

GW – 32

GWDP PERMIT

OCD

REQUESTS

AND WRC

SUBMITTALS

2021

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd E. Leahy, JD, PhD
Deputy Secretary

Adrienne Sandoval, Director
Oil Conservation Division



BY ELECTRONIC MAIL ONLY

August 25, 2021

Mr. John Moore, PE
Western Refining Southwest LLC
92 Giant Crossing Road
Gallup, NM 87301
JMoore5@Marathonpetroleum.com

Re: Marathon Gallup Refinery – Notice of an Administratively Incomplete Discharge Permit Application

Dear Mr. Moore:

The New Mexico Energy, Minerals and Natural Resource Department's (EMNRD) Oil Conservation Division (OCD) reviewed your July 27, 2021, Discharge Permit Application submittal for Western Refining Southwest LLC, Marathon Gallup Refinery.

As Per 20.6.2.3108.A NMAC, OCD is required to notify Marathon Gallup Refinery within 30-days of receipt of the discharge permit application of any deficiencies that make the application deemed administratively incomplete. OCD is requesting the below additional information for administrative completeness of the submitted discharge permit application:

1. As per the requirements of 20.6.2.3108.A NMAC, an application is not deemed administratively complete without providing the information required by Paragraphs (1) through (5) of Subsection F of 20.6.2.3108 NMAC. Please provide the public notice requirements of 20.6.2.3108 NMAC including the proposed location(s) and newspaper for providing notice.
2. Provide further description of the capacity and/or volumetric flow rates for each of the below locations:
 - Tanks 28 and 35,
 - New American Petroleum Institute separator (NAPIS),
 - The Wastewater Treatment Plant (WWTP),
 - Evaporation Pond number 2,
 - Evaporation Pond number 3,

- Evaporation Pond number 4-6,
 - Evaporation Pond number 9,
 - Evaporation Pond number 7,
 - Evaporation Pond number 8,
 - Evaporation Pond number 11,
 - Evaporation Pond number 12A,
 - Evaporation Pond number 12B, and
 - Pond number STP-1 and the two associated bays.
3. For the evaporation ponds, explain the construction of each pond and any intended maintenance to prevent discharges from the ponds to surface and/or ground water.
 4. Amend Section 11.0 (Spills and Release Contingency Plan) of the discharge permit application to include notification requirements for any discharge subject to 20.6.2.1203 NMAC. 20.6.2.1203 NMAC does not define a threshold limit for reporting purposes. Therefore, discharges and/or releases under five bbls should be reported to OCD's Administrative Permitting Section via phone and/or email. Discharges and/or releases meeting the definition of major or minor releases per 19.15.29 NMAC should be reported via OCD's E-Permitting System on Form C-141.
 5. As per 20.6.2.3106.D(4) NMAC, provide a description of the potential for flooding at the Refinery.
 6. Section 10.0 (Inspection and Maintenance Plan) states, "Leaks of any size are noted and repaired." Please provide the Refinery's procedure on the repair process for leaks identified prior to and after the WWTP.
 7. Include a copy of the Refinery's Storm Water Pollution Prevention Plan and NPDES Permit (No. NMR053168) as an attachment to the discharge permit application.
 8. Provide map(s) that show monitoring well locations along with their associated name and/or identifier.
 9. As per 20.6.2.3106.D(3) NMAC, provide a summary table of the depth to and total dissolved solid concentration of the ground water most likely to be affected by all discharge points (e.g., Tanks 28 and 35, WWTP, all evaporation ponds, STP-1, etc.).
 10. Provide a brief summary of the Refinery's historical and current on-site ground water contamination.
 11. 20.6.2.3106.E NMAC requires an applicant for a discharge permit to pay the fees as specified in 20.6.2.3114 NMAC. A facility submitting a discharge permit application for approval must pay the filing fee of \$100. Please mail a check payable to the Water Quality Management Fund in the amount of \$100 to the below address:

Attn: Elizabeth Lujan - Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Mr. Moore
August 25, 2021
Page 3 of 3

An updated discharge permit application is due to OCD by September 24, 2021 (30 days from email read receipt); please email an updated discharge permit application to me at LeighP.Barr@state.nm.us. If you have any questions regarding this letter, please contact me at (505) 670-5684 or via email.

Regards,

Leigh Barr

Leigh P. Barr
Administrative Permitting Supervisor

cc: Emily Hernandez, Environmental Bureau Chief

From: [Barr, Leigh P EMNRD](#)
To: [McDill, Teresa L, EMNRD](#)
Subject: FW: Discharge Permit Application - Western Refining Southwest LLC, Marathon Gallup Refinery
Date: Wednesday, August 25, 2021 2:18:26 PM
Attachments: [OCD Response - Gallup Discharge Permit Application.pdf](#)

Please file accordingly.

Leigh

From: Barr, Leigh P EMNRD
Sent: Wednesday, August 25, 2021 2:17 PM
To: Moore, John <JMoore5@Marathonpetroleum.com>
Cc: Hernandez, Emily, EMNRD <Emily.Hernandez@state.nm.us>
Subject: Discharge Permit Application - Western Refining Southwest LLC, Marathon Gallup Refinery

Mr. Moore,

Please review the attached response letter from OCD regarding the submitted discharge permit application for Western Refining Southwest LLC, Marathon Gallup Refinery. OCD has determined additional information is required to make the application administratively complete.

Please let me know if you have any questions.

Take Care,

Leigh Barr • Environmental Specialist Supervisor – Administrative Permitting Program
EMNRD - Oil Conservation Division
1220 S. St. Francis Drive | Santa Fe, NM 87505
505.670.5684 | LeighP.Barr@state.nm.us
<http://www.emnrd.state.nm.us/OCD/>

From: [Brian McLoughlin](#)
To: [McDill, Teresa L, EMNRD](#); [Barr, Leigh P EMNRD](#); [Cobrain, Dave, NMENV](#); [Suzuki, Michiya, NMENV](#)
Cc: [Luka, Kateri A.](#); [Moore, John](#); [Heidi Jones](#); [Caitlin Fields](#)
Subject: Discharge Plan Application - Western Refining Southwest LLC, Marathon Gallup Refinery
Date: Tuesday, July 27, 2021 2:24:40 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[202107_DischargeApplication_signed_Final_RPT.pdf](#)

Hello,

Please find the attached Marathon Gallup Refinery's Discharge Plan Application.

Please let me know if you have any questions or concerns.

Thank you,

Brian McLoughlin
Engineer



OUR SAFETY IS MY RESPONSIBILITY

1252 Commerce Drive
Laramie, WY 82070
(307) 745-7474 (phone)
(307) 745-7729 (fax)
bmcloughlin@trihydro.com

Connect with us on:



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Western Refining Southwest LLC

A subsidiary of Marathon Petroleum Corporation

I-40 Exit 39
Jamestown, NM 87347

July 27, 2021

Ms. Teresa L. McDill
EMNRD – Oil Conservation Division
1220 St. Francis Drive
Santa Fe, New Mexico 87505

**RE: Discharge Application
Western Refining Southwest LLC
Marathon Gallup Refinery
EPA ID# NMD000333211**

Dear Ms. McDill:

Attached please find the Discharge Plan Application for the Western Refining Southwest LLC, Marathon Gallup Refinery. 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, Gallup Refinery

Ruth A. Cade

Ruth Cade
Vice-President

Enclosure

cc: L. Barr, NMOCD
M. Suzuki, NMED HWB
K. Luka, Marathon Petroleum Company
H. Jones, Trihydro Corporation

D. Cobrain, NMED HWB
G. McCartney, Marathon Petroleum Company
J. Moore, Marathon Gallup Refinery

ATTACHMENT



DISCHARGE PLAN APPLICATION FOR SERVICE COMPANIES, GAS PLANTS, REFINERIES, COMPRESSOR, GEOTHERMAL FACILITIES AND CRUDE OIL PUMP STATIONS

(Refer to the OCD Guidelines for assistance in completing the application)

New Renewal Modification

1. Type: Petroleum Refinery

2. Operator: Western Refining - Gallup Refinery

Operator OGRID: _____ Facility ID: fRF00000000004

Address: 92 Giant Cross Road, Gallup, NM 87347

Contact Person: John Moore, P.E. Phone: (505) 879-7643

Email: JMoore5@Marathonpetroleum.com

3. Location: _____/4 _____/4 Section 33 Township 15N Range 15W

Center of Facility Lat Long: 35.483418, -108.427926

Public Land Survey System Designation: _____

4. Attach the name, telephone number, mailing address and email address of the landowner of the facility site.
5. Attach the description of the facility with a diagram or diagrams indicating location of fences, tanks (above and below ground), Underground Injection Control Wells, monitoring wells, piping (above or below ground), sumps, swales, pits, ponds, lagoons, and containerized materials, on-site or as-received on the facility. Include at least the following maps: topographic map with site location indicated (adapted from USGS quads); soil map and legend, if available; site map showing all permanent structures as designated above (labeled); proposed soil sampling or monitoring well locations if any; and an outline of discharge areas, container storage areas and supply well locations.
6. Attach geological/hydrological information for the facility. Depth to and quality of ground water, including TDS along with other available information, must be incorporated.
7. Attach a description, including location (by latitude and longitude) and quantities, of all containerized materials stored and/or used at the facility. Describe any and all secondary or more containment of these materials. If you believe any of these storage areas to be exempt from 20.6.2 NMAC, please skip to #14 below.
8. Attach a description, including location by latitude and longitude, of present sources of wastes, including sewage, industrial wastes, or any other liquid, gaseous or solid substance designated as waste. If you believe any of these sources to be exempt from 20.6.2 NMAC, please skip to #14 below.

9. For each source in #8, described any known quality, volume/time and flow characteristics if applicable. For waste water, describe the average quality and daily volume.
10. For each source in #8, attach a description of each current liquid, gaseous and solid waste collection/treatment/disposal procedures. When contaminant parameters in the discharge will exceed the standards for ground water pursuant to 20.6.2.3103 NMAC, explain how these levels will not affect ground water of 10,000 or less TDS. Include all calculations.
11. For each source in #8, attach a description of proposed modifications to existing collection/treatment/disposal systems, if any.
12. For each source in #8, attach a routine inspection and maintenance plan to ensure permit compliance.
13. For each source in #7 and #8, attach a contingency plan for discovery, proper reporting and clean-up of spills or releases. Include notification procedures under 19.15.29 NMAC for accidental releases.
14. For each source in #7 and #8, include procedures for detecting failure of the discharge system. If groundwater monitoring, then propose sampling frequency, constituents analyzed, reporting schedule, and actions to be taken for abatement.
15. For each source in #7 and #8 that you may believe to be exempt from 20.6.2 NMAC, include whether that discharge currently meets any of the following exemptions:
 - Are the discharges regulated pursuant to New Mexico Liquid Waste Disposal and Treatment regulations 20.7.3 NMAC? If yes, include permit reference or copy.
 - Are the discharges performed under an existing NPDES permit? If yes, include permit reference or copy.
 - Are the discharges approved for the use of irrigated agriculture, or the watering of lawns, trees, gardens, or shrubs? If yes, include approval reference or copy.
 - Are the discharges due to the use of diverted water or the operation of a flood control system which has not been added to by another source? If yes, explain the situation.
 - Are the discharges occurring as leachates resulting from the natural filtering of precipitation? If yes, explain situation and distance from or other mitigating factors for any stored or handled contaminants, loading areas, process areas, etc.
16. Describe how the facility will obtain expected results for permit, such as system for monitoring and/or reporting to verify. Include how records will be maintained for 5 years and be made available to EMNRD inspectors and/or requests. Describe immediate self-reporting procedures for permit exceedances.
17. Attach a facility closure plan, and other information as is necessary to demonstrate compliance with any other WQCC and OCD rules, regulations and/or orders.
18. CERTIFICATION I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: John Moore

Title: Environmental Supervisor

Signature: *John Moore*

Date: 07/27/21

E-mail Address: jmoore5@marathonpetroleum.com

**OIL CONSERVATION DIVISION
DISCHARGE PERMIT APPLICATION**



**WESTERN REFINING SOUTHWEST LLC
GALLUP, NEW MEXICO
EPA ID# NMD000333211¹**

JULY 27, 2021

¹ EPA ID from Gallup Refinery Resource Conservation and Recovery Act (RCRA) Post-Closure Permit, October 2013, modified September 2017

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- 12-2. Monitoring Wells and Proposed Well Locations, Western Refining Southwest LLC, Gallup Refinery, Gallup, New Mexico

1.0 Discharge Type

Western Refining Southwest LLC (d/b/a Marathon Gallup Refinery) owns a petroleum refinery located approximately 17 miles east of Gallup, McKinley County, New Mexico along the north side of Interstate Highway I-40 (Figure 1-1). The physical address is I-40, Exit #39, Jamestown, New Mexico 87347. The Gallup Refinery property covers approximately 810 acres. The Marathon Gallup Refinery has been indefinitely idled since August 2020.

The Refinery continues to operate its wastewater treatment plant (WWTP). The Refinery has a Facility Wide Groundwater Monitoring Work Plan (dated April 1, 2021) that is required pursuant to its Resource Conservation and Recovery Act (RCRA) Permit No. NM000333211. The Work Plan is updated annually with the New Mexico Environment Department (NMED), and fully characterizes the nature and extent of groundwater contamination at, and migrating from, the Refinery, and monitors the effectiveness of interim containment and remediation systems.

The current operations of the Refinery are limited to the WWTP. There is no longer product stored at the Refinery and all processes have been temporarily shut down as part of the refinery idling. Oily water and stormwater sewers have been plugged and flushed and can be considered RCRA clean. Tanks and reactors have been cleaned and inspected and no longer store or contain material.

Remediation water is regulated under the Refinery's RCRA Permit that was issued by NMED. Collected groundwater is treated on-site at the Refinery's WWTP. Treated water is then transported to the non-discharging evaporation ponds where water is evaporated. No process water is discharged off-site or leaves the Refinery. Monitoring activities of the evaporation ponds are completed under the Facility Wide Groundwater Monitoring Plan and results are submitted annually to NMED and the Oil Conservation Division (OCD).

2.0 Facility Information

Information regarding the Gallup Refinery ownership is below:

Owner/Operator: Western Refining Southwest LLC (Postal Address)
92 Giant Crossing Road
Gallup, New Mexico 87301

Western Refining Southwest LLC (Physical Address)
Marathon Gallup Refinery
I-40, Exit 39
Jamestown, New Mexico 87347

Correspondence regarding this discharge plan should be directed to John Moore, PE:

John Moore, PE
Environmental Supervisor
Western Refining Southwest LLC
92 Giant Crossing Road
Gallup, New Mexico 87301
Phone: (505) 879-7643

3.0 Location

The Marathon Gallup Refinery is located on 810 acres that are largely located within the lower one quarter of Section 28 and throughout Section 33 of Township 15 North, Range 15 West of the New Mexico Prime Meridian. A small component of the property lies within northeastern one quarter of Section 4 of Township 14 North, Range 15 West (Figure 3-1).

4.0 Landowner Information

The landowner, operator, and legally responsible party is as follows:

Owner/Operator: Western Refining Southwest LLC (Postal Address)
Marathon Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301

5.0 Facility Description

The Marathon Gallup Refinery was built in the 1950s within a rural and sparsely populated section of McKinley County in Jamestown, New Mexico, 17 miles east of Gallup, New Mexico. The nearest population centers are the Pilot Flying J Travel Center refueling plaza, the Interstate 40 highway corridor, and a small cluster of residential homes located on the south side of Interstate 40 approximately 2 miles southwest of the Refinery (Jamestown).

The Refinery is a petroleum refinery that processes crude oil transported by pipeline or tanker truck from the Four Corners region. The Refinery can receive natural gas feed stock from the Western Refining Southwest LLC – Wingate Plant. Process operations at the Refinery include: crude distillation, reformer, fluidized catalytic cracker, alkylation, sulfur recovery, merox treater, and hydrotreater. The refinery is capable of producing gasoline, diesel fuels, jet fuels, kerosene, propane, butane, and residual fuel. A diagram indicating location of fences, tanks, evaporation ponds, and monitoring wells at the Refinery are presented in Figure 5-1.

