hydrogeologic unit in which they are screened, including the alluvial/fluvial upper sand aquifer, the Chinle/alluvium aquifer, and the Sonsela Sandstone aquifer. The alluvial/fluvial upper sand aquifer has a limited aerial extent, existing only on the western margin on the Refinery. Groundwater occurrence in this aquifer is sporadic and limited (Appendix B, Figure 1).

The majority of the wells monitored lie within the shallow weathered sediments that comprise the Chinle/alluvium aquifer. Within the Chinle/alluvium aquifer, shallow groundwater located under the Refinery property generally flows along the upper contact of the Chinle Formation. The prevailing flow is from the southeast to the northwest, although localized areas may have varying flow directions based on the subsurface geology (Appendix B, Figure 2).

Groundwater within the Sonsela flows southeast to northwest (Appendix B, Figure 3). Hydraulic heads measured within the Sonsela are generally lower than those observed within the shallow aquifer near the topographic high on which the Refinery process area and tank farm are situated, and higher than those observed within the shallow aquifer in topographically low areas to the west and northwest, near the evaporation ponds. The higher head in the Sonsela in low areas is due to confining pressure from lower permeability Chinle Formation bedrock between the shallow Chinle/Alluvium aquifer and the Sonsela Sandstone bed at depth, which makes the Sonsela Sandstone aquifer artesian.

3.0 Groundwater Monitoring Programs

Groundwater monitoring at the Refinery is conducted pursuant to the RCRA Post-Closure Permit (NMED 2017) and in accordance with this 2023 Plan. There are two objectives of the groundwater monitoring program at the Refinery: (1) monitor facility-wide groundwater conditions and submit the information in a facility-wide annual groundwater report (due annually to NMED by April 1), and (2) provide information on MNA occurring in the MKTF wells in the hydrocarbon seep area. MNA data are submitted in an annual MNA report. Both programs are discussed below.

3.1 Facility-wide Groundwater Monitoring Program

The facility-wide program will consist of fluid level measurements, and groundwater sample collection and analysis from a series of monitoring wells, recovery wells, outfalls, and EP locations. The monitoring network is divided into nine groups (Section 1.2 and Figure 1-2). The sampling frequency varies by individual well. The analytes are consistent across the nine monitoring groups. Section 4.0 presents the 2023 sampling locations and analyte list.

Appendix B presents the procedures used for sample collection and analysis and includes the following activities:

- Well gauging (i.e., depth to groundwater, depth to SPH [if present], and depth to the bottom of the well)
- Well purging and sampling, including equipment, groundwater stabilization criteria, and collection of field quality parameters
- Sample handling and waste management procedures
- Field and laboratory quality assurance procedures

Groundwater samples will not be collected from monitoring wells that have measurable SPH of 0.01 ft thickness or greater. If a SPH recovery system is present in a well, recovery system operation will be halted to allow groundwater to equilibrate, and the fluid level will be measured. If the well does not have measurable SPH, the recovery system will be removed from the well, and the well will be purged and sampled. For wells that are purged dry, samples will be collected if recharge volume is sufficient for sample collection within 24 hours. Wells not sampled due to insufficient recharge will be documented in the field log. If samples cannot be collected from a location due to safety concerns, such as elevated hydrogen sulfide, arrangements will be made to collect samples from the affected location at a different time by changing the scheduled sampling dates.

Data from the facility-wide groundwater will be presented in an annual report in accordance with the RCRA Post Closure Permit (NMED 2017) Parts IV.C.3 and IV.L.4. The report will include:

- Scope of activities, including deviations from the 2023 Plan
- Field monitoring results
- Analytical data results, including comparison to applicable regulatory standards
- Remediation system monitoring
- Summary
- Tables, figures, and appendices will be provided as appropriate

As requested by NMED (MPC 2021, Comment 3), the October 17, 2019, gauging data for Well OW-58A (Figure 1-2) will not be included in future reports.

3.2 Monitored Natural Attenuation Program

MNA groundwater monitoring will be conducted on an annual basis (Western 2021b) for the select MKTF monitoring wells:

- MKTF-02R
- MKTF-04R
- MKTF-09
- MKTF-10
- MKTF-13
- MKTF-16
- MKTF-17R
- MKTF-19
- MKTF-20
- MKTF-21
- MKTF-22
- MKTF-24
- MKTF-25

The MNA well locations are highlighted in blue on Figure 3-1. The sampling will be conducted concurrently with the third quarter facility-wide monitoring event, following the practices presented in Section 3.1 and Appendix B. Samples will be analyzed for the constituents presented in Table 3-1 and evaluated for evidence of chlorinated volatile organic compounds (CVOCs) MNA and the methyl tert-butyl ether (MTBE) MNA.

The MNA evaluation for 2021 was presented in the "2021 Annual Monitored Natural Attenuation Report" (Western 2022) and is pending NMED approval at the time of this 2023 Plan. MNA reporting is completed in accordance with the "Response to Approval with Modifications" (Western 2021b). The 2023 MNA report will include:

- A summary of the MNA analytical data.
- An update to the United States Environmental Protection Agency quantitative spreadsheet scoring the MNA potential.
- A statistical trend analysis for CVOCs and MTBE.
- A discussion section summarizing natural attenuation progress, including trends in contaminant concentrations and key MNA indicators.
- Tables, figures, and appendices will be provided as appropriate.

4.0 Facility-wide Groundwater Monitoring Program Revisions

Prior to preparing the 2022 Plan, NMED and the Refinery conducted a meeting on December 3, 2021, to discuss work plan and report presentation. Follow-up communications regarding the 2022 analyte list were conducted via email from January 5, 2022, through January 20, 2022, (Personal Communication 2022) and were incorporated into the 2022 Plan. The proposed modifications and the rationale are presented in the following sections.

4.1 Modifications to Monitoring Locations

The monitoring locations are presented in Table 4-1 and shown on Figure 1-2. No modifications to monitoring locations are proposed for 2023.

4.2 Modifications to Monitoring Frequency

The monitoring frequency was evaluated based on the 2022 sampling events and analytical data. No monitoring frequency changes are proposed for the 2023 Plan. Table 4-1 presents the 2023 frequency for the monitoring groups.

4.3 Modifications to Target Analytes

The 2023 facility-wide analyte list will be used for all wells in the groundwater monitoring program, unless noted in Section 4.3.3. The data will be used to evaluate the groundwater on a facility-wide basis. The 2023 analyte list is presented in Table 4-2. A discussion of the 2023 analyte list preparation is presented below.

