Western Refining Southwest LLC
A subsidiary of Marathon Petroleum Corporation

I-40 Exit 39
Jamestown, NM 87347

December 19, 2022 RETURN RECEIPT REQUESTED

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

RE: Request for No Longer Contained-In Determination
Solid Waste Management Unit 1
Western Refining Southwest LLC - d/b/a Marathon Gallup Refinery
EPA ID #NMD000333211

Dear Mr. Shean,

Western Refining Southwest LLC (f/k/a Western Refining Southwest, Inc.) is submitting this request for a No Longer Contained-In (NLCI) determination for the former wastewater aeration lagoons (AL-1 and AL-2) and one evaporation pond (EP-1) at the Marathon Gallup Refinery, owned and operated by Western Refining Southwest LLC, D/B/A Marathon Gallup Refinery (Western). Pursuant to Table G-1 of the Resource Conservation and Recovery Act (RCRA) Post-Closure Care Permit (RCRA Permit No. NM000333211), as modified in February of 2022, lagoons AL-1 and AL-2 and pond EP-1 are collectively defined as a Solid Waste Management Unit (SWMU-1) subject to corrective action under 40 CFR 264.101. Per correspondence dated January 23, 2012, from the New Mexico Environment Department (NMED) Hazardous Waste Bureau (HWB), corrective action complete status for SWMU-1 is equivalent to closure (Comment 1; NMED 2012). Western is requesting that NMED apply U.S. EPA's "contained-in" policy and issue an NLCI determination for Western's dig-and-haul remedy (as approved by NMED) for SWMU-1 subject to certain verification and monitoring conditions as described below.

Currently operations are limited to the wastewater treatment plant, as the refinery was indefinitely idled in August of 2020. There is no product currently stored and all processes have been de-inventoried as part of the refinery idling. All process tanks are empty, have been cleaned and inspected, and no longer store or contain material. The refinery maintains compliance under the RCRA Post-Closure Care Permit ("Permit").

Aeration lagoons AL-1 and AL-2 were formerly operated as a biological treatment unit for the treatment of refinery wastewater, which flowed from AL-1 to AL-2, followed by flow to EP-1 for evaporation. Wastes released into AL-1 and AL-2 were classified as F-listed (F037/F038) hazardous waste as determined by the NMED in 2010 (NMED 2010), and 2017 (NMED 2017). Subsequently in 2022, NMED noted that releases into EP-1 likely occurred (NMED 2022a) and concluded that pond EP-1 may contain media contaminated with F-Listed hazardous waste. NMED has also stated that potentially hazardous wastes that could be present in the soils resulting from the various releases to AL-1, AL-2 and

EP-1 include D018 characteristic hazardous waste and K051 listed hazardous waste (NMED 2010). Corrective action measures anticipated for SWMU-1 include excavation of SWMU-1 contaminated media with disposal in an approved disposal facility.

EPA's "Contained-In" Policy

The "contained-in" principle is based on long-standing United States Environmental Protection Agency (EPA) policy that applies to RCRA Subtitle C requirements for environmental media contaminated with a listed hazardous waste (EPA 1991; EPA 1992; EPA 1995). The contained-in policy recognizes that Land Disposal Restrictions (LDR) treatment standards typically applicable to pure industrial hazardous waste are generally unachievable or inappropriate for contaminated media. Contaminated media is considered "generated" for purposes of the LDR requirements when it is excavated and removed from the area of contamination (as defined in EPA 1998c), in this case SWMU-1. EPA has stated that LDR treatment standards do not apply to in-situ soils left in place and has delegated NLCI determinations to RCRA authorized state agencies. These delegated agencies have the authority on a case-by-case basis to determine that media no longer contains listed hazardous waste, according to the risks posed by the contaminated media (EPA 1996; EPA 1998a; EPA 1998b; EPA 1998c).