The Marathon Gallup Refinery has been indefinitely idled since August 2020. The current operations of the Refinery are limited to the WWTP. Product is not currently stored at the Refinery and all processes have been temporarily shut down as part of the refinery idling. All process tanks are empty and have been cleaned and inspected and no longer store or contain material.

The Refinery maintains compliance under the RCRA Post-Closure Permit issued October 2013, and modified in September 2017. As identified in Section 1.0, the Refinery is a non-discharging facility. Remediation water produced by the facility currently undergoes treatment at the Refinery's WWTP and then flows to a series of 12 evaporation ponds on-site (Figure 5-2).

6.0 Stored Materials

The Refinery is currently indefinitely idled and there are no stored materials located at the Facility.

7.0 Effluent Sources

There are no effluent sources at the Refinery. Groundwater collected from remediation activities is treated at the WWTP and then sent to the evaporation ponds. No wastewater is currently discharged from the Refinery to surface waters of the state.

In September 2015, the Refinery submitted a Notice of Intent requesting continued coverage under the 2015 National Pollutant Discharge Elimination System Multi-Sector General Permit, which was approved on October 8, 2015 (NMR053168). The Refinery maintains a Stormwater Pollution Prevention Plan (SWPPP) that includes best management practices for effective stormwater pollution prevention. In addition, since the facility has been idled, the storm sewers have been capped off and pipes have been blinded in place. Stormwater is managed under the facilities SWPPP.

8.0 Water Collection, Treatment, and Disposal

Water produced from on-site remediation activities follows a path from Tank 35 to the WWTP and the New American Petroleum Institute separator (NAPIS) and then to the evaporation ponds. No water produced at the Refinery is discharged off-site.

8.1 Remediation Wastewater

Remediation wastewater is collected via vacuum truck stored in frac tanks on the bundle cleaning pad and then pumped to the lead tank, Tank 28, prior to being pumped to Tank 35 for equalization. The additional overflow tank, Tank 27, has been cleaned and is out of service. The remediation water from Tank 35 is routed to the NAPIS where oil is skimmed and shipped off-site for processing at a separate facility owned by an affiliate of Western Refining Southwest LLC. The remaining water is then routed to the WWTP where benzene is removed via granular activated carbon (GAC) canisters that are placed at the effluent of the dissolved gas flotation unit. WWTP operations alternate the configuration of these GAC canisters from a single setup to an in-series setup (i.e. primary and secondary canisters). To help monitor the breakthrough of these GAC canisters, several wastewater samples are taken at the effluent of the last GAC canister. Results from benzene analysis of the wastewater samples are monitored to manage the breakthrough from the GAC canisters. When benzene values exceed 0.4 parts per million, one or more of the following actions are taken: the GAC canister configuration is modified to an in-series set-up; the GAC canister is replaced with fresh carbon; and/or the GAC canister effluent is recirculated back through the WWTP. The treated water flows from the GAC canisters into pond STP-1. STP-1 is a dual lined leachate collection pond. STP-1 consists of two bays, north and south, and each bay is equipped with five aerators per bay. Uncontaminated effluent from STP-1 then flows into Evaporation Pond 2 and gravitates to the rest of the ponds.

As a result of the refinery being placed in indefinite idle mode, the stormwater lines and process water lines have been blinded from the wastewater system. Any stormwater collected within the process units is evaporated or managed under the SWPPP.

In accordance with the SWPPP, the Refinery continues to inspect the stormwater system and has constructed several new berms in various areas and improved outfalls (installed barrier dams equipped with gate valves) to minimize the possibility of potentially impacted runoff leaving the Facility and stormwater run-on entering the Facility from the I-40 interchange and the Pilot Travel Center.

The WWTP is routinely inspected for integrity and maintained. If problems are identified, on-site personnel are notified and repairs are scheduled.

8.2 Water Discharge

Once treated, uncontaminated remediation water flows to the evaporation ponds on-site. The flow of the treated water is presented in Figure 8-1. As stated above, the refinery is a non-discharging facility.

8.3 NAPIS Sludge

Oily sediment and sludge accumulates at the bottom of the NAPIS. The NAPIS is taken out of service as needed and the bottom sludge is removed via vacuum trucks. This sludge typically remains in the truck until it is shipped off-site for recycling.

The quantity of NAPIS sludge will vary depending on the quantity of purge water, SPH recovery, and remediation liquid wastes that are collected and sent through the system.

The NAPIS has leak detection monitoring wells installed in the interstitial space between the primary and secondary liner systems to identify potential leaks from the primary liner. It should be noted that this does not constitute a discharge to the environment as potential leaks would still be contained in the secondary liner system.

8.4 Waste Removal

Wastes that are shipped off-site are primarily sent to the following facilities:

- Motiva, Norco, LA
- Advanced Chemical Treatment (ACT), Albuquerque, NM
- US Ecology, Beatty, NV
- US Ecology, Robstown, TX
- Mesa Oil, Belen, NM
- Clean Harbors, Deer Trail, CO

9.0 Proposed Modifications of Existing Collection, Treatment, and Disposal Systems

No modifications of the existing collection, treatment, and/or disposal systems are proposed at this time.

10. Inspection and Maintenance Plan

Inspection and maintenance are an integral part of the WWTP. Inspection provides information critical to the safe and efficient operation of the system. Maintenance is key in the prevention of undesirable events and excessive downtime. Regular inspections are performed to assure safe and efficient operation. The system is monitored on a regular basis during the work week. Observations are recorded in a bound field logbook with the date, time, and person recording the information noted and maintained onsite.

Weekly inspections occur in the control building, and at the storage tank, and NAPIS. All equipment is inspected for leaks and malfunctions. The operator is familiar with the location of underground lines and notes any surface indication of underground leaks. Leaks of any size are noted and repaired. Readings from all water meters are observed and recorded in the logbook regularly, and comparisons to previous readings are made.

11. Spills and Release Contingency Plan

In the event of an unplanned release of water or hydrocarbon at the Facility from the WWTP, the Environmental Supervisor shall be notified and act as the response coordinator. If the Environmental Supervisor is not available, the next person noted in the following list of alternates should be notified.

INTERNAL EMERGENCY NOTIFICATIONS

- John Moore – Environmental Supervisor
 - Mobile: 505-879-7643
 - Office: 915-775-7864
- Joe Leyba - Operations
 - Mobile: 505-870-5593
 - Office: 505-722-0288

EMERGENCY RESPONSE CONTRACTORS

- Gallup Fire Department – Jesus Morales, Fire Chief
 - Office: 505-863-1380

If it is determined that the release of a petroleum product is 5 barrels or greater, the OCD will be notified and a written report submitted. Leaks shall be contained or redirected so that they can be picked up by pumps or vacuum trucks and placed back in storage.

11.1 Inspection

The stormwater system is inspected monthly and following all storm events. These inspections include observations of the stormwater and the Refinery outfalls. Any concerns will be reported to Operations and the Environmental Supervisor at the Refinery. The system is inspected following the procedures outlined in the Refinery's SWPPP. This plan can be made available if requested by OCD.

Paving, curbing, catch basins, and trenches are routinely inspected for integrity. The oily sewer system was blocked as part of the idling process. The NAPIS is emptied and inspected annually. If a crack or seam is discovered, it is repaired before placing the NAPIS back into service.

11.2 Security

The facility is entirely fenced with chain link or barbed wire. Gates are locked and access is limited to facility personnel and supervised visitors and contractors. The refinery will continue to employ full time, on-site security (24/7) at the Refinery.

12. Geological/Hydrogeological Information

Local topography consists of 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) and the lowest point is located at the northwest corner boundary (elevation approximately 6,860 feet). The refinery is located on a flat man-made terrace at an elevation of approximately 6,950 feet.

12.1 Drainages

Surface water in the region consists of the man-made evaporation ponds and aeration basins located within the Refinery, a livestock watering pond (Jon Myer's Pond) located east of the Refinery, two small unnamed spring fed ponds located south of the Refinery, and the South Fork of the Rio Puerco and its tributary arroyos. The various ponds and basins typically contain water throughout the year. The South Fork of the Rio Puerco and its tributaries are intermittent and generally contain water only during and immediately after precipitation.

There are several stormwater conveyance ditches located throughout the Refinery. These ditches are directed to discharge into contained basins where stormwater is collected and recycled for use as process water for the refinery, collected and allowed to evaporate, diverted around regulated industrial activity, or discharged into two designated outfalls located on the east and west section of the property, identified as Outfall 001 and Outfall 002 (Figure 12-1) which are permitted outfalls under the NPDES general permit. Outfall 001 is located directly south of Evaporation Pond 8 on the western edge of the Refinery's property boundary and equipped with four separate small diameter overflow pipelines, each with a manual flow valve for independent control. Outfall 002 is located north of the railroad loading rack on the eastern section of the Facility. This outfall consists of a concrete barrier with a valve to control discharges from a deep ditch that collects/ponds the runoff from the rail rack loading area.

Directly west of the crude tank area, there is a concrete barrier with a control valve that discharges from a culvert that carries stormwater flow from the Truck Loading Rack area. The flow from this concrete barrier continues in a north-northwest direction alongside the southern bermed areas of Evaporation Ponds 3, 4, 5, and 6 and outward towards the Outfall 001 area. At the wastewater treatment plant (WWTP), there are three storm drains located on the south, southwest, and west side of the WWTP. 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 Evaporation Pond 2 and into a holding pond equipped with manual flow valves, located north of Evaporation Pond 3. The discharge from this holding pond then flows north-northwest towards the Outfall 001 area.

Uncontaminated surface water at the facility consists of evaporation ponds and aeration basins. The Refinery continues to monitor the evaporation ponds, including their water levels, as required under the Facility Wide Groundwater Monitoring Plan.

12.2 Presence and Flow Direction of Groundwater

Groundwater flow within the Petrified Forest Formation is extremely slow and typically averages less than 10^{-10} centimeters per second (cm/s) or less than 0.01 feet per year. Groundwater flow within the surface soil layer above the Petrified Forest Formation is highly variable due to the presence of complex and irregular stratigraphy, including sand stringers, cobble beds, and dense clay layers. Hydraulic conductivity may range

from less than 10^{-2} cm/s in the gravelly sands immediately overlying the Petrified Forest Formation down to 10^{-8} cm/s in the clay soil layers located near the surface. Permeability throughout the Refinery and specifically underneath the evaporation ponds are very low due to the clay stones and siltstones. Due to the nature of the geology and rock formations, the Chinle Formation effectively serves as an aquitard.

Shallow groundwater located under the Refinery generally flows along the upper contact of the Petrified Forest Formation. The prevailing flow direction is from the southeast and toward the northwest.

The groundwater that is monitored at the Refinery is situated in three aquifers, Alluvial, Chinle, and Sonsela. Depth to water ranges from 1.45 feet below ground surface (ft bgs) to 46.45 ft bgs. Depth to water and product data for 2020 and the first half of 2021 are presented in Table 12-1.

12.3 Groundwater Quality

Groundwater is currently sampled on a quarterly, semiannual, and annual schedule as outlined in the Annual Groundwater Work Plan (Marathon Petroleum Corporation 2021). Groundwater sampling includes fluid level gauging, field parameters, and analytical monitoring. The data are reviewed and discussed in the Annual Groundwater Monitoring Report, submitted on September 1 of each year. The annual report reviews any outlying data and includes recommendations for the following years sampling activities.

The monitoring well network is presented in Figure 12-2. This figure includes monitoring wells that are scheduled to be installed during 2021. Field parameter data for the annual groundwater monitoring event for September 2020 are provided in Table 12-2. Analytical data are presented in the Annual Groundwater Reports and are available upon request.

13. Monitoring and Reporting

Activities associated with routine groundwater monitories are outlined in the Facility Wide Groundwater Monitoring Plan. Groundwater sampling and analysis occurs on a quarterly, semiannual, and annual basis. An annual report detailing the previous years activities and results is submitted no later than September 1 of the following calendar year.

Activities associated with investigations are submitted to NMED and OCD following analysis of the results. These investigations are generally submitted within 90 days of field events. All records associated with the Refinery are maintained in an electronic database and are available for regulators and inspectors as requested. These records will be maintained for a minimum of five years.

The Gallup Refinery reports spills as required under applicable state and federal laws and regulations to the appropriate governmental agencies. The facility generates waste from routine activities as described in Sections 3 and 4.

As stated previously, the Refinery maintains compliance with its RCRA Post-Closure Permit. This includes submitting routine monitoring reports and investigation work plans and reports to NMED and OCD. Any deviations that occur, such as a spill or discovery of a seep, the Gallup Refinery is required under the Permit to immediately notify the appropriate agencies.

14. Facility Closure and Post-Closure Plan

While the Refinery is currently indefinitely idled, it continues to employ at least a small staff of maintenance and operations personnel, maintains its permits and complies with all permit requirements. If the Refinery is shut down, it will follow the requirements in the RCRA Post-Closure Permit. NMED and OCD would be notified of permanent shut down prior to completing any closure activities.

15. Permit Renewal

After OCD issues a discharge permit for discharges that require a Water Quality Control Commission Discharge Permit, the permit will expire five years after OCD approval and notification of this application. The Refinery will prepare and submit an application for discharge permit renewal at least 120 days before the discharge permit expires. If the renewal application is submitted at least 120 days prior to expiration, then the existing discharge permit for the same activity shall not expire until the application for renewal has been approved or disapproved by OCD.

16. Permit Modifications

In the case of Refinery operation changes or significant modifications that would result in the discharge of water, OCD will be notified in writing for review and approval prior to implementing the modification. An application and a description of the requested modifications will be included in the written notice.