4.3.1 Data Set Compilation

Available data collected between 2012 and third quarter 2022, regardless of location or group, were tabulated (Appendix C-1) and divided into five categories: volatile organic compounds, semi-volatile organic compounds, total and dissolved metals, general chemistry, and per- and polyfluoroalkyl substance. The total number of samples collected for each constituent was compared to the total number of detections and a detection percentage was calculated (Appendix C-2). Total number of detections in the last five annual events (September 2018 through September 2022), lowest detection, highest detection, and total number of non-detects were also noted.

4.3.2 Data Evaluation

The data in Appendix C-2 was first evaluated for inclusion in the Region 5 Waste Management Branch "Modified 'Skinner List' for Constituents of Concern for Wastes from Petroleum Processes" (USEPA 1997). The 1997 Skinner List is provided in Appendix C-3.

- Constituents not included in the Skinner List were removed unless:
    - The analytes were considered to be a facility-wide COC based on a frequency of detection greater than 10 percent (%). The analyte was removed if the detection frequency was less than 10%.
    - The analytes were considered to be a facility-wide COC based exceeding the applicable clean-up level within the last five annual events (third quarter 2018 to third quarter 2022), regardless of detection frequency.
- Constituents included in the Skinner List were removed if:
    - The constituent was not detected at least once in the last five annual events (September 2018 to September 2022), regardless of detection frequency

All data provided by analyses where the limit of detection values exceed the cleanup levels are considered data quality exceptions and will not be used to demonstrate compliance. Furthermore, all data quality exceptions are identified in the tables where data are presented and will continue in all future submittals.

4.3.3 Miscellaneous Data Additions and Removals

Analytes can be added to or deleted from the sampling list through annual data evaluation or as requested by NMED. The following change has been applied for the 2023 sampling events, as appropriate:

- Benzo(b)fluoranthene, an optional Skinner List constituent, has been removed because it has not been detected once in the last five sampling years (September 2018 to September 2022)
- Pentafluorobenzene has been removed because it is a laboratory internal standard for United States Environmental Protection Agency Method 8260 and is added to all samples analyzed using Method 8260. Therefore, the results are not indicative of field conditions and are a standard lab practice.

As noted in the 2022 Plan, dissolved metals are only sampled in even years. Table 4-2 is revised to include sampling for only total metals in 2023.

5.0 Monitored Natural Attenuation Program Revisions

Discussions between NMED and the Refinery are incorporated into this 2023 Plan. The proposed modifications and the rationale are presented in the following sections.

5.1 Modifications to Monitoring Locations

The MNA monitoring locations are shown on Figure 3-1. No modifications to monitoring locations are proposed for the MNA program in 2023.

5.2 Modifications to Monitoring Frequency

No modifications to the monitoring frequency are proposed for the MNA program in 2023.

5.3 Modifications to Target Analytes

No modifications to the target analytes are proposed for the MNA program in 2023.

Analytes specific to the MNA program are presented in Table 3-1. Field parameters (conductance, dissolved oxygen, oxidation reduction potential, pH, salinity, temperature, and total dissolved solids) were not included in the evaluation. Field parameters will continue to be measured in all wells.

6.0 References

Marathon Petroleum Company (MPC). 2020. Natural Attenuation Assessment and Proposed Workplan for the Hydrocarbon Seep Area, Marathon Petroleum Company, LP, Gallup Refinery (dba Western Refining Southwest, Inc.), EPA ID #NMD000333211. December 15.

MPC. 2021. Marathon Petroleum Company LP, Annual Groundwater Monitoring Report, Gallup Refinery – 2019. July 30.

New Mexico Environment Department (NMED). 2017. Western Refining Southwest, Inc. Gallup Refinery, EPA ID NM No. NM000333211, Final RCRA Post-closure Permit, October 2013. Modified September.

NMED. 2021a. Disapproval, Natural Attenuation Assessment and Proposed Work Plan for the Hydrocarbon Seep Area, French Drain Soil Investigation Work Plan, Western Refining Southwest LLC, Gallup Refinery, EPA ID #NMD000333211, HWB-WRG-20-023. January 26.

NMED. 2021b. Approval with Modifications, Response to Disapproval, Natural Attenuation Assessment and Proposed Work Plan for the Hydrocarbon Seep Area. September 28.

NMED. 2021c. Second Disapproval, [Revised] Facility Wide Groundwater Monitoring Work Plan – Updates for 2021, Western Refining Southwest LLC, Gallup Refinery, McKinley County, Gallup, New Mexico, EPA ID #NMD000333211, HWB-WRG-21-006. November 15.

NMED. 2021d. Direction, Proposed Groundwater Well Groupings Figure, Western Refining Southwest Inc., Gallup Refinery, EPA ID #NMD000333211, HWB-WRG-MISC. August 17.

NMED. 2022. Approval with Modifications, 2022 Facility Wide Groundwater Monitoring Work Plan, Western Refining Southwest LLC, Gallup Refinery, McKinley County, Gallup, New Mexico, EPA ID #NMD000333211, HWB-WRG-21-006. May 25.

Personal Communication. 2022. Marathon Gallup – 2022 Groundwater Work Plan Revised Analyte List. Email from Mr. Michiya Suzuki (NMED) to Ms. Lesli Alexander (Trihydro). January 5 through January 20.

United States Environmental Protection Agency (USEPA). 1997. Region 5 Waste Management Branch "Skinner List" Constituents of Concern for Waste from Petroleum Processes.

Western Refining Southwest LLC (Western). 2021a. Response to Disapproval, Natural Attenuation Assessment and Proposed Work Plan for the Hydrocarbon Seep Area, French Drain Soil Investigation Work Plan, Western Refining Southwest LLC, Gallup Refinery, EPA ID #NMD000333211, HWB-WRG-20-023. August 27.

Western. 2021b. Response to Approval with Modifications, Natural Attenuation Assessment and Proposed Work Plan for the Hydrocarbon Seep Area, Western Refining Southwest LLC, Gallup Refinery, EPA ID #NMD000333211, HWB-WRG-20-023. December 17.

Western. 2022. 2021 Annual Monitored Natural Attenuation Report, Western Refining Southwest LLC, D/B/A Marathon Gallup Refinery, EPA ID #NMD000333211. December 19.