Typically, an NLCI determination does not mean that hazardous constituents are not present in environmental media, but simply that the concentrations of hazardous constituents present do not warrant management of the media as hazardous waste (EPA 1998b). In the case of media potentially contaminated with a listed hazardous waste (as in SWMU-1), if the NLCI determination occurs prior to the contaminated media being generated (i.e., excavation and removal from the AOC, in this case the SWMU-1 boundary), then the LDR treatment standards do not apply.

Accordingly, Western is requesting an NLCI determination from NMED to manage contaminated media as a solid waste prior to implementing excavation and disposal offsite, as part of closure/corrective action of SWMU-1. Therefore, if NMED grants the NLCI determination prior to beginning cleanup actions, LDR standards would not apply when the contaminated media is excavated and removed from the SWMU-1 boundary. The contaminated media would still be subject to all applicable NMED solid waste management standards once removed from the SWMU-1 boundary.

The first criterion that must be met for an NLCI determination is that concentrations of hazardous constituents in contaminated media are below levels associated with characteristic hazardous waste (i.e., toxicity, ignitability, corrosivity, or reactivity) (EPA 1998c). The second criterion is that concentrations of hazardous constituents must be below human health-based levels (EPA 1998c). If the contaminated media is to be taken to an approved solid waste facility, then concentrations of hazardous constituents are compared to NMED Industrial Soil Standards (ISSLs).

Western has previously requested NLCI determinations from NMED on three occasions: 1) a November 15, 2005 request for soil contaminated by American Petroleum Institute (API) separator release that was approved by NMED on December 21, 2005 (NMED 2005); 2) a June 15, 2006 request for excavated soil removed from AL-1, AL-2, EP-1 and EP-2 that was approved by NMED on June 29, 2006 (NMED 2006); and 3) a June 22, 2009 request in correspondence to NMED, which was subsequently retracted (Western Refining 2009a).

The remainder of this correspondence provides detailed information that establishes that both criteria for an NLCI determination have been met in the current request to support NMED concluding that the affected soils to be excavated are not hazardous waste based on the contained-in policy. There are no constituents above regulatory levels that would make the contaminated media characteristically hazardous based on TCLP results and individual hazardous constituents are below NMED ISSLs with very few exceptions and at relatively minor concentrations, as described below. In addition, the initial proposal for a post-excavation sampling protocol is included herein, pending finalization after consultation with the NMED Solid Waste Bureau (SWB). The post-excavation sampling will be conducted prior to disposal at an approved facility and will serve as further confirmation that the soil is suitable for disposal at the facility.

SWMU-1 Operational History

SWMU-1 consists of two former aeration lagoons (AL-1 and AL-2) and an evaporation pond (EP-1) as shown in Figure 1 that is attached. The lagoons and the pond are located in an area approximately 280 feet (ft) by 440 ft. AL-1 and AL-2 are approximately 0.3 acres and 0.5 acres, respectively, and EP-1 is approximately 1.3 acres. AL-1, AL-2, and EP-1 are earthen surface impoundments constructed in 1987 with native clay bottoms (DiSorbo 2018). The lagoons served as primary and secondary separation of petroleum refinery wastewater. Releases of primary and secondary sludges (F037/F038), which are listed hazardous waste, have historically occurred. After separation in AL-1 and AL-2, water flowed by gravity to EP-1 for initial evaporation, and then to additional evaporation ponds (EP-2 through EP-12) downstream (SWMU-2). The lagoons operated until 2013 when they were replaced by the current wastewater treatment system, which includes a new aeration basin. AL-1 and AL-2 have a combined estimated holding capacity of 1 million gallons (Western Refining 2009b) and EP-1 has an estimated holding capacity of 3 million gallons (NMED 2017). NMED has documented that releases into EP-1 have likely occurred (NMED 2022a).