Tables

**TABLE 12-1. 2020-2021 FLUID LEVEL DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location	Date Measured	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft)
Pot Surface - Sonsela Wells				
BW-1C	9/14/2020	13.89	ND	NA
BW-2C	9/14/2020	21.32	ND	NA
BW-3C	9/14/2020	8.52	ND	NA
BW-5C	3/05/2020	2.80	ND	NA
BW-5C	6/26/2020	3.38	ND	NA
BW-5C	9/14/2020	4.36	ND	NA
BW-5C	12/07/2020	4.27	ND	NA
BW-5C	2/27/2021	4.11	ND	NA
BW-5C	6/03/2021	4.30	ND	NA
MW-1	6/30/2020	7.25	ND	NA
MW-1	9/14/2020	7.72	ND	NA
MW-2	6/30/2020	9.29	ND	NA
MW-2	9/14/2020	9.74	ND	NA
MW-4	6/30/2020	7.50	ND	NA
MW-4	9/14/2020	8.00	ND	NA
MW-5	6/30/2020	11.46	ND	NA
MW-5	9/14/2020	11.99	ND	NA
OW-01	3/09/2020	1.70	ND	NA
OW-01	6/30/2020	1.60	ND	NA
OW-01	9/15/2020	1.45	ND	NA
OW-01	12/07/2020	1.75	ND	NA
OW-01	2/27/2021	1.76	ND	NA
OW-01	6/03/2021	1.40	ND	NA
OW-10	3/04/2020	5.43	ND	NA
OW-10	6/30/2020	6.75	ND	NA
OW-10	9/20/2020	7.70	ND	NA
OW-10	10/09/2020	7.70	ND	NA
OW-10	12/07/2020	7.61	ND	NA
OW-10	1/28/2021	7.84	ND	NA
OW-10	2/28/2021	7.85	ND	NA
OW-10	3/31/2021	7.68	ND	NA
OW-10	4/26/2021	7.67	ND	NA
OW-10	5/20/2021	7.59	ND	NA
OW-10	6/03/2021	7.89	ND	NA
OW-11	9/15/2020	18.51	ND	NA
OW-12	6/30/2020	Dry	ND	NA
OW-12	9/14/2020	46.45	ND	NA
OW-12	11/09/2020	46.49	ND	NA
OW-12	1/28/2021	46.20	ND	NA
OW-13	3/02/2020	19.91	ND	NA
OW-13	6/30/2020	22.16	ND	NA

**TABLE 12-1. 2020-2021 FLUID LEVEL DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location	Date Measured	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft)
Pot Surface - Sonsela Wells				
OW-13	9/14/2020	20.99	ND	NA
OW-13	11/09/2020	20.38	ND	NA
OW-13	12/07/2020	20.24	ND	NA
OW-13	2/27/2021	20.38	ND	NA
OW-13	6/02/2021	20.20	ND	NA
Pot Surface - Chinle				
BW-1B	9/14/2020	Dry	ND	NA
BW-2B	9/14/2020	28.79	ND	NA
BW-3B	9/14/2020	34.24	ND	NA
BW-4B	3/09/2020	40.35	ND	NA
BW-4B	6/26/2020	NA	NA	NA
BW-4B	6/30/2020	44.75	ND	NA
BW-4B	9/14/2020	39.86	39.85	0.01
BW-4B	12/07/2020	35.86	ND	NA
BW-4B	2/27/2021	47.08	ND	NA
BW-4B	6/03/2021	45.58	ND	NA
BW-5B	3/05/2020	9.94	ND	NA
BW-5B	6/26/2020	10.21	ND	NA
BW-5B	9/14/2020	10.61	ND	NA
BW-5B	12/07/2020	10.53	ND	NA
BW-5B	2/27/2021	9.41	ND	NA
BW-5B	6/03/2021	10.25	ND	NA
SMW-2	6/30/2020	24.25	ND	NA
SMW-2	9/14/2020	24.70	ND	NA
SMW-4	6/30/2020	29.17	ND	NA
SMW-4	9/14/2020	29.15	ND	NA
OW-59	6/30/2020	23.67	ND	NA
OW-59	9/14/2020	24.06	ND	NA
OW-59	12/07/2020	23.91	ND	NA
OW-59	2/27/2021	23.64	ND	NA
OW-59	6/02/2021	23.70	ND	NA
OW-60	3/03/2020	16.14	ND	NA
OW-60	6/30/2020	16.50	ND	NA
OW-60	9/14/2020	16.57	ND	NA
OW-60	11/09/2020	16.35	ND	NA
OW-60	12/07/2020	16.55	ND	NA
OW-60	1/28/2021	16.45	ND	NA
OW-60	2/27/2021	16.47	ND	NA
OW-60	6/02/2021	16.66	ND	NA
OW-61	3/04/2020	21.09	18.28	2.81
OW-61	6/29/2020	18.04	17.17	0.87

**TABLE 12-1. 2020-2021 FLUID LEVEL DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location	Date Measured	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft)
Pot Surface - Chinle				
OW-61	9/15/2020	19.40	16.88	2.52
OW-61	11/09/2020	19.58	18.22	1.36
OW-61	12/08/2020	20.30	18.40	1.90
OW-61	1/28/2021	19.78	19.13	0.65
OW-61	2/27/2021	20.10	18.89	1.21
OW-61	3/31/2021	21.28	18.82	2.46
OW-61	4/26/2021	21.43	18.93	2.50
OW-61	5/20/2021	21.95	19.11	2.84
OW-61	6/02/2021	20.89	18.62	2.27
OW-62	3/10/2020	24.16	23.58	0.58
OW-62	6/30/2020	23.91	23.62	0.29
OW-62	9/15/2020	23.87	23.62	0.25
OW-62	11/09/2020	24.00	23.70	0.30
OW-62	12/08/2020	23.98	23.69	0.29
OW-62	1/28/2021	24.05	23.75	0.30
OW-62	2/27/2021	24.15	23.82	0.33
OW-62	3/31/2021	24.16	23.85	0.31
OW-62	4/26/2021	24.10	23.93	0.17
OW-62	5/20/2021	24.44	23.80	0.64
OW-62	6/02/2021	23.22	22.97	0.25
OW-63	3/04/2020	20.41	ND	NA
OW-63	6/29/2020	20.46	ND	NA
OW-63	9/14/2020	20.73	ND	NA
OW-63	11/09/2020	20.85	ND	NA
OW-63	12/08/2020	20.97	ND	NA
OW-63	1/28/2021	21.15	ND	NA
OW-63	2/27/2021	21.13	ND	NA
OW-63	3/31/2021	21.28	ND	NA
OW-63	4/26/2021	21.40	ND	NA
OW-63	5/20/2021	21.52	ND	NA
OW-63	6/02/2021	21.37	ND	NA
OW-64	3/04/2020	7.50	ND	NA
OW-64	6/30/2020	8.35	ND	NA
OW-64	9/14/2020	7.95	ND	NA
OW-64	11/09/2020	8.18	ND	NA
OW-64	12/07/2020	8.26	ND	NA
OW-64	1/28/2021	8.54	ND	NA
OW-64	2/27/2021	8.29	ND	NA
OW-64	3/31/2021	8.37	ND	NA
OW-64	4/26/2021	8.28	ND	NA
OW-64	5/20/2021	8.08	ND	NA

**TABLE 12-1. 2020-2021 FLUID LEVEL DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location	Date Measured	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft)
Pot Surface - Chinle				
OW-64	6/02/2021	8.13	ND	NA
OW-65	3/04/2020	30.08	23.83	6.25
OW-65	6/29/2020	31.41	24.08	7.33
OW-65	9/14/2020	30.76	24.70	6.06
OW-65	11/09/2020	32.35	25.05	7.30
OW-65	12/08/2020	31.95	25.79	6.16
OW-65	1/28/2021	31.75	26.63	5.12
OW-65	2/27/2021	33.71	26.41	7.30
OW-65	3/31/2021	33.88	27.40	6.48
OW-65	4/26/2021	33.95	28.01	5.94
OW-65	5/20/2021	35.17	28.16	7.01
OW-65	6/02/2021	32.66	26.91	5.75
OW-14	3/02/2020	NA	NA	NA
OW-14	6/30/2020	22.75	ND	NA
OW-14	9/14/2020	NA	NA	NA
OW-14	12/07/2020	24.40	NA	NA
OW-14	2/27/2021	23.32	NA	NA
OW-14	6/02/2021	23.65	NA	NA
OW-29	2/24/2020	16.48	ND	NA
OW-29	6/30/2020	17.42	ND	NA
OW-29	9/14/2020	14.57	ND	NA
OW-29	11/09/2020	17.23	ND	NA
OW-29	12/07/2020	17.15	ND	NA
OW-29	2/27/2021	16.84	ND	NA
OW-29	2/27/2021	17.28	ND	NA
OW-30	3/02/2020	NA	NA	NA
OW-30	6/30/2020	22.33	ND	NA
OW-30	9/15/2020	NA	ND	NA
OW-30	12/07/2020	22.22	ND	NA
OW-30	6/02/2021	22.42	ND	NA
OW-57	3/04/2020	19.97	ND	NA
OW-57	6/30/2020	20.22	ND	NA
OW-57	9/14/2020	20.50	ND	NA
OW-57	11/09/2020	20.53	ND	NA
OW-57	12/07/2020	20.64	ND	NA
OW-57	1/28/2021	20.73	ND	NA
OW-57	2/27/2021	20.73	ND	NA
OW-57	3/31/2021	20.98	ND	NA
OW-57	4/26/2021	21.07	ND	NA
OW-57	5/20/2021	19.88	ND	NA
OW-57	6/02/2021	21.03	ND	NA

**TABLE 12-1. 2020-2021 FLUID LEVEL DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location	Date Measured	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft)
Pot Surface - Chinle				
OW-58	6/30/2020	24.12	ND	NA
OW-58	9/14/2020	23.55	ND	NA
OW-58	11/09/2020	23.31	ND	NA
OW-58	12/08/2020	24.32	ND	NA
OW-58	1/28/2021	24.29	ND	NA
OW-58	2/28/2021	23.80	ND	NA
OW-58	3/31/2021	24.40	ND	NA
OW-58	4/26/2021	24.83	ND	NA
OW-58	5/20/2021	23.33	ND	NA
OW-58	6/02/2021	24.63	ND	NA
OW-58A	3/05/2020	26.13	ND	NA
OW-58A	6/30/2020	26.50	ND	NA
OW-58A	9/15/2020	26.87	ND	NA
OW-58A	11/09/2020	24.31	ND	NA
OW-58A	12/08/2020	26.71	ND	NA
OW-58A	1/28/2021	26.66	ND	NA
OW-58A	2/28/2021	26.51	ND	NA
OW-58A	3/31/2021	26.78	ND	NA
OW-58A	4/26/2021	27.01	ND	NA
OW-58A	5/20/2021	26.31	ND	NA
OW-58A	6/02/2021	26.63	ND	NA
OW-55	3/02/2020	16.96	ND	NA
OW-55	6/30/2020	17.42	ND	NA
OW-55	9/14/2020	17.96	ND	NA
OW-55	10/09/2020	17.70	ND	NA
OW-55	12/07/2020	17.61	ND	NA
OW-55	6/02/2021	17.82	ND	NA
OW-56	3/02/2020	13.02	ND	NA
OW-56	6/30/2020	14.33	ND	NA
OW-56	9/14/2020	14.36	ND	NA
OW-56	11/09/2020	14.21	ND	NA
OW-56	12/07/2020	13.73	ND	NA
OW-56	2/27/2021	13.08	ND	NA
OW-56	6/02/2021	13.75	ND	NA
OW-50	3/02/2020	14.05	ND	NA
OW-50	6/30/2020	14.61	ND	NA
OW-50	9/14/2020	15.11	ND	NA
OW-50	11/09/2020	14.87	ND	NA
OW-50	12/07/2020	14.72	ND	NA
OW-50	2/28/2021	14.32	ND	NA
OW-50	2/28/2021	14.71	ND	NA

**TABLE 12-1. 2020-2021 FLUID LEVEL DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location	Date Measured	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft)
Pot Surface - Chinle				
OW-52	3/02/2020	13.71	ND	NA
OW-52	6/30/2020	14.20	ND	NA
OW-52	9/14/2020	14.56	ND	NA
OW-52	10/09/2020	14.52	ND	NA
OW-52	12/07/2020	14.42	ND	NA
OW-52	2/27/2021	14.08	ND	NA
OW-52	6/02/2021	14.14	ND	NA
OW-53	3/02/2020	Dry	ND	NA
OW-53	6/30/2020	Dry	ND	NA
OW-53	9/14/2020	Dry	ND	NA
OW-53	11/09/2020	Dry	ND	NA
OW-53	12/07/2020	Dry	ND	NA
OW-53	2/27/2021	Dry	ND	NA
OW-53	6/02/2021	Dry	ND	NA
OW-54	3/02/2020	17.18	ND	NA
OW-54	6/30/2020	17.75	ND	NA
OW-54	9/14/2020	18.17	ND	NA
OW-54	10/09/2020	17.92	ND	NA
OW-54	12/07/2020	17.78	ND	NA
OW-54	2/27/2021	17.50	ND	NA
OW-54	6/02/2021	17.88	ND	NA
RW-1	3/04/2020	NA	NA	NA
RW-1	6/30/2020	29.50	28.25	1.25
RW-1	9/19/2020	30.20	28.07	2.13
RW-1	11/10/2020	30.33	29.50	0.83
RW-1	12/08/2020	30.33	29.50	0.83
RW-1	1/28/2021	30.33	29.98	0.35
RW-1	2/27/2021	31.05	29.75	1.30
RW-1	3/31/2021	32.01	29.90	2.11
RW-1	4/26/2021	31.89	29.81	2.08
RW-1	5/20/2021	33.23	30.05	3.18
RW-1	6/01/2021	33.42	30.33	3.09
RW-2	3/04/2020	NA	NA	NA
RW-2	6/30/2020	21.00	20.66	0.34
RW-2	9/19/2020	22.23	22.10	0.13
RW-2	11/09/2020	22.28	22.09	0.19
RW-2	12/08/2020	22.38	22.20	0.18
RW-2	1/28/2021	22.40	ND	NA
RW-2	2/27/2021	22.45	22.40	0.05
RW-2	3/31/2021	22.85	22.70	0.15
RW-2	4/26/2021	23.19	23.05	0.14

**TABLE 12-1. 2020-2021 FLUID LEVEL DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location	Date Measured	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft)
Pot Surface - Chinle				
RW-2	5/20/2021	23.86	23.77	0.09
RW-2	6/01/2021	23.86	23.77	0.09
RW-5	3/04/2020	NA	NA	NA
RW-5	6/30/2020	32.05	28.65	3.40
RW-5	9/19/2020	32.81	29.59	3.22
RW-5	11/09/2020	33.03	29.86	3.17
RW-5	12/08/2020	39.51	33.15	6.36
RW-5	1/28/2021	33.98	32.42	1.56
RW-5	2/27/2021	31.65	31.02	0.63
RW-5	3/31/2021	31.59	30.10	1.49
RW-5	4/26/2021	31.76	30.43	1.33
RW-5	5/20/2021	30.90	30.76	0.14
RW-5	6/01/2021	31.86	31.20	0.66
RW-6	3/04/2020	NA	NA	NA
RW-6	6/30/2020	30.50	28.87	1.63
RW-6	9/19/2020	32.64	29.72	2.92
RW-6	11/09/2020	33.05	29.98	3.07
RW-6	12/08/2020	33.31	30.18	3.13
RW-6	1/28/2021	33.12	30.22	2.90
RW-6	2/27/2021	33.68	30.45	3.23
RW-6	3/31/2021	31.70	31.60	0.10
RW-6	4/26/2021	31.61	31.58	0.03
RW-6	5/20/2021	31.64	31.61	0.03
RW-6	6/01/2021	32.24	32.11	0.13
NAPIS-1	3/04/2020	7.74	7.69	0.05
NAPIS-1	7/01/2020	7.42	7.38	0.04
NAPIS-1	9/15/2020	6.71	6.70	0.01
NAPIS-1	11/10/2020	7.20	7.19	0.01
NAPIS-1	12/07/2020	7.44	ND	NA
NAPIS-1	1/28/2021	7.89	7.88	0.01
NAPIS-1	2/27/2021	7.95	7.90	0.05
NAPIS-1	3/31/2021	8.01	ND	NA
NAPIS-1	4/26/2021	7.82	ND	NA
NAPIS-1	5/20/2021	8.52	ND	NA
NAPIS-1	6/03/2021	7.85	ND	NA
NAPIS-2	3/03/2020	9.46	ND	NA
NAPIS-2	7/01/2020	9.12	ND	NA
NAPIS-2	9/15/2020	8.12	ND	NA
NAPIS-2	11/10/2020	8.51	ND	NA
NAPIS-2	12/07/2020	8.72	ND	NA
NAPIS-2	1/28/2021	9.16	ND	NA

**TABLE 12-1. 2020-2021 FLUID LEVEL DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location	Date Measured	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft)
Pot Surface - Chinle				
NAPIS-2	2/27/2021	9.15	ND	NA
NAPIS-2	3/31/2021	9.32	ND	NA
NAPIS-2	4/26/2021	9.14	ND	NA
NAPIS-2	5/20/2021	8.96	ND	NA
NAPIS-2	6/03/2021	9.10	ND	NA
NAPIS-3	7/01/2020	10.10	ND	NA
NAPIS-3	9/15/2020	9.25	ND	NA
NAPIS-3	11/10/2020	9.47	ND	NA
NAPIS-3	12/07/2020	8.51	ND	NA
NAPIS-3	1/28/2021	9.00	ND	NA
NAPIS-3	2/28/2021	9.09	ND	NA
NAPIS-3	3/31/2021	9.27	ND	NA
NAPIS-3	4/26/2021	8.89	ND	NA
NAPIS-3	5/20/2021	9.30	ND	NA
NAPIS-3	6/03/2021	9.31	ND	NA
OAPIS-1	3/03/2020	12.46	ND	NA
OAPIS-1	7/01/2020	12.60	ND	NA
OAPIS-1	9/15/2020	11.90	ND	NA
OAPIS-1	11/10/2020	12.02	ND	NA
OAPIS-1	12/07/2020	12.31	ND	NA
OAPIS-1	1/28/2021	12.98	ND	NA
OAPIS-1	2/27/2021	12.96	ND	NA
OAPIS-1	3/31/2021	13.48	ND	NA
OAPIS-1	4/26/2021	13.24	ND	NA
OAPIS-1	5/20/2021	13.88	ND	NA
OAPIS-1	6/03/2021	13.08	ND	NA
GWM-1	3/03/2020	21.48	21.40	0.08
GWM-1	7/01/2020	20.37	20.82	-0.45
GWM-1	9/15/2020	21.40	20.73	0.67
GWM-1	11/09/2020	21.72	20.88	0.84
GWM-1	12/07/2020	21.85	20.91	0.94
GWM-1	1/28/2021	22.30	21.10	1.20
GWM-1	2/28/2021	22.57	21.19	1.38
GWM-1	3/31/2021	22.57	21.19	1.38
GWM-1	4/26/2021	22.98	22.14	0.84
GWM-1	5/20/2021	22.92	21.66	1.26
GWM-1	6/02/2021	22.67	21.26	1.41
GWM-2	3/03/2020	Dry	ND	NA
GWM-2	7/01/2020	Dry	ND	NA
GWM-2	9/15/2020	Dry	ND	NA
GWM-2	11/10/2020	Dry	ND	NA