Figures

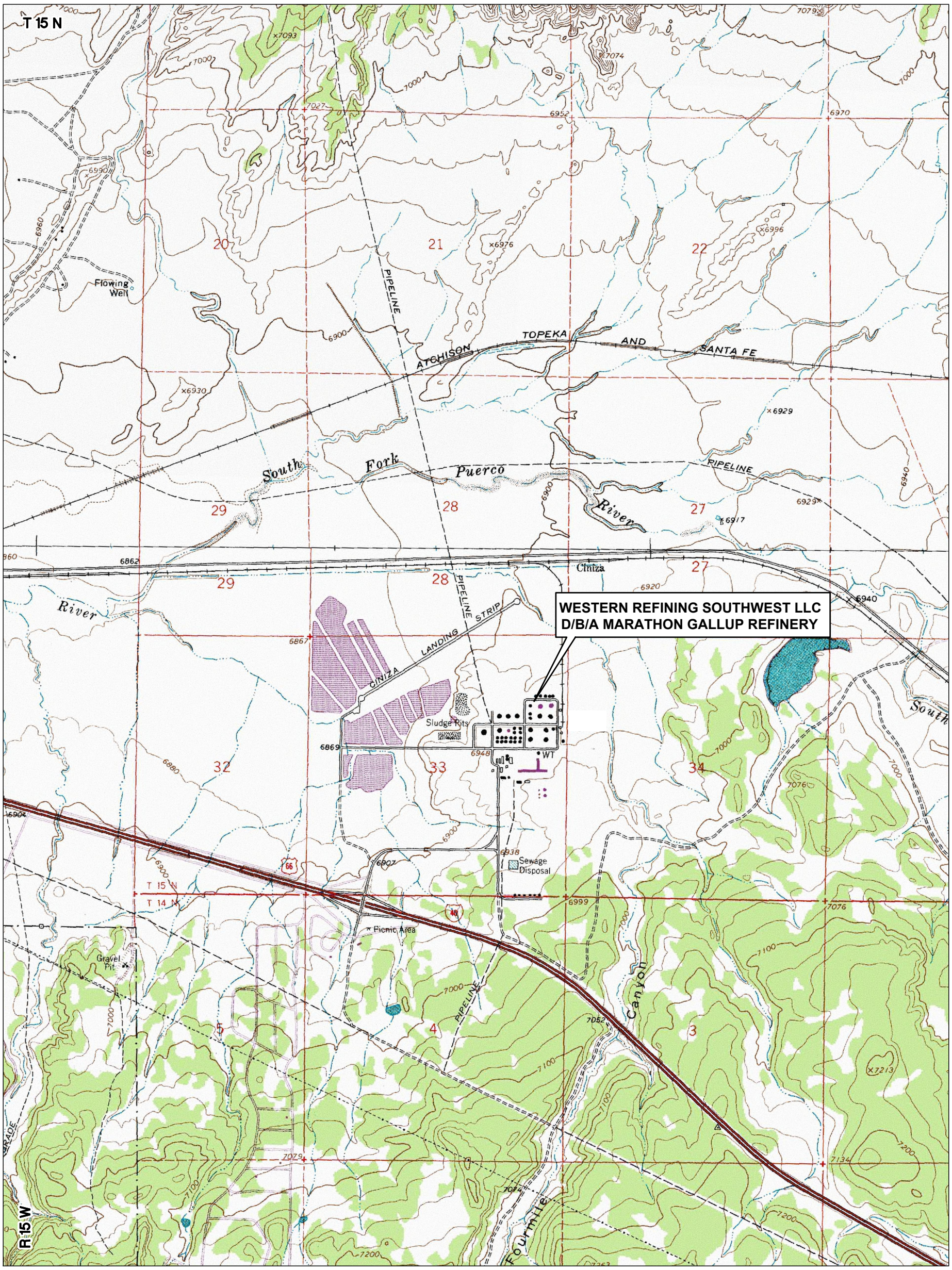
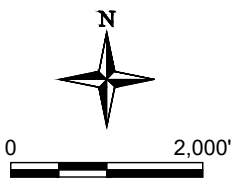


Image Cite: U.S. Geological Survey, 1:24,000–Scale 7.5 Minute Digital Raster Graphic Quadrangle, McKinley County, Publication: 2004

NOTE:

SITE LEGAL DESCRIPTION - TOWNSHIP 15 NORTH, RANGE 15 WEST, SECTION 33, LOWER QUARTER SECTION 28, AND NORTHEAST QUARTER SECTION 4.

QUADRANGLE LOCATION



Trihydro CORPORATION
1252 Commerce Drive
Laramie, Wyoming 82070
www.trihydro.com
(P) 307/745.7474 (F) 307/745.7729

FIGURE 1-1

SITE LOCATION AND TOPOGRAPHIC MAP

WESTERN REFINING SOUTHWEST LLC
D/B/A MARATHON GALLUP REFINERY
GALLUP, NEW MEXICO

Drawn By: REP	Checked By: BN	Scale: 1" = 2,000'	Date: 1/6/2023	File: 697-GWWP-SITELAYTOPO-2023