Post-Closure Permitting History

On September 16, 2011, NMED issued a draft renewal Permit for RCRA post-closure care of the hazardous waste Land Treatment Unit and corrective action at multiple SWMUs (including SWMU-1) and multiple RCRA Areas of Concern (RCRA AOCs). Western was the only party that submitted comments. NMED issued the renewal Permit on October 31, 2013 (NMED 2013), which was appealed by Western on November 27, 2013. The appeal was primarily prompted by NMED's addition of 20 RCRA AOCs for investigation and remediation in addition to the SWMUs and RCRA AOCs listed in the previous Permit. Following the filing of the appeal, Western and NMED entered into mediation and NMED agreed to address Western's objections to the addition of the RCRA AOCs by means of an Order on Consent that was entered on January 20, 2017 (Consent Order). The parties agreed to modify the Permit to transfer the RCRA AOCs from the Permit to the Consent Order. The Consent Order required Western to submit release assessment reports for each of the RCRA AOCs over a period of four years (to be completed by June 2021), after which NMED would make a determination as to whether the RCRA AOCs would be eliminated from corrective action requirements or added to the permit as requiring corrective action. In accordance with the Consent Order, NMED determined on August 19, 2021, that all of the RCRA AOCs would be added to the Permit as requiring corrective action and directed Western to submit a permit modification request to add the RCRA AOCs to the Permit.

Western submitted a Class 1 Permit Modification Request to add the RCRA AOCs to the Permit on December 3, 2021. NMED approved the Permit Modification Request and added the units to the Permit in February 2022 (NMED 2022c). As previously mentioned, AL-1, AL-2, and EP-1 are collectively defined as SWMU-1 subject to corrective action under 40 CFR 264.101 and are not classified as an interim hazardous waste unit in the Permit.

Western submitted a request to terminate the Consent Order on October 8, 2021, and on May 6, 2022, NMED determined Western fulfilled the requirements and terminated the Consent Order.

SWMU-1 Regulatory History

Western submitted the first version of a closure plan for the aeration lagoons (did not include EP-1) pursuant to the requirements of the first Permit issued by the NMED on August 17, 2000 (Western Refining 2009b). The NMED responded with a Notice of Disapproval (NOD) and requested additional information (NMED 2009). The disapproval noted that the closure plan needed to be submitted as a Corrective Measures Implementation Work Plan (CMIWP) for a SWMU as described in the NMED fee regulations (New Mexico Administrative Code [NMAC] 20.4.2 [2006]). The CMIWP was resubmitted and received a second NOD from NMED in June of 2010 (NMED 2010).

Concurrently with submittal of the 2009 closure plan and subsequent CMIWP, the EPA and Western entered into a Compliance and Consent Agreement and Final Order (2009 CAFO) (Docket No. RCRA-06-2009-0936) (EPA 2009). Among other provisions, the 2009 CAFO required that Western develop a revised CMIWP for NMED approval (Paragraph 100.A, EPA 2009). After addressing multiple concerns by NMED and required modifications to Western's CMIWP over the years, NMED ultimately approved Western's preferred conceptual remedy of a dig-and-haul solution for AL-1, AL-2, and EP-1 (SWMU-1) in March 2021. NMED further approved Western's Estimated Schedule of Completion of Closure of SWMU 1 (dated April 15, 2021) on June 24, 2021. The most recent SWMU-1 closure/CMIWP was submitted to NMED on September 30, 2021, in accordance with the approved estimated schedule.

After receiving approval from NMED to proceed with development of a final SWMU-1 closure/CMIWP for implementation of the approved conceptual dig-and-haul remedy, the estimated costs for implementing the SWMU-1 closure/CMIWP (excavation and disposal) increased significantly over the last year and now greatly exceed the costs Western had budgeted for the scope of work in 2021. In June of 2022 Western provided NMED with a status update to that effect (MPC 2022). The bids/cost estimates received reflected the ongoing impacts associated with the Covid-19 pandemic recovery, including such impacts as supply chain disruptions and inflationary pressures.