**TABLE 12-1. 2020-2021 FLUID LEVEL DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location	Date Measured	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft)
Pot Surface - Chinle				
GWM-2	12/07/2020	Dry	ND	NA
GWM-2	1/28/2021	Dry	ND	NA
GWM-2	2/28/2021	Dry	ND	NA
GWM-2	3/31/2021	Dry	ND	NA
GWM-2	4/26/2021	Dry	ND	NA
GWM-2	5/20/2021	Dry	ND	NA
GWM-2	6/03/2021	Dry	ND	NA
GWM-3	3/03/2020	Dry	ND	NA
GWM-3	7/01/2020	Dry	ND	NA
GWM-3	9/15/2020	Dry	ND	NA
GWM-3	10/11/2020	Dry	ND	NA
GWM-3	12/07/2020	Dry	ND	NA
GWM-3	1/28/2021	Dry	ND	NA
GWM-3	2/28/2021	Dry	ND	NA
GWM-3	3/31/2021	Dry	ND	NA
GWM-3	4/26/2021	Dry	ND	NA
GWM-3	5/20/2021	Dry	ND	NA
GWM-3	6/03/2021	Dry	ND	NA
STP1-NW	3/03/2020	20.27	ND	NA
STP1-NW	6/30/2020	20.67	ND	NA
STP1-NW	12/08/2020	20.78	ND	NA
STP1-NW	1/28/2021	20.76	ND	NA
STP1-NW	2/28/2021	20.60	ND	NA
STP1-NW	3/31/2021	21.95	ND	NA
STP1-NW	4/26/2021	20.81	ND	NA
STP1-NW	5/20/2021	22.19	ND	NA
STP1-NW	6/03/2021	22.16	ND	NA
STP1-SW	3/03/2020	NA	NA	NA
STP1-SW	12/08/2020	29.23	NA	NA
STP1-SW	2/28/2021	29.12	29.10	0.02
STP1-SW	3/31/2021	29.15	ND	NA
STP1-SW	4/26/2021	28.96	ND	NA
STP1-SW	5/22/2021	29.70	ND	NA
STP1-SW	6/03/2021	28.97	ND	NA
MKTF-01	2/24/2020	5.16	4.87	0.29
MKTF-01	6/26/2020	5.71	5.50	0.21
MKTF-01	9/15/2020	5.62	5.61	0.01
MKTF-01	11/10/2020	5.89	5.61	0.28
MKTF-01	12/03/2020	6.02	5.74	0.28
MKTF-01	1/28/2021	8.08	7.60	0.48
MKTF-01	2/28/2021	5.93	5.70	0.23

**TABLE 12-1. 2020-2021 FLUID LEVEL DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location	Date Measured	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft)
Pot Surface - Chinle				
MKTF-01	3/31/2021	6.33	6.09	0.24
MKTF-01	4/26/2021	6.22	5.88	0.34
MKTF-01	5/20/2021	6.77	6.41	0.36
MKTF-01	6/01/2021	6.12	5.81	0.31
MKTF-02	2/24/2020	6.52	ND	NA
MKTF-02	6/26/2020	7.70	ND	NA
MKTF-02	9/15/2020	7.88	ND	NA
MKTF-02	11/10/2020	7.43	ND	NA
MKTF-02	12/03/2020	7.72	ND	NA
MKTF-02	1/28/2021	7.75	ND	NA
MKTF-02	2/28/2021	7.14	ND	NA
MKTF-02	3/31/2021	7.84	ND	NA
MKTF-02	4/26/2021	7.78	ND	NA
MKTF-02	5/20/2021	8.11	ND	NA
MKTF-02	6/01/2021	8.02	ND	NA
MKTF-03	3/05/2020	7.84	6.47	1.37
MKTF-03	6/26/2020	8.63	7.36	1.27
MKTF-03	9/15/2020	7.09	7.08	0.01
MKTF-03	11/10/2020	8.43	7.13	1.30
MKTF-03	12/03/2020	8.62	7.46	1.16
MKTF-03	1/28/2021	8.73	7.80	0.93
MKTF-03	2/28/2021	8.39	7.46	0.93
MKTF-03	3/31/2021	8.23	7.20	1.03
MKTF-03	4/26/2021	7.91	7.11	0.80
MKTF-03	5/20/2021	8.37	7.28	1.09
MKTF-03	6/01/2021	8.46	7.33	1.13
MKTF-04	3/02/2020	8.47	ND	NA
MKTF-04	6/26/2020	9.75	ND	NA
MKTF-04	9/15/2020	9.40	9.39	0.01
MKTF-04	11/10/2020	9.20	ND	NA
MKTF-04	12/03/2020	9.71	9.70	0.01
MKTF-04	1/28/2021	10.14	ND	NA
MKTF-04	2/28/2021	9.96	9.84	0.12
MKTF-04	3/31/2021	9.23	9.21	0.02
MKTF-04	4/26/2021	9.22	9.20	0.02
MKTF-04	5/20/2021	9.38	9.28	0.10
MKTF-04	6/01/2021	9.22	9.19	0.03
MKTF-05	3/05/2020	13.72	13.58	0.14
MKTF-05	6/25/2020	14.80	14.06	0.74
MKTF-05	9/15/2020	14.68	13.65	1.03
MKTF-05	11/10/2020	14.90	14.02	0.88

**TABLE 12-1. 2020-2021 FLUID LEVEL DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location	Date Measured	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft)
Pot Surface - Chinle				
MKTF-05	12/03/2020	14.93	14.12	0.81
MKTF-05	1/28/2021	15.13	14.94	0.19
MKTF-05	2/28/2021	14.75	14.60	0.15
MKTF-05	3/31/2021	15.05	14.99	0.06
MKTF-05	4/26/2021	15.17	15.03	0.14
MKTF-05	5/20/2021	15.09	15.02	0.07
MKTF-05	6/01/2021	14.96	14.88	0.08
MKTF-06	3/05/2020	18.60	16.89	1.71
MKTF-06	6/25/2020	18.90	14.05	4.85
MKTF-06	9/15/2020	18.71	16.78	1.93
MKTF-06	11/10/2020	18.59	17.20	1.39
MKTF-06	12/03/2020	18.49	17.38	1.11
MKTF-06	1/28/2021	19.65	18.09	1.56
MKTF-06	2/28/2021	18.65	17.93	0.72
MKTF-06	3/31/2021	18.15	17.97	0.18
MKTF-06	4/26/2021	17.95	17.88	0.07
MKTF-06	5/20/2021	18.13	18.01	0.12
MKTF-06	6/01/2021	18.25	18.09	0.16
MKTF-07	3/05/2020	13.72	12.50	1.22
MKTF-07	6/25/2020	13.76	12.23	1.53
MKTF-07	9/18/2020	13.77	11.42	2.35
MKTF-07	11/10/2020	13.76	12.56	1.20
MKTF-07	12/03/2020	13.80	12.93	0.87
MKTF-07	1/28/2021	14.20	13.80	0.40
MKTF-07	2/28/2021	13.72	13.51	0.21
MKTF-07	3/31/2021	13.81	13.70	0.11
MKTF-07	4/26/2021	13.76	13.51	0.25
MKTF-07	5/20/2021	13.81	13.68	0.13
MKTF-07	6/01/2021	13.63	13.52	0.11
MKTF-08	3/05/2020	14.37	14.03	0.34
MKTF-08	6/25/2020	14.40	14.00	0.40
MKTF-08	9/18/2020	14.15	13.76	0.39
MKTF-08	11/10/2020	14.69	14.23	0.46
MKTF-08	12/03/2020	14.76	14.36	0.40
MKTF-08	1/28/2021	15.15	14.84	0.31
MKTF-08	2/28/2021	14.89	14.76	0.13
MKTF-08	3/31/2021	14.70	14.60	0.10
MKTF-08	4/26/2021	14.75	14.64	0.11
MKTF-08	5/20/2021	14.71	14.63	0.08
MKTF-08	6/01/2021	14.79	14.71	0.08
MKTF-09	3/02/2020	14.23	ND	NA

**TABLE 12-1. 2020-2021 FLUID LEVEL DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location	Date Measured	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft)
Pot Surface - Chinle				
MKTF-09	6/25/2020	14.55	ND	NA
MKTF-09	9/18/2020	14.20	14.19	0.01
MKTF-09	11/10/2020	14.62	14.61	0.01
MKTF-09	12/03/2020	14.76	14.75	0.01
MKTF-09	1/28/2021	15.11	ND	NA
MKTF-09	2/28/2021	14.89	14.76	0.13
MKTF-09	3/31/2021	14.87	14.85	0.02
MKTF-09	4/26/2021	14.84	14.79	0.05
MKTF-09	5/20/2021	15.16	14.98	0.18
MKTF-09	6/01/2021	14.95	14.92	0.03
MKTF-10	3/02/2020	7.67	ND	NA
MKTF-10	6/25/2020	7.07	ND	NA
MKTF-10	9/18/2020	7.53	7.52	0.01
MKTF-10	11/10/2020	7.79	ND	NA
MKTF-10	12/03/2020	7.80	ND	NA
MKTF-10	1/28/2021	7.91	ND	NA
MKTF-10	2/28/2021	7.89	ND	NA
MKTF-10	3/31/2021	7.74	ND	NA
MKTF-10	4/26/2021	8.03	ND	NA
MKTF-10	5/20/2021	7.92	ND	NA
MKTF-10	6/01/2021	7.69	ND	NA
MKTF-11	3/02/2020	7.89	ND	NA
MKTF-11	6/26/2020	7.68	7.67	0.01
MKTF-11	9/18/2020	7.60	7.59	0.01
MKTF-11	11/10/2020	7.61	ND	NA
MKTF-11	12/03/2020	7.91	7.89	0.02
MKTF-11	1/28/2021	7.88	ND	NA
MKTF-11	2/28/2021	7.84	ND	NA
MKTF-11	3/31/2021	7.63	ND	NA
MKTF-11	4/26/2021	7.70	ND	NA
MKTF-11	5/20/2021	7.67	ND	NA
MKTF-11	6/01/2021	7.56	ND	NA
MKTF-12	2/27/2020	17.92	17.84	0.08
MKTF-12	6/29/2020	19.25	19.13	0.12
MKTF-12	9/18/2020	18.65	18.64	0.01
MKTF-12	11/10/2020	18.00	17.97	0.03
MKTF-12	12/03/2020	19.06	18.90	0.16
MKTF-12	1/28/2021	19.63	19.46	0.17
MKTF-12	2/28/2021	18.92	18.82	0.10
MKTF-12	3/31/2021	18.63	18.59	0.04
MKTF-12	4/26/2021	18.60	18.49	0.11

**TABLE 12-1. 2020-2021 FLUID LEVEL DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location	Date Measured	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft)
Pot Surface - Chinle				
MKTF-12	5/20/2021	18.73	18.70	0.03
MKTF-12	5/20/2021	19.08	19.03	0.05
MKTF-13	2/27/2020	17.31	11.13	6.18
MKTF-13	6/29/2020	18.21	12.67	5.54
MKTF-13	9/18/2020	16.92	12.55	4.37
MKTF-13	11/10/2020	16.36	11.98	4.38
MKTF-13	12/03/2020	16.65	12.84	3.81
MKTF-13	1/28/2021	17.26	13.25	4.01
MKTF-13	2/28/2021	16.90	12.60	4.30
MKTF-13	3/31/2021	16.65	12.21	4.44
MKTF-13	4/26/2021	16.33	12.25	4.08
MKTF-13	5/20/2021	16.70	12.11	4.59
MKTF-13	6/01/2021	15.67	11.93	3.74
MKTF-14	2/27/2020	5.65	5.35	0.30
MKTF-14	6/29/2020	8.58	6.38	2.20
MKTF-14	9/18/2020	8.16	6.18	1.98
MKTF-14	11/10/2020	6.28	5.98	0.30
MKTF-14	12/03/2020	7.06	6.79	0.27
MKTF-14	1/28/2021	7.41	7.11	0.30
MKTF-14	2/28/2021	6.98	6.64	0.34
MKTF-14	3/31/2021	6.26	6.14	0.12
MKTF-14	4/26/2021	6.18	6.11	0.07
MKTF-14	5/20/2021	6.31	6.20	0.11
MKTF-14	6/01/2021	5.97	5.81	0.16
MKTF-15	2/03/2020	13.11	13.02	0.09
MKTF-15	6/26/2020	13.17	13.11	0.06
MKTF-15	9/18/2020	13.03	13.00	0.03
MKTF-15	11/10/2020	13.60	13.39	0.21
MKTF-15	1/28/2021	13.75	13.54	0.21
MKTF-15	2/28/2021	13.52	13.45	0.07
MKTF-15	3/31/2021	13.42	13.39	0.03
MKTF-15	4/26/2021	13.32	13.11	0.21
MKTF-15	5/20/2021	13.58	13.51	0.07
MKTF-15	6/01/2021	13.47	13.43	0.04
MKTF-16	2/05/2020	9.68	ND	NA
MKTF-16	6/26/2020	9.54	ND	NA
MKTF-16	9/18/2020	9.19	9.18	0.01
MKTF-16	11/10/2020	7.20	ND	NA
MKTF-16	12/08/2020	9.70	ND	NA
MKTF-16	1/28/2021	6.15	ND	NA
MKTF-16	2/28/2021	8.84	ND	NA

**TABLE 12-1. 2020-2021 FLUID LEVEL DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location	Date Measured	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft)
Pot Surface - Chinle				
MKTF-16	3/31/2021	9.31	ND	NA
MKTF-16	4/26/2021	9.51	ND	NA
MKTF-16	5/20/2021	9.40	ND	NA
MKTF-16	6/01/2021	9.28	ND	NA
MKTF-16	6/23/2021	Dry	ND	NA
MKTF-17	2/03/2020	16.85	11.44	5.41
MKTF-17	6/29/2020	15.50	10.19	5.31
MKTF-17	9/14/2020	15.37	10.00	5.37
MKTF-17	11/10/2020	11.59	11.39	0.20
MKTF-17	12/04/2020	11.47	11.28	0.19
MKTF-17	1/28/2021	11.90	11.88	0.02
MKTF-17	2/28/2021	11.90	11.88	0.02
MKTF-17	3/31/2021	12.09	12.06	0.03
MKTF-17	4/26/2021	14.99	14.97	0.02
MKTF-17	5/20/2021	15.06	15.03	0.03
MKTF-17	6/01/2021	15.15	15.10	0.05
MKTF-18	2/05/2020	9.10	ND	NA
MKTF-18	6/30/2020	8.98	ND	NA
MKTF-18	9/18/2020	8.50	8.49	0.01
MKTF-18	11/10/2020	8.74	ND	NA
MKTF-18	12/04/2020	8.80	ND	NA
MKTF-18	1/28/2021	9.28	ND	NA
MKTF-18	2/28/2021	9.08	ND	NA
MKTF-18	3/31/2021	9.30	ND	NA
MKTF-18	4/26/2021	9.23	ND	NA
MKTF-18	5/20/2021	9.25	ND	NA
MKTF-18	6/01/2021	9.21	ND	NA
MKTF-19	2/03/2020	12.40	11.35	1.05
MKTF-19	6/29/2020	13.29	12.08	1.21
MKTF-19	9/14/2020	11.97	11.95	0.02
MKTF-19	11/10/2020	13.55	12.22	1.33
MKTF-19	12/04/2020	13.42	12.18	1.24
MKTF-19	1/28/2021	13.46	12.22	1.24
MKTF-19	2/28/2021	13.59	12.45	1.14
MKTF-19	3/31/2021	13.83	12.60	1.23
MKTF-19	4/26/2021	14.07	12.54	1.53
MKTF-19	5/20/2021	13.70	12.28	1.42
MKTF-19	6/01/2021	13.77	12.55	1.22
MKTF-20	2/05/2020	9.02	ND	NA
MKTF-20	6/26/2020	8.67	ND	NA
MKTF-20	9/15/2020	9.35	8.54	0.81