\\TRIHYDRO.COM\CLIENTS\ITON\MARATHON\CADD\GALLUP_REPORTS\GW\WORKPLANS\20221 2_2023GWWP\697-GWWP-SITELAYTOPO-2023

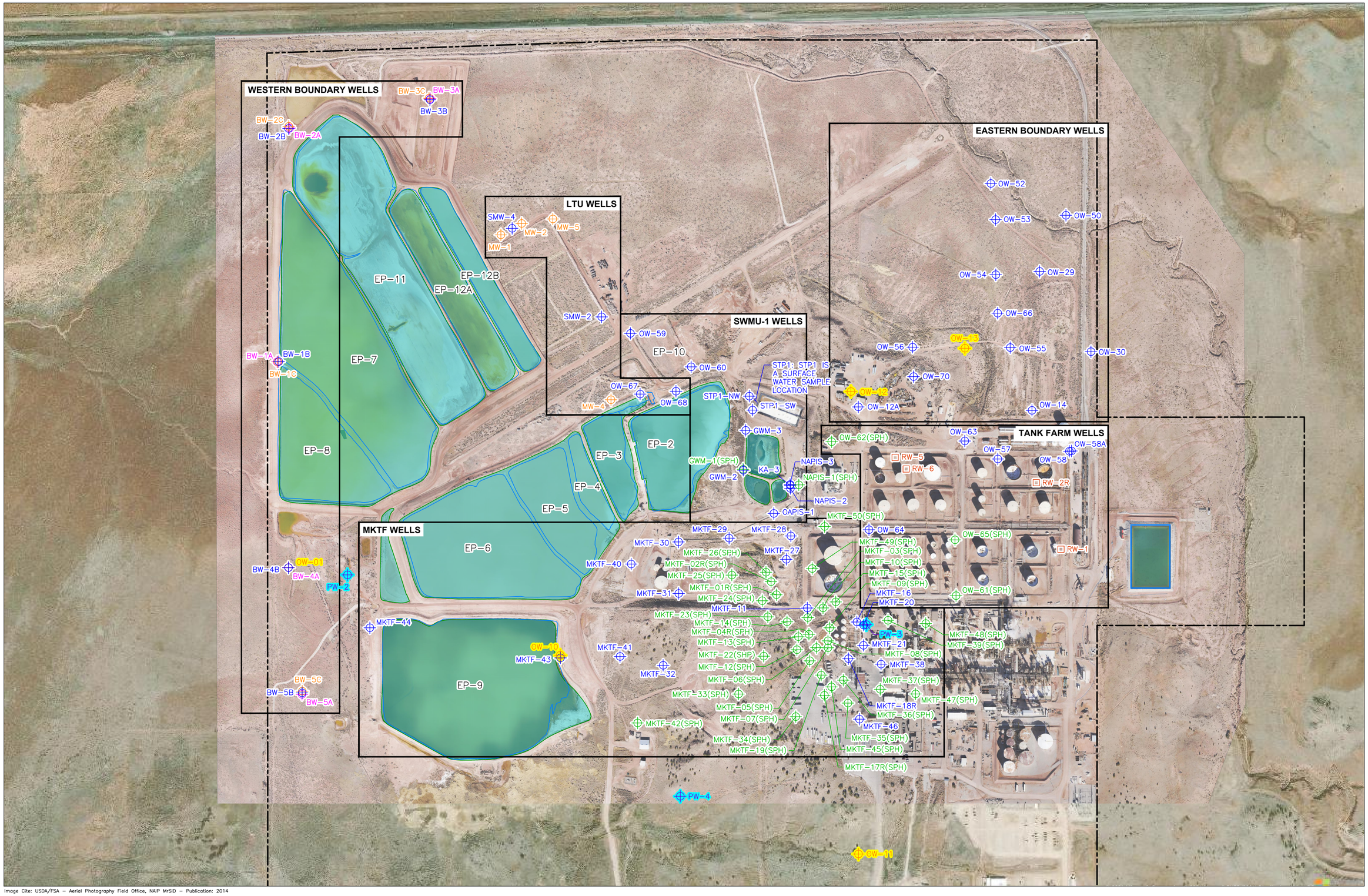


Image Cite: USDA/FSA – Aerial Photography Field Office, NAIP MrSID – Publication: 2014

EXPLANATION

OW-10	SONSELA WELL AND DESIGNATION
OW-11	CHINLE/ALLUVIUM INTERFACE WELL AND DESIGNATION
SMW-2	ALLUVIAL/FLUVIAL UPPER SAND WELL AND DESIGNATION
MKTF-42(SPH)	SPH MONITORING WELL AND DESIGNATION
PW-4	RAW WATER PRODUCTION WELL AND DESIGNATION
RW-6	RECOVERY WELL AND DESIGNATION

	DEEP WELL GROUP
	PRODUCTION WELL GROUP
	WELL GROUP
	SURFACE WATER
EP	EVAPORATION POND
LTU	LAND TREATMENT UNIT
MKTF	MARKETING TANK FARM

SPH	SEPARATE-PHASE HYDROCARBON (DETECTED IN 2022)
STP	SANITARY TREATMENT POND
SWMU	SOLID WASTE MANAGEMENT UNIT
WWT	WASTE WATER TREATMENT

N

0 400' 800'

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FIGURE 1-2

FACILITY AND WELL GROUPS 2023

WESTERN REFINING SOUTHWEST LLC D/B/A MARATHON GALLUP REFINERY GALLUP, NEW MEXICO

Drawn By: REP	Checked By: BN	Scale: 1" = 400'	Date: 1/6/23	File: 697-GWWP-FACWELLGROUPS-2022

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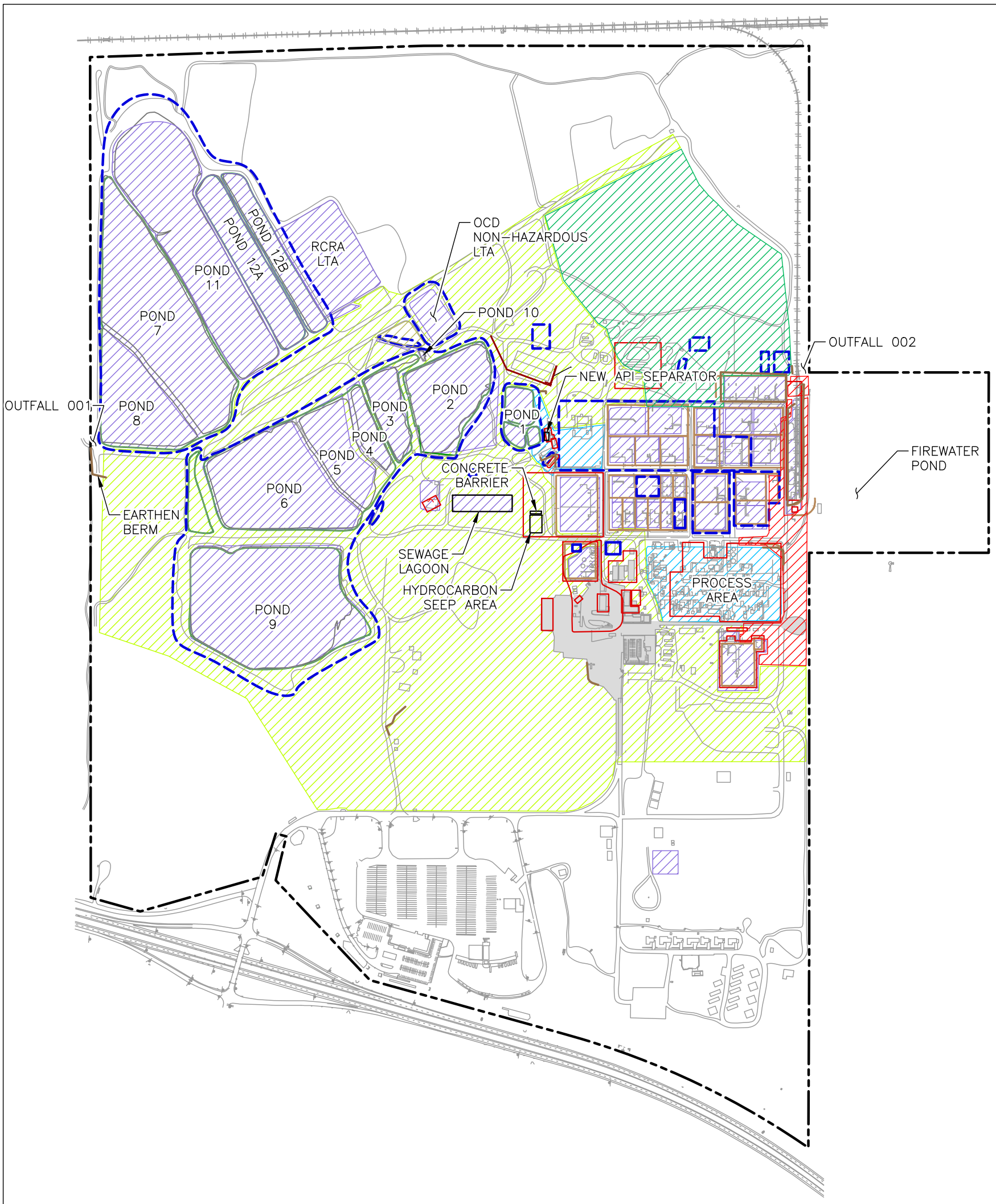