As previously stated, the purpose of this letter is to request an NLCI determination from NMED to manage contaminated media prior to implementing Western's closure plan to excavate and remove contaminated media from SWMU-1. While meeting the goals of protection of human health and the environment, NMED's application of the "contained-in" policy as requesting herein will dramatically reduce the costs of implementing Western's approved dig-and-haul conceptual remedy for SWMU-1, which is one of several remedy evaluation criteria that are applied during remedy selection (e.g., applicability, technical feasibility, effectiveness, implementability, and impacts to human health and the environment. NMED's application of the "contained-in" policy also results in a more green and

sustainable remedy, as haul distances will be diminished and valuable space in Subtitle D hazardous waste facilities where space is limited would be preserved.

Western's continued progress has been communicated to NMED and a revised closure/CMIWP is being prepared for NMED consideration, pending the outcome of this NLCI request. The revised closure/CMIWP will also address the NMED comments on the September 2021 draft, which were received in December of 2021 (NMED 2021a).

Historical Investigations

Sampling has been conducted for soil and waste volume determination and chemical characterization several times since the construction of AL-1, AL-2, and EP-1. Initial soil sampling took place in the early 1990s and indicated that no significant impacts had occurred near AL-1 and AL-2 from the operation of SWMU-1. Soil sampling was conducted every two years and then reduced to every five years (Western Refining 2009b). Groundwater monitoring wells were installed down-gradient of SWMU-1 in 2004. Groundwater impacts in the vicinity of SWMU-1 (in the shallow Chinle aquifer) have been historically documented, including the detection of some constituents of concern (arsenic, benzene, ethylbenzene, toluene, xylenes, and naphthalene [BTEXN], methyl tert-butyl ether, lead, phenanthrene, total petroleum hydrocarbon [TPH] diesel range organics [DRO] and TPH gasoline range organics [GRO]) above applicable screening levels. Separate phase hydrocarbons (SPH) have also been detected in the wells surrounding SWMU-1; sampling does not occur when SPH are present in the well.

Sediment characterization sampling was conducted in 2008 to compare the analytical results to then relevant screening levels and to calculate the approximate volume of contaminated media (Trihydro 2008). Sampling was conducted using a boat because of the presence of water in the ponds. Laboratory analyses of the sediment consisted of TPH-DRO and TPH-GRO by EPA Method 8015, semi-volatile organic compounds (SVOCs) by EPA Method 8270, volatile organic compounds (VOCs) by EPA Method 8260, RCRA metals by EPA Method 6010C, and mercury by EPA Method 7471.

EPA's Maximum Concentrations of Contaminants for the Toxicity Characteristic is found in CFR Title 40 Part 261 – Identification and Listing of Hazardous Waste; said concentrations are generated as screening levels for Toxicity Characteristic Leaching Procedure (TCLP) Method 1311. TCLP analysis was not performed on the 2008 samples.

Field work was conducted in April 2008 and consisted of the following:

- Collecting two discrete-depth sediment samples at five locations in each aeration lagoon (from various depths).
- Measuring sediment thicknesses at each aeration lagoon sample location as well as five additional locations in each lagoon to assist in sediment volume calculations.
- Collecting one sediment sample at eight locations in EP-1.
- Measuring sediment thicknesses at each evaporation pond sample location as well as eight additional locations to assist in sediment volume calculations.

A report of the 2008 investigation was prepared in June of 2008 (Trihydro 2008) and submitted to NMED as Appendix A of the 2009 Closure Plan (RPS JDC 2009). As detailed in the investigation report, data were compared to NMED ISSLs. Analytical data were previously provided in the investigation report, but a short description of exceedances is provided below for context.

One sample exceeded the ISSL for arsenic, and one sample exceeded the ISSL for benzo(a)anthracene (from EP-1) (Trihydro 2008). Additional information on data screening for purposes of this NLCI request is provided in subsequent sections herein.