**TABLE 12-1. 2020-2021 FLUID LEVEL DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location	Date Measured	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft)
Pot Surface - Chinle				
MKTF-20	11/10/2020	8.90	8.10	0.80
MKTF-20	12/08/2020	8.95	8.76	0.19
MKTF-20	1/28/2021	9.60	8.99	0.61
MKTF-20	2/28/2021	Dry	ND	NA
MKTF-20	3/31/2021	9.23	8.95	0.28
MKTF-20	4/26/2021	9.43	9.14	0.29
MKTF-20	5/20/2021	9.17	8.90	0.27
MKTF-20	6/01/2021	9.30	9.01	0.29
MKTF-21	2/05/2020	8.25	ND	NA
MKTF-21	6/26/2020	8.20	8.17	0.03
MKTF-21	9/15/2020	7.09	7.08	0.01
MKTF-21	11/10/2020	6.41	ND	NA
MKTF-21	12/04/2020	8.05	8.04	0.01
MKTF-21	1/28/2021	7.34	ND	NA
MKTF-21	2/28/2021	7.81	ND	NA
MKTF-21	3/31/2021	7.73	ND	NA
MKTF-21	4/26/2021	7.28	ND	NA
MKTF-21	5/20/2021	7.40	ND	NA
MKTF-21	6/01/2021	6.98	ND	NA
MKTF-22	2/27/2020	25.53	24.48	1.05
MKTF-22	6/29/2020	27.71	24.57	3.14
MKTF-22	9/14/2020	27.68	24.98	2.70
MKTF-22	11/10/2020	27.29	24.94	2.35
MKTF-22	12/04/2020	27.55	25.10	2.45
MKTF-22	1/28/2021	27.97	25.28	2.69
MKTF-22	2/28/2021	27.85	25.17	2.68
MKTF-22	3/31/2021	27.25	25.77	1.48
MKTF-22	4/26/2021	26.23	26.01	0.22
MKTF-22	5/20/2021	26.98	25.15	1.83
MKTF-22	6/01/2021	28.20	26.10	2.10
MKTF-23	2/27/2020	13.42	ND	NA
MKTF-23	6/29/2020	13.25	ND	NA
MKTF-23	9/19/2020	15.44	15.42	0.02
MKTF-23	11/10/2020	14.23	ND	NA
MKTF-23	12/04/2020	14.16	14.15	0.01
MKTF-23	1/28/2021	14.23	14.22	0.01
MKTF-23	2/28/2021	14.39	14.38	0.01
MKTF-23	3/31/2021	14.21	ND	NA
MKTF-23	4/26/2021	13.90	ND	NA
MKTF-23	5/20/2021	14.19	ND	NA
MKTF-23	6/01/2021	13.98	ND	NA

**TABLE 12-1. 2020-2021 FLUID LEVEL DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location	Date Measured	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft)
Pot Surface - Chinle				
MKTF-24	2/24/2020	22.17	ND	NA
MKTF-24	6/26/2020	22.80	ND	NA
MKTF-24	9/15/2020	23.35	ND	NA
MKTF-24	11/10/2020	23.32	ND	NA
MKTF-24	12/04/2020	23.22	ND	NA
MKTF-24	1/28/2021	23.26	ND	NA
MKTF-24	2/27/2021	22.97	ND	NA
MKTF-24	3/31/2021	23.16	ND	NA
MKTF-24	4/26/2021	24.16	ND	NA
MKTF-24	5/20/2021	23.21	ND	NA
MKTF-24	6/01/2021	23.40	ND	NA
MKTF-25	2/26/2020	12.94	ND	NA
MKTF-25	6/26/2020	13.33	ND	NA
MKTF-25	9/15/2020	13.90	ND	NA
MKTF-25	11/10/2020	13.75	ND	NA
MKTF-25	12/04/2020	13.62	ND	NA
MKTF-25	1/28/2021	13.54	ND	NA
MKTF-25	2/27/2021	13.46	ND	NA
MKTF-25	3/31/2021	13.41	ND	NA
MKTF-25	4/26/2021	14.14	ND	NA
MKTF-25	5/20/2021	13.32	ND	NA
MKTF-25	6/01/2021	13.32	ND	NA
MKTF-26	2/26/2020	9.11	8.35	0.76
MKTF-26	6/26/2020	9.50	8.61	0.89
MKTF-26	9/15/2020	9.56	8.81	0.75
MKTF-26	11/10/2020	9.36	8.65	0.71
MKTF-26	12/04/2020	9.39	7.67	1.72
MKTF-26	1/28/2021	9.20	8.93	0.27
MKTF-26	2/27/2021	9.05	8.88	0.17
MKTF-26	3/31/2021	9.11	9.00	0.11
MKTF-26	4/26/2021	8.92	8.81	0.11
MKTF-26	5/20/2021	9.14	9.02	0.12
MKTF-26	6/01/2021	9.19	9.10	0.09
MKTF-27	2/24/2020	3.61	ND	NA
MKTF-27	6/30/2020	6.70	ND	NA
MKTF-27	9/15/2020	6.21	ND	NA
MKTF-27	11/10/2020	6.72	ND	NA
MKTF-27	12/04/2020	6.47	ND	NA
MKTF-27	1/28/2021	6.62	ND	NA
MKTF-27	2/28/2021	5.51	ND	NA
MKTF-27	3/31/2021	6.48	ND	NA

**TABLE 12-1. 2020-2021 FLUID LEVEL DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location	Date Measured	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft)
Pot Surface - Chinle				
MKTF-27	4/26/2021	6.18	ND	NA
MKTF-27	5/20/2021	6.52	ND	NA
MKTF-27	6/01/2021	6.69	ND	NA
MKTF-28	2/24/2020	4.53	ND	NA
MKTF-28	6/30/2020	4.84	ND	NA
MKTF-28	9/15/2020	4.59	ND	NA
MKTF-28	11/10/2020	8.81	ND	NA
MKTF-28	12/04/2020	7.13	ND	NA
MKTF-28	1/28/2021	9.74	ND	NA
MKTF-28	2/28/2021	8.18	ND	NA
MKTF-28	3/31/2021	8.51	ND	NA
MKTF-28	4/26/2021	8.47	ND	NA
MKTF-28	5/20/2021	7.94	ND	NA
MKTF-28	6/01/2021	7.87	ND	NA
MKTF-29	2/24/2020	4.49	ND	NA
MKTF-29	6/26/2020	6.42	ND	NA
MKTF-29	9/15/2020	8.01	ND	NA
MKTF-29	11/10/2020	6.98	ND	NA
MKTF-29	12/04/2020	6.40	ND	NA
MKTF-29	1/28/2021	5.61	ND	NA
MKTF-29	2/28/2021	5.31	ND	NA
MKTF-29	3/31/2021	5.20	ND	NA
MKTF-29	4/26/2021	4.92	ND	NA
MKTF-29	5/20/2021	5.21	ND	NA
MKTF-29	6/01/2021	4.12	ND	NA
MKTF-30	2/26/2020	15.31	ND	NA
MKTF-30	6/26/2020	16.19	ND	NA
MKTF-30	9/15/2020	16.66	ND	NA
MKTF-30	11/10/2020	16.87	ND	NA
MKTF-30	12/04/2020	16.76	ND	NA
MKTF-30	1/28/2021	16.79	ND	NA
MKTF-30	2/28/2021	16.33	ND	NA
MKTF-30	3/31/2021	16.40	ND	NA
MKTF-30	4/26/2021	16.20	ND	NA
MKTF-30	5/20/2021	16.39	ND	NA
MKTF-30	6/01/2021	16.32	ND	NA
MKTF-31	2/24/2020	8.10	ND	NA
MKTF-31	6/26/2020	8.25	ND	NA
MKTF-31	9/15/2020	8.75	ND	NA
MKTF-31	11/10/2020	8.79	ND	NA
MKTF-31	12/04/2020	8.73	ND	NA

**TABLE 12-1. 2020-2021 FLUID LEVEL DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location	Date Measured	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft)
Pot Surface - Chinle				
MKTF-31	1/28/2021	8.62	ND	NA
MKTF-31	2/28/2021	8.53	ND	NA
MKTF-31	3/31/2021	8.61	ND	NA
MKTF-31	4/26/2021	8.40	ND	NA
MKTF-31	5/20/2021	8.51	ND	NA
MKTF-31	6/01/2021	8.43	ND	NA
MKTF-32	2/26/2020	13.78	ND	NA
MKTF-32	6/29/2020	14.25	ND	NA
MKTF-32	9/14/2020	14.58	ND	NA
MKTF-32	11/10/2020	14.31	ND	NA
MKTF-32	12/04/2020	14.25	ND	NA
MKTF-32	1/28/2021	14.08	14.08	0
MKTF-32	2/27/2021	14.02	14.01	0.01
MKTF-32	3/31/2021	14.11	ND	NA
MKTF-32	4/26/2021	13.90	ND	NA
MKTF-32	5/20/2021	14.15	ND	NA
MKTF-32	6/01/2021	13.86	ND	NA
MKTF-33	2/27/2020	22.71	ND	NA
MKTF-33	6/29/2020	21.17	ND	NA
MKTF-33	9/14/2020	28.02	21.61	6.41
MKTF-33	11/10/2020	27.81	21.65	6.16
MKTF-33	12/04/2020	27.77	21.69	6.08
MKTF-33	1/28/2021	25.96	22.58	3.38
MKTF-33	2/27/2021	23.75	23.00	0.75
MKTF-33	3/31/2021	23.41	23.19	0.22
MKTF-33	4/26/2021	24.77	24.16	0.61
MKTF-33	5/20/2021	23.52	23.21	0.31
MKTF-33	6/01/2021	23.45	23.07	0.38
MKTF-34	2/05/2020	17.78	ND	NA
MKTF-34	6/29/2020	19.06	19.04	0.02
MKTF-34	9/14/2020	19.09	ND	NA
MKTF-34	11/10/2020	19.08	ND	NA
MKTF-34	12/04/2020	18.92	18.91	0.01
MKTF-34	1/28/2021	19.39	ND	NA
MKTF-34	2/28/2021	18.41	18.40	0.01
MKTF-34	3/31/2021	20.61	ND	NA
MKTF-34	4/26/2021	22.61	ND	NA
MKTF-34	5/20/2021	20.60	ND	NA
MKTF-34	6/01/2021	20.23	ND	NA
MKTF-35	2/05/2020	9.28	ND	NA
MKTF-35	6/30/2020	9.25	ND	NA

**TABLE 12-1. 2020-2021 FLUID LEVEL DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location	Date Measured	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft)
Pot Surface - Chinle				
MKTF-35	9/14/2020	8.59	ND	NA
MKTF-35	11/10/2020	8.86	ND	NA
MKTF-35	12/04/2020	9.03	9.02	0.01
MKTF-35	1/28/2021	9.46	ND	NA
MKTF-35	2/28/2021	9.17	ND	NA
MKTF-35	3/31/2021	9.50	ND	NA
MKTF-35	4/26/2021	10.33	ND	NA
MKTF-35	5/20/2021	9.60	ND	NA
MKTF-35	6/01/2021	9.47	ND	NA
MKTF-36	2/03/2020	8.44	7.89	0.55
MKTF-36	6/30/2020	8.25	8.04	0.21
MKTF-36	9/14/2020	7.87	ND	NA
MKTF-36	11/10/2020	8.03	7.98	0.05
MKTF-36	12/04/2020	8.17	8.10	0.07
MKTF-36	1/28/2021	8.18	8.13	0.05
MKTF-36	2/28/2021	8.27	8.26	0.01
MKTF-36	3/31/2021	8.36	ND	NA
MKTF-36	4/26/2021	8.91	ND	NA
MKTF-36	5/20/2021	8.30	ND	NA
MKTF-36	6/01/2021	8.11	ND	NA
MKTF-37	2/03/2020	9.89	9.77	0.12
MKTF-37	6/30/2020	9.63	9.61	0.02
MKTF-37	9/14/2020	8.76	ND	NA
MKTF-37	11/10/2020	9.37	9.36	0.01
MKTF-37	12/04/2020	9.65	9.64	0.01
MKTF-37	1/28/2021	9.65	9.64	0.01
MKTF-37	2/28/2021	9.67	9.65	0.02
MKTF-37	3/31/2021	9.85	9.83	0.02
MKTF-37	4/26/2021	10.13	10.10	0.03
MKTF-37	5/20/2021	9.82	9.79	0.03
MKTF-37	6/01/2021	9.90	9.86	0.04
MKTF-38	3/04/2020	9.61	ND	NA
MKTF-38	6/26/2020	9.38	ND	NA
MKTF-38	9/14/2020	8.55	ND	NA
MKTF-38	11/10/2020	9.12	ND	NA
MKTF-38	12/04/2020	9.36	9.35	0.01
MKTF-38	2/28/2021	9.22	ND	NA
MKTF-38	2/28/2021	9.17	ND	NA
MKTF-38	3/31/2021	9.30	ND	NA
MKTF-38	4/26/2021	8.86	ND	NA
MKTF-38	5/20/2021	9.31	ND	NA

**TABLE 12-1. 2020-2021 FLUID LEVEL DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location	Date Measured	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft)
Pot Surface - Chinle				
MKTF-38	5/20/2021	8.95	ND	NA
MKTF-39	2/03/2020	10.10	ND	NA
MKTF-39	6/26/2020	9.63	ND	NA
MKTF-39	9/15/2020	9.58	ND	NA
MKTF-39	11/10/2020	10.05	ND	NA
MKTF-39	12/04/2020	10.15	ND	NA
MKTF-39	1/28/2021	11.58	9.45	2.13
MKTF-39	2/28/2021	10.02	9.31	0.71
MKTF-39	3/31/2021	10.20	9.38	0.82
MKTF-39	4/26/2021	11.19	11.16	0.03
MKTF-39	5/20/2021	10.22	9.36	0.86
MKTF-39	6/01/2021	10.06	9.27	0.79
MKTF-40	2/27/2020	13.23	ND	NA
MKTF-40	6/26/2020	12.75	ND	NA
MKTF-40	9/15/2020	13.39	ND	NA
MKTF-40	11/10/2020	13.71	ND	NA
MKTF-40	12/04/2020	13.99	ND	NA
MKTF-40	1/28/2021	14.22	ND	NA
MKTF-40	2/28/2021	14.17	ND	NA
MKTF-40	3/31/2021	14.65	ND	NA
MKTF-40	4/26/2021	15.65	ND	NA
MKTF-40	5/20/2021	14.63	ND	NA
MKTF-40	6/01/2021	14.70	ND	NA
MKTF-41	2/26/2020	20.15	ND	NA
MKTF-41	6/29/2020	19.77	ND	NA
MKTF-41	9/14/2020	20.72	ND	NA
MKTF-41	11/10/2020	21.01	ND	NA
MKTF-41	12/04/2020	20.90	ND	NA
MKTF-41	1/28/2021	21.21	ND	NA
MKTF-41	2/27/2021	21.11	ND	NA
MKTF-41	3/31/2021	21.41	ND	NA
MKTF-41	4/26/2021	21.41	ND	NA
MKTF-41	5/20/2021	21.40	ND	NA
MKTF-41	6/01/2021	21.14	ND	NA
MKTF-42	2/26/2020	16.79	ND	NA
MKTF-42	6/30/2020	16.25	ND	NA
MKTF-42	9/14/2020	16.35	ND	NA
MKTF-42	11/10/2020	15.30	ND	NA
MKTF-42	12/04/2020	16.41	ND	NA
MKTF-42	1/28/2021	16.85	ND	NA
MKTF-42	2/27/2021	16.83	ND	NA