EXPLANATION

- PROPERTY BOUNDARY (APPROXIMATE)
- SOLID WASTE MANAGEMENT UNIT (SWMU)
- AREA OF CONCERN (AOC)
- EARTHEN BERM
- CONTAINED/BERMED AREA, NO STORMWATER RUN OFF DISCHARGED TO ANOTHER POINT
- AREA CONTRIBUTING FLOW TO OUTFALL 2
- DRAINS TO GRASSY AREA, DOES NOT LEAVE SITE
- NEW STORMWATER COLLECTION BASIN
- AREA CONTRIBUTING FLOW TO OUTFALL 1
- PROCESS AREA, STORMWATER DRAINS TO POND 1
- IMPERVIOUS SURFACE

API	AMERICAN PETROLEUM INSTITUTE
LTA	LAND TREATMENT AREA
OCD	OIL CONSERVATION DIVISION
RCRA	RESOURCE CONSERVATION AND RECOVERY ACT

NOTE:

IMPERVIOUS AREAS ARE IDENTIFIED FOR DISCHARGING AREAS ONLY. IMPERVIOUS SURFACES WITHIN AREAS WHERE STORMWATER DOES NOT DISCHARGE HAVE NOT BEEN IDENTIFIED, CONSIDERING THESE AREAS DO NOT PRODUCE REGULATED STORMWATER DISCHARGES.

N

0 800'

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FIGURE 2-1

STORMWATER CATCH BASINS

**WESTERN REFINING SOUTHWEST LLC
D/B/A MARATHON GALLUP REFINERY
GALLUP, NEW MEXICO**

Drawn By: REP	Checked By: BN	Scale: 1" = 800'	Date: 1/6/23	File: 697-GWWP-STRMCTCHBASIN-2022

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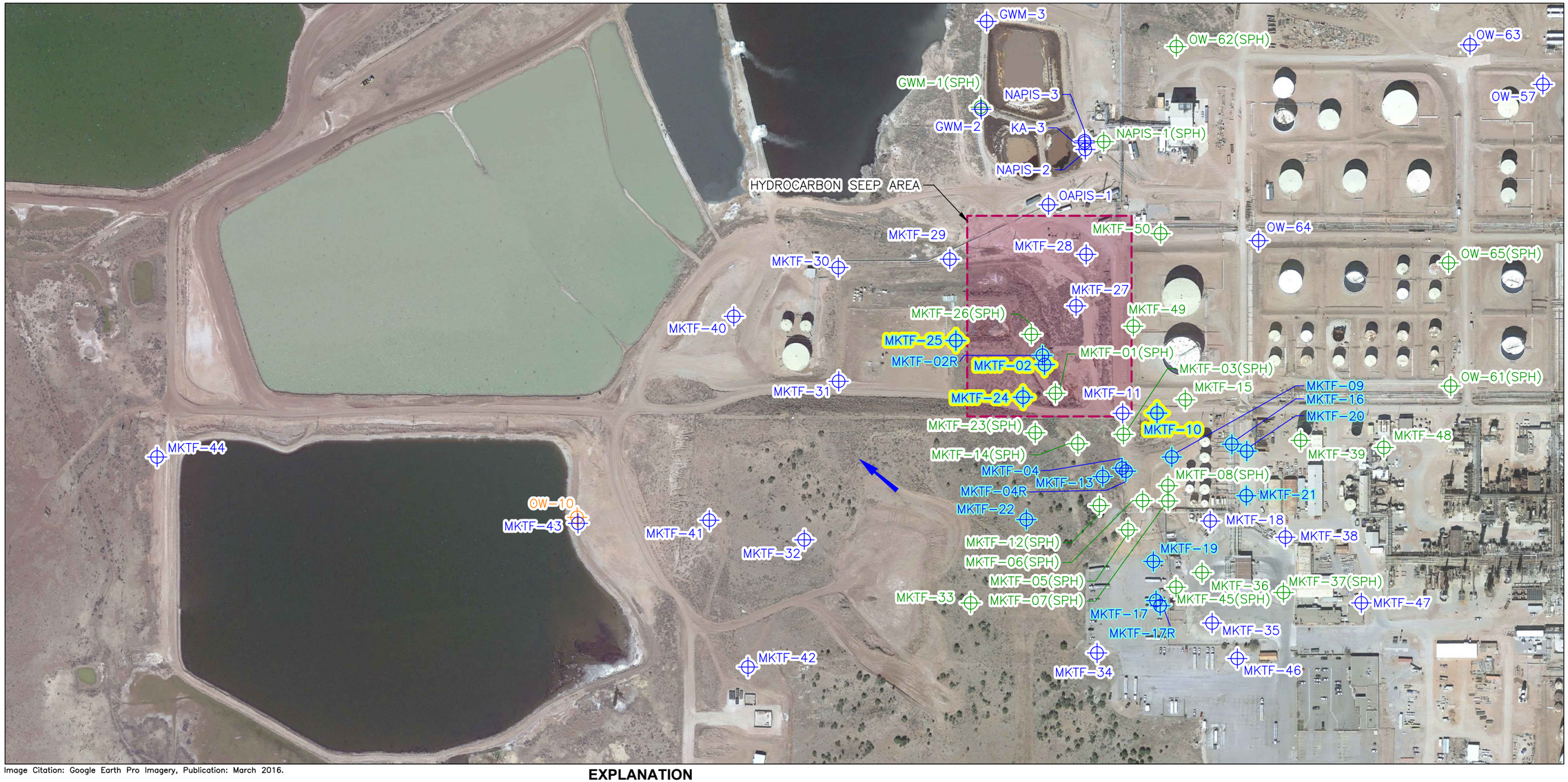

Image Citation: Google Earth Pro Imagery, Publication: March 2016.