2020 Corrective Measures Investigation

In 2019, a Corrective Measures Investigation Work Plan (Investigation Work Plan) was submitted to NMED to support the ongoing SWMU-1 remedy evaluations; revisions to the Investigation Work Plan were submitted on September 23, 2019 (MPC 2019a) and additional modifications were submitted in December 2019 (MPC 2019b). NMED approved the Investigation Work Plan with modifications on October 30, 2019 (NMED 2019).

Sampling took place in January 2020 for soil and sediment volume determination and chemical characterization for future SWMU-1 excavation. A total of 97 samples were collected from 22 locations, including 10 waste and 12 berm locations (as shown in attached Figure 1). Field work consisted of:

- Collecting samples at four locations in EP-1 and at three locations in AL-1 and AL-2.
- Collecting samples on each of the four berms of the lagoons and the pond.
- Measuring soil/sediment thickness at all sampling locations.

The samples were collected using a hand auger and analyzed for pH, VOCs, SVOCs, TCLP (benzene, lead, and mercury), TPH-GRO, TPH-DRO and TPH oil range organics (ORO). The samples were also analyzed for free liquids to evaluate whether the water accumulating in the lagoons and pond came from outside SWMU-1 or from groundwater.

The investigation report was submitted in March 2020 (MPC 2020) and disapproved by NMED in August 2020 (NMED 2020). NMED subsequently approved the investigation report with modifications on January 26, 2021 (NMED 2021a). As with the 2008 investigation, analytical data were provided in the investigation report. A short description of the exceedances is provided below for context.

Benzene samples with concentrations greater than 0.5 mg/kg were analyzed for TCLP benzene. Only eight samples from AL-1 met this criterion. No detections of benzene exceeded the NMED ISSL's of 87.24 milligram per kilogram (mg/kg). No detections of benzene exceeded the 40 CFR 261.24 TCLP regulatory level of 0.5 milligrams per liter (mg/L). All additional TCLP results for lead and mercury were also below applicable TCLP regulatory levels.

Exceedances were observed in TPH-DRO, TPH-GRO, and TPH-ORO results. In addition, benzo(a)anthracene and benzo(a)pyrene exceeded the NMED ISSLs at one location (surface sample SWMU 1-9). No other exceedances of the NMED ISSLs were observed. The detections were generally

higher in locations sampled closer to the surface, and concentrations decreased relatively abruptly with depth (several orders of magnitude) as the underlying clay was encountered.

April 2021 Test Pits Investigation

An additional investigation was completed in April 2021 involving installation of four shallow test pits at SWMU-1. The purpose was to ascertain if shallow groundwater is present within the SMWU-1 sediment horizon outside of the berms, and if so, determine if the groundwater is contributing to the shallow surface water observed in AL-1 and AL-2.

The investigation included excavating four 10- to 15-ft deep test pits outside of the internal berms (see attached Figure 1) for yield testing. With the exception of TP-4 (adjacent to EP-1), groundwater was not encountered during excavation of the test pits. Damp soils were observed during excavation of TP-1 through TP-3, and water was detected in the test pits the day after excavation.

The SWMU-1 Test Pit Investigation Report was submitted on October 27, 2021 (MPC 2021d), and NMED provided approval with modifications on January 3, 2022 (NMED 2022b). The report concluded that significant groundwater seepage into AL-1 and AL-2 is unlikely due to groundwater levels in comparison to surface water elevations and the low permeability of soils underlying the area. The likely source of the accumulated water in AL-1 and AL-2 is surface water and precipitation. However, a groundwater interceptor trench will be constructed along the upgradient (east) side of SWMU-1 to reduce the potential for impacted groundwater from migrating into clean backfill as part of remedy implementation.