**TABLE 12-1. 2020-2021 FLUID LEVEL DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location	Date Measured	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft)
Pot Surface - Chinle				
MKTF-42	3/31/2021	17.17	ND	NA
MKTF-42	4/26/2021	18.91	ND	NA
MKTF-42	5/20/2021	17.10	ND	NA
MKTF-42	6/01/2021	17.07	ND	NA
MKTF-43	2/26/2020	6.33	ND	NA
MKTF-43	6/30/2020	5.50	ND	NA
MKTF-43	9/14/2020	6.45	ND	NA
MKTF-43	11/10/2020	7.48	ND	NA
MKTF-43	12/04/2020	8.12	ND	NA
MKTF-43	1/28/2021	8.69	ND	NA
MKTF-43	2/27/2021	8.67	ND	NA
MKTF-43	3/31/2021	8.49	ND	NA
MKTF-43	4/26/2021	8.66	ND	NA
MKTF-43	5/20/2021	8.47	ND	NA
MKTF-43	6/01/2021	8.61	ND	NA
MKTF-44	3/04/2020	30.34	ND	NA
MKTF-44	6/26/2020	33.08	ND	NA
MKTF-44	9/14/2020	28.00	ND	NA
MKTF-44	12/04/2020	39.59	ND	NA
MKTF-44	2/28/2021	38.50	ND	NA
MKTF-44	3/31/2021	45.28	ND	NA
MKTF-44	4/26/2021	45.33	ND	NA
MKTF-44	5/20/2021	45.11	ND	NA
MKTF-44	6/01/2021	44.28	ND	NA
MKTF-45	2/03/2020	18.62	9.60	9.02
MKTF-45	6/30/2020	19.08	11.08	8.00
MKTF-45	9/14/2020	18.43	13.14	5.29
MKTF-45	11/10/2020	14.76	12.94	1.82
MKTF-45	12/04/2020	14.51	12.66	1.85
MKTF-45	1/28/2021	16.13	16.00	0.13
MKTF-45	2/27/2021	13.56	13.55	0.01
MKTF-45	3/31/2021	15.57	15.55	0.02
MKTF-45	4/26/2021	16.37	16.34	0.03
MKTF-45	5/20/2021	16.01	15.50	0.51
MKTF-45	6/01/2021	16.05	16.03	0.02
MKTF-46	3/05/2020	10.93	ND	NA
MKTF-46	6/30/2020	11.08	ND	NA
MKTF-46	9/14/2020	10.18	ND	NA
MKTF-46	11/10/2020	10.57	ND	NA
MKTF-46	12/04/2020	10.77	ND	NA
MKTF-46	1/28/2021	11.32	ND	NA

**TABLE 12-1. 2020-2021 FLUID LEVEL DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location	Date Measured	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft)
Pot Surface - Chinle				
MKTF-46	2/27/2021	10.82	ND	NA
MKTF-46	3/31/2021	10.90	ND	NA
MKTF-46	4/26/2021	11.13	ND	NA
MKTF-46	5/20/2021	11.03	ND	NA
MKTF-46	6/01/2021	11.09	ND	NA
MKTF-47	3/05/2020	9.89	ND	NA
MKTF-47	6/29/2020	9.50	ND	NA
MKTF-47	9/15/2020	8.54	8.53	0.01
MKTF-47	11/10/2020	9.33	ND	NA
MKTF-47	12/04/2020	9.59	9.58	0.01
MKTF-47	1/28/2021	9.34	ND	NA
MKTF-47	2/27/2021	9.15	ND	NA
MKTF-47	3/31/2021	Dry	ND	NA
MKTF-47	4/26/2021	Dry	ND	NA
MKTF-47	5/20/2021	Dry	ND	NA
MKTF-47	6/01/2021	Dry	ND	NA
MKTF-48	3/03/2020	12.82	12.66	0.16
MKTF-48	6/29/2020	11.58	ND	NA
MKTF-48	9/15/2020	11.86	11.85	0.01
MKTF-48	11/10/2020	12.51	12.40	0.11
MKTF-48	12/04/2020	13.10	12.77	0.33
MKTF-48	1/28/2021	12.20	12.19	0.01
MKTF-48	2/27/2021	12.25	12.19	0.06
MKTF-48	3/31/2021	12.65	12.41	0.24
MKTF-48	4/26/2021	13.95	13.71	0.24
MKTF-48	5/20/2021	12.52	12.38	0.14
MKTF-48	6/01/2021	12.88	12.64	0.24
MKTF-49	3/04/2020	20.27	ND	NA
MKTF-49	6/30/2020	20.65	ND	NA
MKTF-49	9/15/2020	20.33	ND	NA
MKTF-49	11/10/2020	20.75	ND	NA
MKTF-49	12/04/2020	20.81	ND	NA
MKTF-49	1/28/2021	21.05	ND	NA
MKTF-49	2/28/2021	21.05	ND	NA
MKTF-49	3/31/2021	21.15	ND	NA
MKTF-49	4/26/2021	20.11	ND	NA
MKTF-49	5/20/2021	21.21	ND	NA
MKTF-49	6/01/2021	20.92	ND	NA
MKTF-49	6/16/2021	22.08	21.40	0.68
MKTF-50	3/04/2020	15.87	ND	NA
MKTF-50	6/30/2020	16.00	ND	NA

**TABLE 12-1. 2020-2021 FLUID LEVEL DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location	Date Measured	Depth to Water (ft-bmp)	Depth to Product (ft-bmp)	Product Thickness (ft)
Pot Surface - Chinle				
MKTF-50	9/15/2020	15.37	15.36	0.01
MKTF-50	11/10/2020	16.03	ND	NA
MKTF-50	12/04/2020	16.17	ND	NA
MKTF-50	1/28/2021	16.43	ND	NA
MKTF-50	2/28/2021	16.38	ND	NA
MKTF-50	3/31/2021	16.48	ND	NA
MKTF-50	4/26/2021	16.19	ND	NA
MKTF-50	5/20/2021	16.47	ND	NA
MKTF-50	6/01/2021	16.66	ND	NA
MKTF-50	6/16/2021	16.85	16.68	0.17
KA-3	3/03/2020	9.30	ND	NA
KA-3	7/01/2020	8.75	ND	NA
KA-3	12/07/2020	9.56	ND	NA
KA-3	1/28/2021	10.50	ND	NA
KA-3	2/28/2021	10.55	ND	NA
KA-3	3/31/2021	10.68	ND	NA
KA-3	4/26/2021	9.82	ND	NA
KA-3	5/20/2021	11.03	ND	NA
KA-3	6/03/2021	10.40	ND	NA
Pot Surface - Alluvial				
BW-1A	9/14/2020	Dry	ND	NA
BW-2A	9/14/2020	32.93	ND	NA
BW-3A	9/14/2020	Dry	ND	NA
BW-4A	3/09/2020	38.34	ND	NA
BW-4A	6/30/2020	Dry	ND	NA
BW-4A	9/14/2020	Dry	ND	NA
BW-4A	12/07/2020	Dry	ND	NA
BW-4A	2/27/2021	Dry	ND	NA
BW-4A	6/03/2021	Dry	ND	NA
BW-5A	3/05/2020	Dry	ND	NA
BW-5A	6/26/2020	23.21	ND	NA
BW-5A	9/14/2020	Dry	ND	NA
BW-5A	12/07/2020	23.27	ND	NA
BW-5A	2/27/2021	23.23	ND	NA
BW-5A	6/03/2021	Dry	ND	NA

NOTES:

ft-bmp - feet below measuring point

ft - feet

ND - Not Detected

NA - Not applicable

**TABLE 12-2. 2020 FIELD PARAMETERS DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location ID	Date Sampled	Specific	Dissolved Oxygen,	ORP, Field (mV)	pH, Field (Std Units)	Solids, Total	Temperature, Field (oC)
		Conductance Field (umhos/cm)	Field (mg/L)			Dissolved, Field (mg/L)	
BW-1C	09/20/20	1480	0.66	189	8.99	962	15.4
BW-2A	09/20/20	1500	0.55	34.6	7.95	975	15
BW-2B	09/21/20	2390	0.75	231.7	8.11	1553.8	13.7
BW-2C	09/22/20	8790.2	2.41	245.9	9.62	923	14.5
BW-3B	09/21/20	1640	0.49	75.8	8.36	1066	14.1
BW-3C	09/22/20	7922.3	1.19	205.5	9.51	1040	13.9
BW-5B	09/20/20	2890	2.41	245.6	8.71	1878	14.4
BW-5C	09/19/20	6700	1.24	65.8	8.01	4361	12.6
KA-3	09/22/20	2220	1.06	-30.2	7.61	1443	25
MKTF-02	09/15/20	--	--	--	6.72	--	--
	09/21/20	5271	0.21	285.1	6.72	4297	14.76
MKTF-09	09/20/20	6019	1.7	210.5	7.07	4627	16.89
MKTF-23	09/18/20	2183	1.76	206.1	6.23	1881	12.2
MKTF-24	09/15/20	--	--	--	7.55	--	--
	09/19/20	3454	2.65	238.9	7.55	2960	12.35
MKTF-25	09/19/20	4060	11.68	86.3	5.51	3341	14.01
MKTF-27	09/15/20	--	--	--	6.81	--	--
	09/20/20	1089	1.79	324.1	6.81	8099	18.46
MKTF-28	09/15/20	--	--	--	7.35	--	--
	09/20/20	3278	3.36	260.1	7.35	2502	21.08
MKTF-29	09/15/20	--	--	--	7.07	--	--
MKTF-30	09/15/20	--	--	--	7.52	--	--
	09/20/20	3814	4.06	277.4	7.52	3070	14.91
MKTF-31	09/15/20	--	--	--	6.43	--	--
	09/19/20	2765	2.11	113.5	6.43	2013	19.32
MKTF-32	09/14/20	--	--	--	7.91	--	--
	09/20/20	2310	0.23	362.5	7.91	1881	14.4
MKTF-34	09/14/20	--	--	--	7.42	--	--
	09/16/20	2237	2.27	227.5	7.42	1830	14.22
MKTF-35	09/14/20	--	--	--	6.72	--	--
	09/16/20	2305	1.18	91.4	6.72	1642	20.42
MKTF-36	09/14/20	1868	2.85	31.1	6.87	1334	20.33
MKTF-37	09/14/20	--	--	--	7.04	--	--
	09/17/20	1629	3.14	56.1	7.04	1213	18.34
MKTF-38	09/14/20	--	--	--	7.8	--	--

Notes:
umhos/cm - micromhos per centimeter
mg/L - milligrams per liter
mV - millivolts
deg. C - degrees Celsius

**TABLE 12-2. 2020 FIELD PARAMETERS DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location ID	Date Sampled	Specific	Dissolved Oxygen,	ORP, Field (mV)	pH, Field (Std Units)	Solids, Total	Temperature, Field (oC)
		Conductance Field (umhos/cm)	Field (mg/L)			Dissolved, Field (mg/L)	
MKTF-38	09/19/20	2764	1.98	165.2	7.8	2022	19.2
MKTF-39	09/15/20	--	--	--	6.74	--	--
MKTF-40	09/19/20	1314	4.04	147.5	6.74	1314	19.04
	09/15/20	--	--	--	7.01	--	--
MKTF-41	09/19/20	8303	5.01	128.5	7.01	6555	15.7
	09/14/20	--	--	--	8.23	--	--
MKTF-42	09/21/20	2794	1.83	335.2	8.23	2359	12.96
	09/14/20	--	--	--	8.27	--	--
MKTF-43	09/21/20	3167	1.52	338.4	8.27	2611	13.89
	09/14/20	--	--	--	6.86	--	--
MKTF-44	09/21/20	21280	1.53	326.5	6.86	16310	16.97
	09/14/20	--	--	--	7.91	--	--
MKTF-46	09/21/21	3409	5.05	339.7	7.91	2865	13.08
	09/14/20	2452	3.56	181.5	7.15	1853	17.68
MKTF-49	09/15/20	--	--	--	6.91	--	--
	09/20/20	4778	2.52	308.4	6.91	3916	14.17
MW-1	09/22/20	10306.4	0.62	219.9	9.83	773.5	14.5
MW-2	09/18/20	1240	0.98	221.8	7.01	806	14.5
MW-4	09/18/20	1290	3.29	216.7	8.9	838.5	14.3
MW-5	09/21/20	1220	0.47	209.7	9.29	806	14.3
NAPIS-2	09/22/20	6406.2±0	6.96	146.5±0	8.23±0	975	26.9±0
NAPIS-3	09/22/20	3757.5	2.67	209	8.16	1696.5	24.6
OAPIS-1	09/22/20	1383±0	0.81	248.2±0	8.02±0	4426	17.7±0
OW-01	09/20/20	1620	0.86	232.2	8.56	1058	14.9
OW-10	09/20/20	3190	0.54	166	7.7	2067	13.3
OW-11	09/20/20	3200	0.69	176.6	8.64	2080	15
OW-12	09/17/20	1230	2.57	251.7	9.95	799.5	17.5
OW-13	09/17/20	1410	0.93	182.1	8.61	916.5	13.3
OW-29	09/17/20	2.27	0.54	60	7.91	1432	13.6
OW-50	09/17/20	1350	0.41	147.5	8.62	884	13.1
OW-52	09/17/20	1.13	0.46	114.3	8.72	734.5	12.7
OW-56	09/21/20	3170	5.22	145.3	7.95	2067	15.5
OW-57	09/18/20	1930	0.97	89	7.66	641.25	15
OW-58	09/17/20	2100	1.22	-49.6	7.85	1358.5	15.1
OW-58A	09/18/20	2560	0.89	69.9	7.49	1664	14.1