EXPLANATION

OW-10	SONSELA WELL AND DESIGNATION
MKTF-42	CHINLE/ALLUVIUM INTERFACE WELL AND DESIGNATION
MKTF-45	SPH MONITORING WELL AND DESIGNATION
MKTF-17	MKTF MNA WELL
MKTF-10	MONITORING WELL WITH CONSISTENT DETECTION OF VINYL CHLORIDE
	GENERAL GROUNDWATER FLOW DIRECTION
	HYDROCARBON SEEP AREA

MKTF	MARKETING TANK FARM
MNA	MONITORED NATURAL ATTENUATION
SPH	SEPARATE PHASE HYDROCARBON (DETECTED DURING THIRD QUARTER 2022 SAMPLING EVENT)

NEW MEXICO

QUADRANGLE LOCATION

NOTE:

SITE LEGAL DESCRIPTION - TOWNSHIP 15 NORTH, RANGE 15 WEST, SECTION 33

N

0 300'

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FIGURE 3-1

MNA WELL NETWORK

WESTERN REFINING SOUTHWEST LLC D/B/A MARATHON GALLUP REFINERY GALLUP, NEW MEXICO

Drawn By: REP	Checked By: BN	Scale: 1" = 300'	Date: 1/6/23	File: 697-GWWP-SITEMNA-2023

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Tables

TABLE 3-1. MNA GROUNDWATER ANALYTICAL LIST
WESTERN REFINING SOUTHWEST LLC, D/B/A/ MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

Analyte	Method of Analysis	Significance for MNA	Analyte Used in CVOC or MTBE Evaluation	Utility for MNA Analyses
BTEX	Laboratory	Source of organics for reducing conditions	CVOC, MTBE	Monitor trends
MTBE	Laboratory	Decreasing trends indicate natural attenuation	MTBE	Monitor trends
TBA	Laboratory	Decreasing trends indicate natural attenuation	MTBE	Monitor trends, degradation product of MTBE
PCE	Laboratory	Decreasing trends indicate natural attenuation	CVOC	Monitor trends
TCE	Laboratory	Decreasing trends indicate natural attenuation	CVOC	Monitor trends, degradation product of PCE
cis-1,2-DCE	Laboratory	Decreasing trends indicate natural attenuation	CVOC	Monitor trends, degradation product of TCE
1,1-DCE	Laboratory	Decreasing trends indicate natural attenuation	CVOC	Monitor trends, degradation product of TCE
1,1-DCA	Laboratory	Decreasing trends indicate natural attenuation	CVOC	Monitor trends
1,2-DCA	Laboratory	Decreasing trends indicate natural attenuation	CVOC	Monitor trends
Vinyl chloride	Laboratory	Decreasing trends indicate natural attenuation	CVOC	Monitor trends, degradation product of cis-1,2-DCE and 1,1-DCE
Ethene [1]	Laboratory	Decreasing trends indicate natural attenuation	CVOC	Monitor trends, degradation product of vinyl chloride
Ethane [1]	Laboratory	Decreasing trends indicate natural attenuation	CVOC	Monitor trends, degradation product of vinyl chloride
Methane [1]	Laboratory	Decreasing trends indicate natural attenuation	CVOC, MTBE	Monitor trends, indicator for CVOC and MTBE degradation
Chloride	Laboratory	End product of 1,1-DCA and 1,2-DCA degradation	CVOC	Monitor trends, but dissolved salts may mask trends
Nitrate	Laboratory	Potential electron receptor for biodegradation	CVOC, MTBE	Presence indicates potential for biodegradation
Nitrite	Laboratory	Form of nitrate reduced by biodegradation	CVOC, MTBE	Presence indicates possible biodegradation
Sulfate/sulfide	Laboratory	Potential electron receptor for biodegradation	CVOC, MTBE	Monitor trends
Iron (ferric/ferrous)	Laboratory	Potential electron receptor for biodegradation	CVOC, MTBE	Monitor trends
Manganese (total/dissolved)	Laboratory	Potential electron receptor for biodegradation	CVOC, MTBE	Monitor trends
Temperature	Field	Rate of natural attenuation	CVOC, MTBE	Monitor trends
pH	Field	Neutral range 6-8 required for biodegradation	CVOC, MTBE	Monitor level and trends
DO	Field	Presence required for aerobic biodegradation	CVOC, MTBE	Monitor level and trends
ORP	Field	Indicates redox state for biodegradation	CVOC, MTBE	Monitor level and trends

BTEX - benzene, toluene, ethylbenzene, xylene
CVOC - chlorinated volatile organic compound
DCA - dichloroethane
DCE - dichloroethene
DO - dissolved oxygen
MNA - monitored natural attenuation
MTBE - methyl tert-butyl ether
ORP - oxidation reduction potential measured using an silver/silver chloride reference cell
PCE - tetrachloroethene
TCE - trichloroethene
TBA - tert-butyl alcohol

Note:
[1] Compound will be analyzed in monitoring wells MKTF-2, MKTF-10, MKTF-24, and MKTF-25 only.

TABLE 4-1. 2023 GROUNDWATER MONITORING NETWORK AND SAMPLING FREQUENCY
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

Well Network	Sample Frequency
Western Boundary	
BW-1A	Annual
BW-1B	Annual
BW-1C	Annual
BW-2A	Annual
BW-2B	Annual
BW-2C	Annual
BW-3A	Annual
BW-3B	Annual
BW-3C	Annual
BW-4A	Annual
BW-4B	Annual
BW-5A	Annual
BW-5B	Quarterly
BW-5C	Quarterly
Land Treatment Unit	
MW-1	Annual
MW-2	Annual
MW-4	Annual
MW-5	Annual
SMW-2	Annual
SMW-4	Annual
OW-67	Quarterly
OW-68	Quarterly
SWMU 1	
GWM-1	Quarterly
GWM-2	Quarterly
GWM-3	Quarterly
OW-59	Quarterly
OW-60	Quarterly
NAPIS-1	Quarterly
NAPIS-2	Quarterly
NAPIS-3	Quarterly
KA-3	Quarterly
OAPIS-1	Quarterly
STP1-NW	Quarterly
STP1-SW	Quarterly
East LDU	Quarterly
West LDU	Quarterly
Oil Sump LDU	Quarterly