Estimated Volumes of Contaminated Media in SWMU-1

As previously described under Historical Investigations, 2008 sediment sampling was conducted when the ponds were flooded, and a boat was required for sample collection. The resulting sediment depths and calculations of contaminated media volumes were affected by the presence of water. Based on data from the 2020 investigation, areas, and volumes of contaminated media in AL-1, AL-2 and EP-1 were re-calculated using CADD software. Approximate volumes of contaminated media for excavation were calculated using the areas and the average depth of contamination, and then rounded to the nearest 100 cubic yards (yds^3), with resulting waste volumes as follows (MPC 2021b):

- AL-1: Average depth 5.2 ft, surface area 13,789 square feet (ft^2), volume 2,700 yds^3.
- AL-2: Average depth 5.3 ft, surface area 23,211 ft^2, volume 4,500 yds^3.
- EP-1: Average depth 5.3 ft, surface area 58,757 ft^2, volume 11,500 yds^3.

Western proposes, as further detailed in the pending future revisions to the closure/CMIWP, to remove these volumes of contaminated media from SWMU-1 and dispose the materials at an approved non-hazardous disposal facility, subject to NLCI verification sampling, and sampling required by SWB prior to disposal, as proposed below.

Comparison of 2008 and 2020 Hazardous Constituent Analytical Data to Human Health Based Levels

For NMED's reference, we have attached Table 2 that summarizes the sample results, detection rates and exceedance rates for individual constituents in comparison to human health-based levels (NMED RSSLs, included for reference only, and the NMED ISSLs). We have also attached Table 3 that lists the analytes that were not detected in any of the samples.

The following analytes exceeded the NMED ISSL, which is the screening value relevant to this NLCI request. The exceedance rate as a percentage of sample count for the ISSL screening level is also listed.

- Arsenic 1 sample out of 228 (0.44% for ISSL)
- Benzo(a)anthracene 3 samples out of 234 (1.28% for ISSL)
- Benzo(a)pyrene 1 sample out of 234 (0.43% for ISSL)

Based on the low frequency of exceedances, Western anticipates stockpile samples will not exceed the ISSLs and will be confirmed by the analytical results from post-excavation sampling for NLCI verification, as outlined below.

Post-Excavation Sampling for NLCI Verification

Western proposes post-excavation sampling to further confirm the soils excavated from SWMU-1 are not a hazardous waste. The excavated soils will be temporarily stockpiled into multiple separate piles within the boundary of SWMU-1. The stockpiles will be in a segregated stockpile area and managed in accordance with the temporary storage requirements of NMAC 20.9.8, and not stored for longer than 90 days from the date the waste is placed in storage awaiting transportation, processing, or final disposal, unless otherwise approved by the NMED SWB.

Western proposes a sampling frequency for purposes of NLCI verification of at least one (1) 5-point composite sample per 250 yds^3 stockpiled. Composite samples will be analyzed for pH, VOCs, SVOCs, TCLP (benzene, lead, and mercury), TPH-GRO, TPH-DRO, TPH-ORO, ignitability, corrosivity, and all detected analytes shown on Table 1. Additionally, each composite sample will be analyzed for all waste acceptance criteria that may be required for the designated landfill(s). Composite aliquots will be collected at various depths and locations in the temporary stockpiles. This results in a minimum of 75 total samples, as follows:

- AL-1 approximate stockpile volume 2,700 yds^3 = 11 samples
- AL-2 approximate stockpile volume 4,500 yds^3 = 18 samples
- EP-1 approximate stockpile volume 11,500 yds^3 = 46 samples

Additional composite samples maybe necessary if greater volumes of soil are generated during remedy implementation than those estimated above. As with the historical data reviewed herein, post-excavation composite sample analytical results for each stockpile will be compared to TCLP screening levels and NMED ISSLs. If the sampling analysis confirms that the excavated soil is not characteristically hazardous waste and the concentration of hazardous waste constituents do not present a threat to human health and the environment after placement in a nonhazardous waste disposal facility (i.e., the two NLCI criteria), confirmation that the contaminated media is eligible for disposal as a solid waste will be

accomplished. If any post-excavation sampling results in values above hazardous waste TCLP screening levels, said waste will be segregated and managed per NMED HWB requirements.