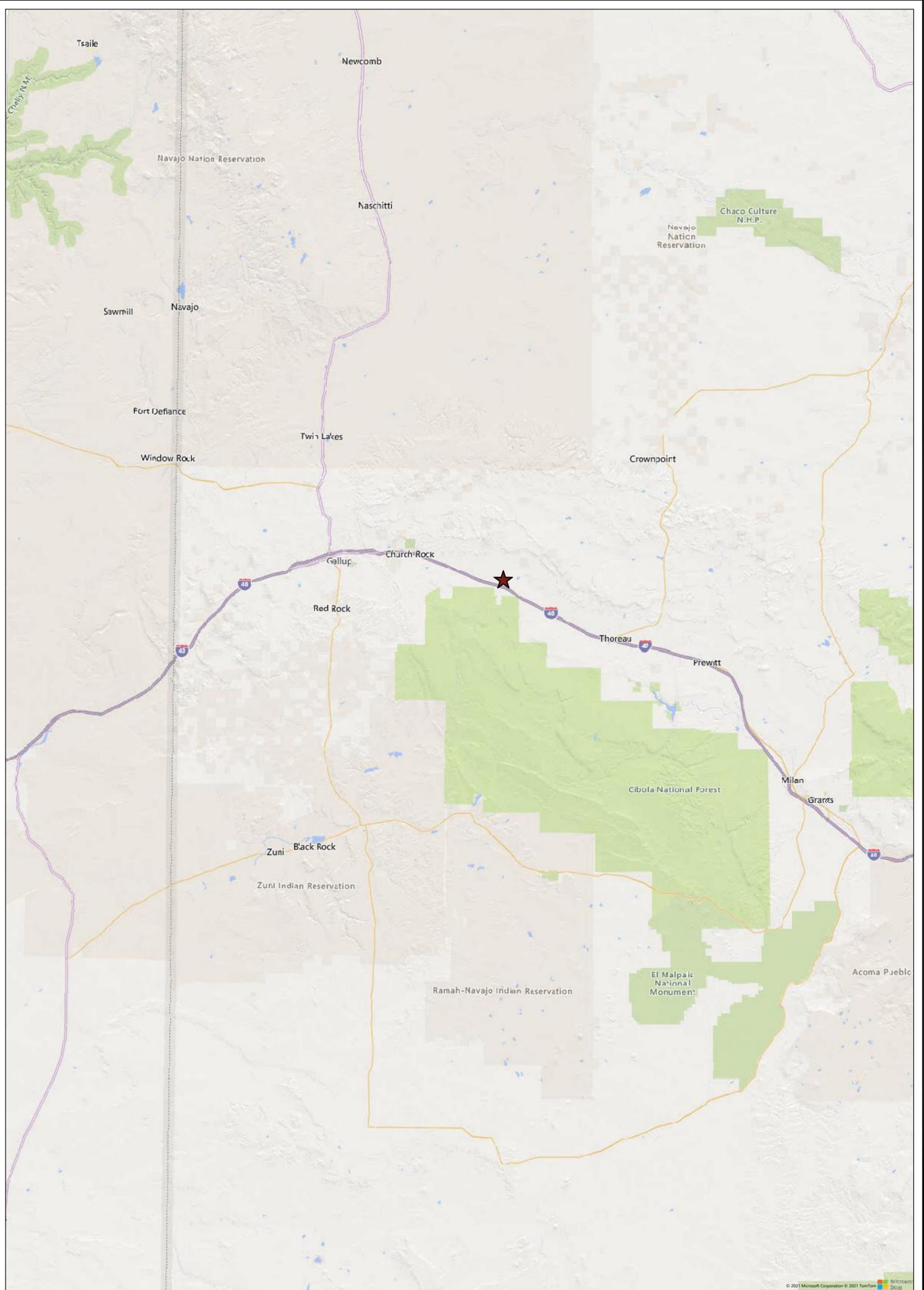
Notes:
umhos/cm - micromhos per centimeter
mg/L - milligrams per liter
mV - millivolts
deg. C - degrees Celsius

**TABLE 12-2. 2020 FIELD PARAMETERS DATA
WESTERN REFINING SOUTHWEST LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Location ID	Date Sampled	Specific Conductance Field (umhos/cm)	Dissolved Oxygen, Field (mg/L)	ORP, Field (mV)	pH, Field (Std Units)	Solids, Total Dissolved, Field (mg/L)	Temperature, Field (oC)
OW-59	09/19/20	12030	2.03	279.4	7.38	780.6	15.9
OW-60	09/21/20	7440	4.11	217.3	8.23	484.2	15.1
OW-63	09/22/20	1800	0.53	-76.4	7.67	1163.5	14.3
OW-64	09/22/20	5493.3	2.53	224.5	8.5	1404	16.8
SMW-2	09/19/20	12880	2.46	224.6	7.64	841.8	15.1
SMW-4	09/20/20	1340	1.04	190	8.7	902.7	16.1

Notes:
umhos/cm - micromhos per centimeter
mg/L - milligrams per liter
mV - millivolts
deg. C - degrees Celsius

Figures

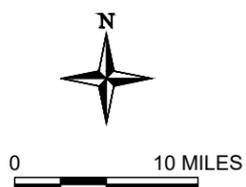


\\TRHYDRO\CLIENTS\TON\MARATHON\CADD\GALLUP\REPORTS\OILCONSERVATION\DISCHARGE\APPLICATION\697-GAOC-REGIONMAP

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EXPLANATION

★ GALLUP REFINERY LOCATION



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

FIGURE 1-1

REGIONAL MAP

**WESTERN REFINING SOUTHWEST, LLC
GALLUP REFINERY
GALLUP, NEW MEXICO**

Drawn By: REP | Checked By: MS | Scale: 1" = 10 MI | Date: 1/8/21 | File: 697-GAOC-REGIONMAP

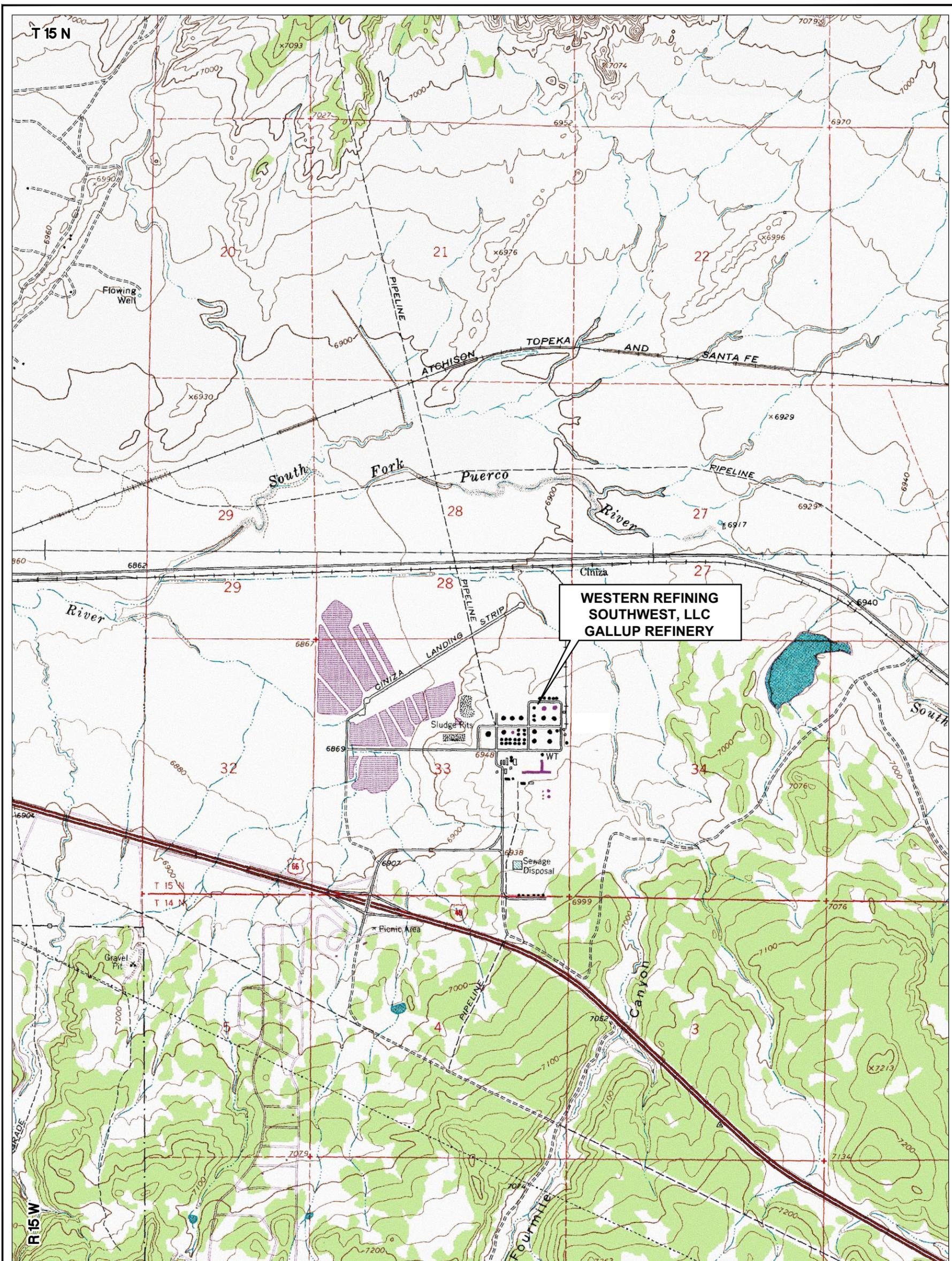


Image Cite: U.S. Geological Survey, 1:24,000-Scale 7.5 Minute Digital Raster Graphic Quadrangle, McKinley County, Publication: 2004

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



QUADRANGLE LOCATION



0 2,000'

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

FIGURE 3-1

TOPOGRAPHIC MAP

WESTERN REFINING SOUTHWEST, LLC
 GALLUP REFINERY
 GALLUP, NEW MEXICO

Drawn By: REP Checked By: MS Scale: 1" = 2,000' Date: 1/8/21 File: 697-GA0CD-TOPOMAP

\\TRIHYRO.COM\CLIENTS\TON\MARATHON\CADD\GALLUP\REPORTS\OILCONSERVATION\DISCHARGE\APPLICATION_697-GA0CD-TOPOMAP



Image Cite: DigitalGlobe © CNES (2019) Distribution Airbus DS © Microsoft Corporation, BING Imagery

NOTE:

THE FOLLOWING WORK INVESTIGATIONS ARE COMPLETED SITE WIDE: GROUNDWATER MONITORING, FENCELINE MONITORING, WEEKLY ON-SITE SUPPORT.

EXPLANATION

-  TANK OR OTHER STRUCTURE AND DESIGNATION
-  PROPERTY BOUNDARY (APPROXIMATE)
-  BORROW PIT (APPROXIMATE)
- 



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

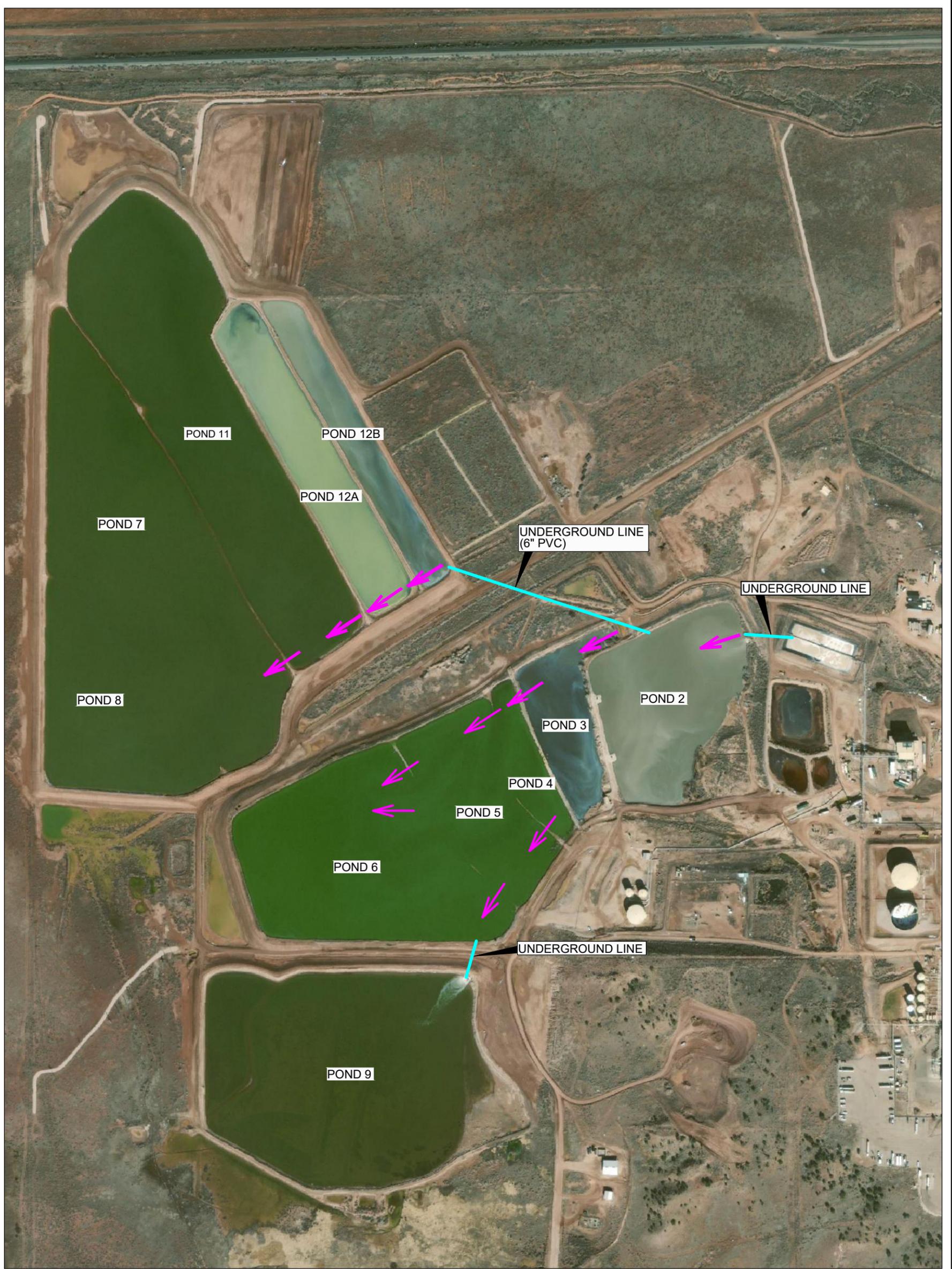
FIGURE 5-1

SITE MAP

**WESTERN REFINING SOUTHWEST, LLC
GALLUP REFINERY
GALLUP, NEW MEXICO**

Drawn By: REP | Checked By: CF | Scale: 1" = 400' | Date: 4/21/2021 | File: 697-GA OCD-SITEMAP

\\TRIHYRO.COM\CLIENTS\TONY MARRATHON\CADD\GALLUP\REPORTS\OILCONSERVATION\DISCHARGE\APPLICATION\697-GA OCD-SITEMAP



Modified From: DiSorbo Environmental Consulting Firm, Evaporation Ponds Flow Path of Wastewater and Sampling Locations; June 26, 2019

NOTE:

ORIGINAL DISORBO DOCUMENT CONTAINED SAMPLE LOCATIONS WHICH HAVE BEEN REMOVED BY TRIHYDRO FOR PROJECT SPECIFIC MODIFICATIONS.