TABLE 4-1. 2023 GROUNDWATER MONITORING NETWORK AND SAMPLING FREQUENCY
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

Well Network	Sample Frequency
Eastern Boundary	
OW-12A	Quarterly
OW-14	Quarterly, if no measurable SPH is detected
OW-29	Quarterly, if no measurable SPH is detected
OW-30	Quarterly, if no measurable SPH is detected
OW-50	Quarterly
OW-52	Quarterly
OW-53	Quarterly
OW-54	Quarterly
OW-55	Quarterly
OW-56	Quarterly
OW-66	Quarterly
OW-70	Quarterly
Tank Farm	
OW-57	Quarterly
OW-58	Quarterly
OW-58A	Quarterly
OW-61	Quarterly
OW-62	Quarterly
OW-63	Quarterly
OW-64	Quarterly
OW-65	Quarterly
RW-1	Quarterly, if no measurable SPH is detected
RW-2R	Quarterly, if no measurable SPH is detected
RW-5	Quarterly, if no measurable SPH is detected
RW-6	Quarterly, if no measurable SPH is detected
Production Wells	
PW-2	Annual[1]
PW-3	Quarterly
PW-4	Annual
Deep Wells	
OW-1	Quarterly
OW-10	Quarterly
OW-11	Annual
OW-12	Semiannual
OW-13	Quarterly, if no measurable SPH is detected

TABLE 4-1. 2023 GROUNDWATER MONITORING NETWORK AND SAMPLING FREQUENCY
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

Well Network	Sample Frequency
Marketing Tank Farm	
MKTF-01R	Quarterly
MKTF-02R	Quarterly; MNA Annually
MKTF-03	Quarterly
MKTF-04R	Quarterly; MNA Annually
MKTF-05	Quarterly
MKTF-06	Quarterly
MKTF-07	Quarterly
MKTF-08	Quarterly
MKTF-09	Quarterly; MNA Annually
MKTF-10	Quarterly; MNA Annually
MKTF-11	Quarterly
MKTF-12	Quarterly
MKTF-13	Quarterly; MNA Annually
MKTF-14	Quarterly
MKTF-15	Quarterly
MKTF-16	Quarterly; MNA Annually
MKTF-17R	Quarterly; MNA Annually
MKTF-18R	Quarterly
MKTF-19	Quarterly; MNA Annually
MKTF-20	Quarterly; MNA Annually
MKTF-21	Quarterly; MNA Annually
MKTF-22	Quarterly; MNA Annually
MKTF-23	Quarterly
MKTF-24	Quarterly; MNA Annually
MKTF-25	Quarterly; MNA Annually
MKTF-26	Quarterly
MKTF-27	Quarterly
MKTF-28	Quarterly
MKTF-29	Quarterly
MKTF-30	Quarterly
MKTF-31	Quarterly
MKTF-32	Quarterly
MKTF-33	Quarterly
MKTF-34	Quarterly
MKTF-35	Quarterly
MKTF-36	Quarterly
MKTF-37	Quarterly
MKTF-38	Quarterly
MKTF-39	Quarterly
MKTF-40	Quarterly
MKTF-41	Quarterly
MKTF-42	Quarterly
MKTF-43	Quarterly
MKTF-44	Quarterly

TABLE 4-1. 2023 GROUNDWATER MONITORING NETWORK AND SAMPLING FREQUENCY
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

Well Network	Sample Frequency
MKTF-45	Quarterly
MKTF-46	Quarterly
MKTF-47	Quarterly
MKTF-48	Quarterly
MKTF-49	Quarterly
MKTF-50	Quarterly
Evaporation Ponds	
EP-2	Semiannual
EP-3	Semiannual
EP-4	Semiannual
EP-5	Semiannual
EP-6	Semiannual
EP-7	Semiannual
EP-8	Semiannual
EP-9	Semiannual
EP-11	Semiannual
EP-12A	Semiannual
EP-12B	Semiannual
STP-1 to EP-2	Quarterly

MNA - Monitored Natural Attenuation
SPH - Separate phase hydrocarbon

Notes:
[1] Sampled in 3 year intervals; will sample in 2023; next event is 2026.

TABLE 4-2. 2023 GROUNDWATER MONITORING ANALYTE LIST
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

CONSTITUENT	COMMENTS
VOC	
1,1,1-Trichloroethane	Facility-wide analyte
1,1-Dichloroethane (1,1-DCA)	Facility-wide and MNA analyte[1]
1,1-Dichloroethene (1,1-DCE)	Facility-wide and MNA analyte
1,2,4-Trimethylbenzene	Facility-wide analyte
1,2-Dibromoethane (EDB)	Facility-wide analyte
1,2-Dichloroethane (1,2-DCA)	Facility-wide and MNA analyte
1,3,5-Trimethylbenzene	Facility-wide analyte
2-Butanone (MEK)	Facility-wide analyte
Acetone	Facility-wide analyte
Benzene	Facility-wide and MNA analyte
Bromomethane	Facility-wide analyte
Carbon Disulfide	Facility-wide analyte
Chlorobenzene	Facility-wide analyte
Chloroform	Facility-wide analyte
Chloromethane	Facility-wide analyte
cis-1,2-Dichloroethene (cis-1,2-DCE)	Facility-wide and MNA analyte
Ethylbenzene	Facility-wide and MNA analyte
Isopropyl benzene	Facility-wide analyte
Methylene Chloride	Facility-wide analyte
Methyl Tert-Butyl Ether (MTBE)	Facility-wide and MNA analyte
n-Butylbenzene	Facility-wide analyte
n-Propyl benzene	Facility-wide analyte
Pentafluorobenzene	Facility-wide analyte
p-Isopropyl toluene	Facility-wide analyte
sec-Butylbenzene	Facility-wide analyte
Styrene	Facility-wide analyte
Tetrachloroethene (PCE)	Facility-wide and MNA analyte
Toluene	Facility-wide and MNA analyte
Trichloroethene (TCE)	Facility-wide and MNA analyte
Vinyl Chloride	Facility-wide and MNA analyte
Xylenes, Total	Facility-wide and MNA analyte
SVOC	
1,4-Dichlorobenzene	Facility-wide analyte
1,4-Dioxane	Facility-wide analyte
1-Methylnaphthalene	Facility-wide analyte
2,4,6-Trichlorophenol	Facility-wide analyte
2,4-Dimethylphenol	Facility-wide analyte
2,4-Dinitrophenol	Facility-wide analyte
2-Methylnaphthalene	Facility-wide analyte
2-Methylphenol	Facility-wide analyte
3,4-Methylphenol	Facility-wide analyte
Acenaphthene	Facility-wide analyte