EXPLANATION

- FLOW DIRECTION
- UNDERGROUND LINE

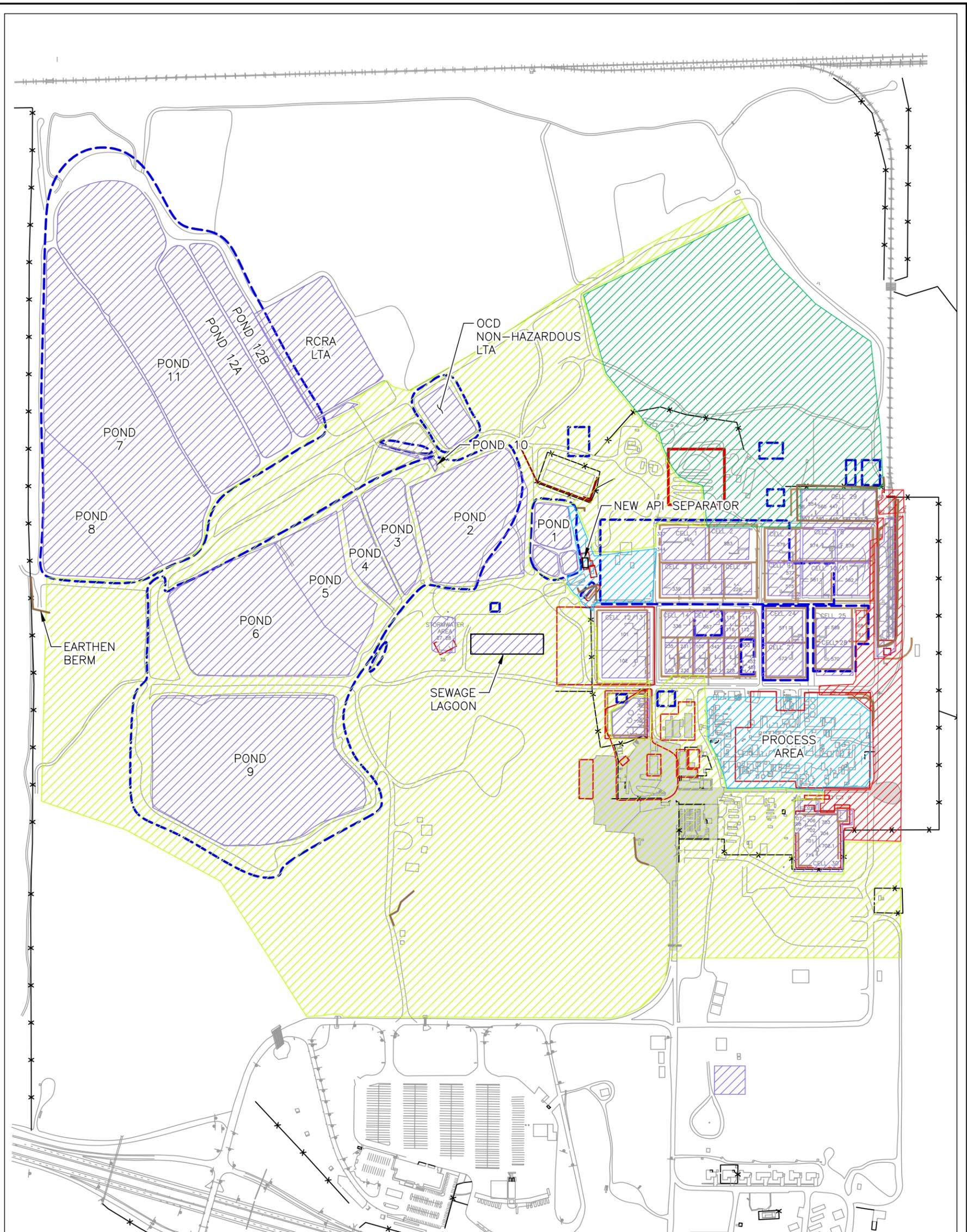


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CORPORATION
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Laramie, Wyoming 82070
www.trihydro.com
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FIGURE 5-2

EVAPORATION PONDS

**WESTERN REFINING SOUTHWEST, LLC
GALLUP REFINERY
GALLUP, NEW MEXICO**



EXPLANATION

- NEW FACILITY BOUNDARY
- 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

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.



0 600'

FIGURE 12-1

**STORMWATER CATCH BASINS
2021**

**WESTERN REFINING SOUTHWEST, LLC
GALLUP REFINERY
GALLUP, NEW MEXICO**

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

\\MONTWARRATION\GIS\PROJECTS\GALLUPREFINERY\OOD_OILCONSERVATION\DIVISION\DISCHARGE\APPLICATION\2021\1\4_ADDNL_WELL_INSTALL\2021_FIG2-4.MXD



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

EXPLANATION

-  EXISTING MONITORING WELL LOCATION
-  PROPOSED REPLACEMENT OF EXISTING MONITORING WELL LOCATION
-  PROPOSED NEW MONITORING WELL

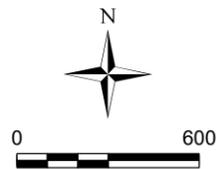


FIGURE 12-2
MONITORING WELLS AND PROPOSED WELL LOCATIONS
WESTERN REFINING SOUTHWEST, LLC
GALLUP REFINERY
GALLUP, NEW MEXICO

Drawn By: KEJ Checked By: CF Scale: 1" = 600' Date: 7/16/21 File: 2-4_Addnl_Well_Install2021_Fig2-4.mxd

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd E. Leahy, JD, PhD
Deputy Secretary

Adrienne Sandoval, Director
Oil Conservation Division



BY ELECTRONIC MAIL ONLY

June 15, 2021

John Moore, P.E.
Environmental Superintendent
Gallup Refinery
Western Refining Southwest, Inc.
I-40, Exit 39
Jamestown, New Mexico 87347

Re: Discharge Permit Requirement for Gallup Refinery

Dear Mr. Moore:

On May 14, 2021, the Oil Conservation Division (“Division”) advised Western Refining Southwest, Inc. (“Western”) that it must submit an application for a discharge permit for the Gallup Refinery no later than sixty (60) days after receipt of the letter. On May 26, 2021, Western sent an email requesting clarification on several topics. The Division’s responses are provided below in italics.

- Please clarify the alleged discharge that requires a discharge permit.

The Gallup Refinery has surface evaporation ponds and a wastewater treatment system, and other possible sources of ground water contamination. Section 3104 of 20.6.2 NMAC prohibits a person from causing or allowing effluent or leachate to move directly or indirectly into ground water without a discharge permit. This requirement applies to actual and potential discharges, and the person’s intent to cause or allow the discharge is irrelevant. The surface evaporation ponds and wastewater treatment system both have the potential to discharge.

- Western has not modified the Gallup Refinery since the Division revoked GW-32, so no discharge permit is required.

The Division incorrectly interpreted the requirement for a discharge permit when it revoked GW-32. Because there has been and continues to be an actual or potential discharge at the Gallup Refinery, GW-32 should have been renewed, rather than revoked.

Mr. Moore
June 15, 2021
Page 2 of 2

- The Division reviewed and approved AP-111 pursuant to 19.15.30 NMAC, and the public commented in the RCRA permit process administered by NMED in accordance with the 2017 Order on Consent.

AP-111 is not a valid abatement plan because Western did not comply with the public notification requirements in Section 3109(F) of 20.6.2 NMAC, and the abatement plan was not reviewed and approved by the Division. The Division was not a party to the 2017 Order on Consent, and NMED's RCRA permit is not a substitute for compliance with 20.6.2 NMAC.

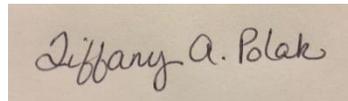
- Western has relied on OCD's approval of AP-111 to perform remediation at the Gallup Refinery, so the Division's notice that AP-111 is invalid raises concerns about Western's decisions and commitment to remediate and protect the environment.

The Division expects Western to continue with its current remediation efforts at the Gallup Refinery, but it must obtain a discharge permit because the abatement plan was not properly issued.

In summary, Western must obtain a discharge permit for the Gallup Refinery. Please submit the application no later than July 13, 2021.

If you have any questions regarding this letter, please contact Leigh Barr, Administrative Permitting Manager, at (505) 670-5684.

Regards,



Tiffany A. Polak
Deputy Director

cc: Emily Hernandez, Environmental Bureau Chief
Leigh Barr, Administrative Permitting Program Manager
EMNRD-OGC

From: [Moore, John](#)
To: [Barr, Leigh P EMNRD](#); [McDill, Teresa L, EMNRD](#)
Subject: [EXT] RE: Discharge Permit
Date: Wednesday, June 2, 2021 9:56:20 AM
Attachments: [image001.jpg](#)
[image002.png](#)

Good morning. I just wanted to follow up on this correspondence from last week and confirm that you received it?

John Moore, P.E.
Environmental Supervisor
JMoore5@Marathonpetroleum.com

MPC – El Paso and Gallup Refineries
Desk: (915) 775-7864
Mobile: (505) 879-7643
www.Marathonpetroleum.com

From: Moore, John
Sent: Wednesday, May 26, 2021 9:47 AM
To: leighp.barr@state.nm.us; TeresaL.McDill@state.nm.us
Subject: Discharge Permit

Ms. Barr and Ms. McDill,

Thank you for making time for us to have a discussion regarding the OCD's May 14, 2021 request that the Gallup Refinery submit a discharge permit application. As you requested, here are a few talking points we would like to discuss during our upcoming call:

1. Please clarify what the alleged discharge is that requires a groundwater discharge permit.
 - a. It's not clear to us in OCD's correspondence what requires a permit or what discharge is occurring that is not being addressed.
2. Since there have been no modifications or expansions to the plant since transferring abatement activities from GW-32 Discharge Permit to AP-111 and we are not aware of any other discharges at the refinery, we are not clear on what activities OCD is referring to that would require a discharge permit. As you are aware, since OCD transferred abatement activities from GW-32 Discharge Permit to AP-111 in 2012, the refinery has continued its abatement activities as required under AP-111.
3. The current AP-111 has been reviewed, approved, and commented on as provided for under 19.15.30 NMAC. In addition, public comment was achieved through the 2017 Order on Consent associated with the RCRA permit renewal managed by NMED HWB.
 - a. [19.15.30.11](#) ABATEMENT PLAN REQUIRED: A. *Unless otherwise provided by 19.15.30 NMAC responsible persons who are abating, or who are required to abate, water pollution in excess of the standards and requirements set forth in [19.15.30.9](#) NMAC shall do so pursuant to an abatement plan the director approves. When the director has approved an abatement plan, the responsible person's actions leading to*

and including abatement shall be consistent with the abatement plan's terms and conditions.

4. Since OCD's decision to transfer abatement activities from GW-32 to AP-111 in 2012, Western has been relying on OCD's approval of AP-111 to perform remediation activities at the site and make remediation decisions for the facility for over a decade. If OCD is alleging now that our AP-111 is invalid, it raises concerns regarding how we can be expected to make decisions and commitments to remediate and protect the environment.

Again, thank you for the opportunity to discuss our concerns. After you have ~~had~~ a chance to review, please let me know a date and time that you would be available to further discuss. I look forward to hearing from you.

John Moore, P.E.
Environmental Supervisor
JMoore5@Marathonpetroleum.com

MPC – El Paso and Gallup Refineries
212 N. Clark Street
El Paso, TX 79905
Desk: (915) 775-7864
Mobile: (505) 879-7643
www.Marathonpetroleum.com



From: [LeighP.Barr, EMNRD](#)
To: [Hernandez, Emily, EMNRD](#)
Cc: [McDill, Teresa L, EMNRD](#)
Subject: Marathon - Gallup Refinery Meeting
Date: Thursday, May 20, 2021 1:28:14 PM

Emily,

I just wanted to provide you a brief summary of today's meeting with Marathon concerning the Gallup Refinery. The below are highlights from the meeting:

- Marathon asked for a meeting next week to discuss our letter alerting them of the requirement to submit a discharge permit application to the OCD. Their lawyer is currently reviewing the letter we sent. I asked Marathon to send me a list of questions/concerns they have prior to the next meeting.
- Marathon also asked about the status of their request from OCD to close-out their Landfarm Permit. Marathon submitted an application to Carl Chevz, I believe in April 2020. Terry is going to check on the status of this.
- Marathon believes a Landfarm Permit is no longer necessary. Marathon is only showing high chlorides around Pond 10 (SWMU2) area. They stated this area is also under the NMED's jurisdiction and they would like to simplify and only continue meeting NMED's permit requirements to eliminate duplication and paperwork. At some point as part of their NMED obligations, Marathon will conduct a risk assessment on the area's remaining impacts on the deeper layer of high concentrations of chloride.
- Marathon strongly recommended that OCD visit the site location for a better understanding of the layout.

Let me know if you have any questions.

Leigh Barr • Environmental Specialist Supervisor – Administrative Permitting Program
EMNRD - Oil Conservation Division
1220 S. St. Francis Drive | Santa Fe, NM 87505
505.670.5684 | LeighP.Barr@state.nm.us
<http://www.emnrd.state.nm.us/OCD/>

From: [McDill, Teresa L, EMNRD](#)
To: JMoore5@Marathonpetroleum.com
Cc: [Hernandez, Emily, EMNRD](#); [Polak, Tiffany, EMNRD](#)
Subject: Request for Ground Water Discharge Permit
Date: Monday, May 17, 2021 2:50:00 PM
Attachments: [Western Refining Southwest Inc. Gallup Refinery May 14 2021 Letter \(002\).pdf](#)

Dear Mr. Moore,

Attached is a letter being set to you by certified mail and email. Please contact me if you have any questions.

Best Regards,
Teresa McDill

Teresa L. McDill • Environmental Scientist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 S St Francis Dr | Santa Fe, NM 87505
505.469.6769 | TeresaL.McDill@state.nm.us
<http://www.emnrd.state.nm.us/OCD/>

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd E. Leahy, JD, PhD
Deputy Secretary

Adrienne Sandoval, Director
Oil Conservation Division



BY CERTIFIED & ELECTRONIC MAIL

May 14, 2021

John Moore, P.E.
Environmental Superintendent
Gallup Refinery
Western Refining Southwest, Inc.
I-40, Exit 39
Jamestown, New Mexico 87347

Re: Compliance with 20.6.2 NMAC – Ground and Surface Water Protection

Dear Mr. Moore:

The Oil Conservation Division writes to advise that pursuant to 20.6.2 NMAC – *Ground and Surface Water Protection*, Western Refining Southwest, Inc. (“Western”) must submit an application for a discharge permit for the Gallup Refinery no later than sixty (60) days after receipt of this letter.

On March 5, 2020, the Division advised Western that a discharge permit was required for the Gallup Refinery. On April 13, 2020, Western responded that it would not obtain a discharge permit because the Gallup Refinery did not intentionally discharge effluent or leachate to ground water. In support of its position, Western cited a letter issued by the Division on February 17, 2012.

The Division’s February 17, 2012 letter incorrectly interpreted the requirements for a discharge permit. Section 3104 in 20.6.2 NMAC prohibits a person from causing or allowing effluent or leachate to move directly or indirectly into ground water without a discharge permit. The requirement applies to actual and potential discharges, and the person’s intent to cause or allow the discharge is irrelevant.

The Division’s February 17, 2012 letter also stated that Western’s ongoing efforts to address ground water contamination at the Gallup Refinery would be regulated under an abatement plan designated “AP-111”. The Division repeated this statement in a letter dated November 3, 2020. Both statements are incorrect.

Mr. John Moore

May 14, 2021

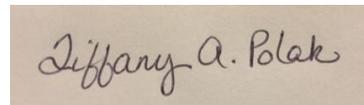
Page 2 of 2

Pursuant to Section 3109(F) of 20.6.2 NMAC, when a discharge permit is terminated but there is remaining ground water contamination at a facility, the discharger must submit a Stage 1 abatement plan, including a proposed site investigation, and the Division must publish a news release containing specific information regarding the proposal. Upon the Division's approval of the site investigation, the discharger must submit a Stage 2 abatement plan to attain the applicable standards, a financial assurance plan, an oversight funding agreement if required, and a draft public notice. Upon the Division's approval of the public notice, the discharger must provide the notice to the specified persons and agencies and provide an opportunity for public comment, as well as either a public meeting or hearing upon a showing of significant public interest. Western did not comply with these requirements, therefore "AP-111" is not a valid abatement plan under 20.6.2 NMAC.

Western is required to have a discharge permit for the Gallup Refinery. Please submit an application for a discharge permit in accordance with the applicable regulations no later than July 1, 2021. Failure to submit an application may result in enforcement action under the Water Quality Act, including the assessment of civil penalties.

If you have any questions regarding this letter, please call Teresa McDill, Environmental Specialist, at (505) 469-6769.

Regards,

A rectangular area containing a handwritten signature in cursive script that reads "Tiffany A. Polak".

Tiffany A. Polak
Deputy Director

cc: Emily Hernandez, Environmental Bureau Chief
Teresa McDill, Environmental Specialist
EMNRD-OGC

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

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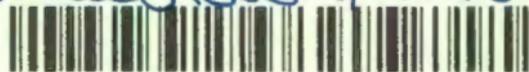
John Moore, P.E.
Environmental Superintendent
Gallup Refinery
Western Refining Southwest, Inc.
I-40 Exit 39
Jamestown, NM 87347

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

John Moore, P.E.
Gallup Refinery
Western Refining Corp
1-40 Exit 39
Sagestown, NM 87347



9590 9402 2695 6351 2691 38

2. Article Number (Transfer from service label)

7015 0640 0007 1331 3865

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A. Signature

X

 Agent Addressee

B. Received by (Printed Name)

C. Date of Delivery

 D. Is delivery address different from item 1? Yes
 If YES, enter delivery address below: No

3. Service Type

- Adult Signature
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- Certified Mail®
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- Collect on Delivery Restricted Delivery

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