TABLE 4-2. 2023 GROUNDWATER MONITORING ANALYTE LIST
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

CONSTITUENT	COMMENTS
Anthracene	Facility-wide analyte
Benzo(a)anthracene	Facility-wide analyte
Benzoic Acid	Facility-wide analyte
Bis(2-ethylhexyl)phthalate	Facility-wide analyte
Chrysene	Facility-wide analyte
Diethyl phthalate	Facility-wide analyte
Dimethyl phthalate	Facility-wide analyte
Di-n-butyl phthalate	Facility-wide analyte
Di-n-octylphthalate	Facility-wide analyte
Fluoranthene	Facility-wide analyte
Fluorene	Facility-wide analyte
Indeno(1,2,3-cd)pyrene	Facility-wide analyte
Naphthalene	Facility-wide analyte
Phenanthrene	Facility-wide analyte
Phenol	Facility-wide analyte
Pyrene	Facility-wide analyte
Pyridine	Facility-wide analyte
METALS[2]	
Antimony, Total	Facility-wide analyte
Arsenic, Total	Facility-wide analyte
Barium, Total	Facility-wide analyte
Beryllium, Total	Facility-wide analyte
Cadmium, Total	Facility-wide analyte
Chromium, Total	Facility-wide analyte
Cobalt, Total	Facility-wide analyte
Lead, Total	Facility-wide analyte
Mercury, Total	Facility-wide analyte
Nickel, Total	Facility-wide analyte
Selenium, Total	Facility-wide analyte
Silver, Total	Facility-wide analyte
Vanadium, Total	Facility-wide analyte
Zinc, Total	Facility-wide analyte
GENERAL CHEMISTRY	
Biochemical Oxygen Demand	Evaporation Pond Samples Only
Chemical Oxygen Demand	Evaporation Pond Samples Only
Coliform, E-Coli	Evaporation Pond Samples Only
Cyanide, Total	Facility-wide analyte
TPH DRO	Facility-wide analyte
TPH GRO	Facility-wide analyte
TPH ORO	Facility-wide analyte

TABLE 4-2. 2023 GROUNDWATER MONITORING ANALYTE LIST
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

CONSTITUENT	COMMENTS
2023 SPECIFIC WELL PARAMETERS	
Pesticides (Method 8081B)	**Per NMED 2019 Comment 25 (2020)[3] and Comment 10 (2021)[4]**
2,4-DDE	EP-2 only
4,4-DDD	EP-2 only
4,4-DDE	EP-2 only
4,4-DDT	EP-2 only
a-BHC	EP-2 only
Aldrin	EP-2 only
b-BHC	EP-2 only
Chlordane	EP-2 only
d-BHC	EP-2 only
Dieldrin	EP-2 only
Endosulfan I	EP-2 only
Endosulfan II	EP-2 only
Endosulfan sulfate	EP-2 only
Endrin	EP-2 only
Endrin aldehyde	EP-2 only
g-BHC (Lindane)	EP-2 only
Heptachlor	EP-2 only
Heptachlor epoxide	EP-2 only
Methoxychlor	EP-2 only
Toxaphene	EP-2 only
PFAS (Method 537.1)	**Per NMED Comment 30 (2020)[3]**
PFBA	OW-63 only
PFPeA	OW-63 only
PFBS	OW-63 only
4:2 FTS	OW-63 only
PFHxA	OW-63 only
PFPeS	OW-63 only
PFHpA	OW-63 only
PFHxS	OW-63 only
6:2 FTS	OW-63 only
PFOA	OW-63 only
PFHpS	OW-63 only
PFNA	OW-63 only
PFOSA	OW-63 only
PFDA	OW-63 only
8:2 FTS	OW-63 only
PFNS	OW-63 only
MeFOSAA	OW-63 only
EtFOSAA	OW-63 only

TABLE 4-2. 2023 GROUNDWATER MONITORING ANALYTE LIST
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

CONSTITUENT	COMMENTS
PFUnA	OW-63 only
PFDS	OW-63 only
PFDoA	OW-63 only
PFTrDA	OW-63 only
PFTeDA	OW-63 only
FIELD PARAMETERS	
Conductivity	Facility-wide analyte
DO	Facility-wide and MNA analyte
ORP	Facility-wide and MNA analyte
pH	Facility-wide and MNA analyte
Salinity	Facility-wide analyte
Temperature	Facility-wide and MNA analyte
Total Dissolved Solids	Facility-wide analyte
Turbidity	Facility-wide analyte

COC - Constituent of concern

DO - Dissolved oxygen

DRO - Diesel Range Organic

GRO - Gasoline Range Organic

NMED - New Mexico Environment Department

MNA - Monitored Natural Attenuation

ORO - Oil Range Organic

ORP - Oxidation Reduction Potential

PFAS - Pre- and Polyfluoroalkyl substances

SVOC - Semi-volatile organic compound

TPH - Total Petroleum Hydrocarbon

VOC - Volatile Organic Compound

Notes:

[1]Analytes are included in both the facility-wide groundwater monitoring program and the MNA groundwater program (see Table 3-1).

[2] Personal Communication. 2022. Marathon Gallup - 2022 Groundwater Work Plan Revised Analyte List. Emails between Mr. Michiya Suzuki (NMED) and Ms. Lesli Alexander (Trihydro). January 5 through January 20.

[3] NMED. 2020. Disapproval, Annual Groundwater Monitoring Report Gallup Refinery -2019, Western Refining Southwest Inc., Gallup Refinery, EPA ID #NMD000333211, HWB-WRG-20-013. November 23. Comments 25 (Pesticides) and 30 (PFAS).

[4] NMED. 2021. Second Disapproval, [Revised] Facility Wide Groundwater Monitoring Work Plan - Updates for 2021, Western Refining Southwest Inc., Gallup Refinery, McKinley County, Gallup, New Mexico, EPA ID #NMD000333211, HWB-WRG-21-006. November 15. Comment 10.

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 181938

CONDITIONS

Operator: Western Refining Southwest LLC 539 South Main Street Findlay, OH 45840	OGRID: 267595
	Action Number: 181938
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

CONDITIONS

Created By	Condition	Condition Date
scwells	Accepted for Record Retention Purposes-Only	2/2/2023