Further, if confirmation samples verify that the contaminated media excavated from SWMU-1 meets the two NLCI criteria required for an NLCI determination, the contaminated media would then be considered "special waste," as defined under Subsection S of 20.9.2.7 NMAC (NMAC 2007a). "Special waste" is defined, in part, as "solid waste that has unique handling, transportation, or disposal requirements to assure protection of the environment and the public health, welfare, and safety, including:…(f) sludge, except; sludge that is land applied under 40 CFR Part 503 as intermediate or final cover at a landfill and meets the requirements of Subpart B of 40 CFR Part 503;…(i) petroleum contaminated soils, that have a sum of benzene, toluene, ethylbenzene, and xylene isomer concentrations of greater than 50 mg/kg, or benzene individually greater than 10 mg/kg, or a total petroleum hydrocarbon concentration of greater than 100 mg/kg."[1] Therefore, petroleum contaminated soils that have a TPH concentration of greater than 100 mg/kg are regulated by NMED SWB as special waste.

Further discussion regarding management of the stockpiled material as a solid waste prior to disposal will be provided under a future Disposal Management Plan, as summarized below. The DMP will be developed for approval by the NMED SWB, and once approved, will be an appendix to the pending revised closure/CMIWP.

In-State Special Waste Disposal Management Plan

Facilities permitted to accept certain special waste in New Mexico require the generator to submit a Disposal Management Plan (DMP) and receive approval from the NMED SWB for each special waste accepted at the facility.[2] If post-excavation confirmation sample results confirm that the contaminated media in SWMU-1 is not a hazardous waste and instead is a solid waste regulated as a special waste, Western will confer with the NMED SWB in developing an outline of the DMP[3].

In general, the DMP will contain information regarding the origin of the contaminated media and temporary storage requirements prior to hauling for disposal. Temporary storage in designated special waste stockpiles must meet the requirements of 20.9.8 NMAC (2007b), and the special waste cannot be stored for longer than 90 days from the date the waste is placed in storage awaiting transportation, processing, or final disposal, unless otherwise approved by the NMED SWB.

The DMP will also specify that representative samples will be collected from the temporary stockpiles prior to disposal in an approved solid waste facility, to ensure that the special waste does not contain free liquids as determined by the paint filter liquids test (USEPA test method 9095). Special wastes must also meet specified limits (listed in 20.9.8.16.D NMAC [2007b]) for pH (within the range of 2.0 and 12.5), polychlorinated biphenyls (less than 50 mg/kg). The DMP will address special waste management prior to disposal required to meet TPH parameters as established by the landfill and NMED

[1] *See* 20.9.2.7.S(13) NMAC for definition of "special waste."
[2] *See* New Mexico Environment Department's Guidance Document "Special Waste Management Information."
[3] *See* New Mexico Environment Department's Guidance Documents "Sludge Disposal Management Guidelines and Example."

SWB. Lastly, the DMP will discuss transportation of the special waste for disposal and contingency planning.

Conclusion

Based on the information provided above including historical data analysis, Western requests that NMED apply the "contained-in" policy to the contaminated media generated during implementation of corrective action (i.e., approved conceptual dig-and-haul remedy) at SWMU-1 and approve Western's request that contaminated media not be considered hazardous waste prior to conducting excavation. Such an NLCI determination would be contingent on the post-excavation NLCI verification sampling results for SWMU-1 meeting the two criteria described above. Upon NMED's issuance of approval, Western will then revise the closure/CMIWP for SWMU-1 by adding post-excavation NLCI verification sampling, as well as the special waste DMP for solid waste management and disposal. The closure/CMIWP will also establish the remedial standards that will be used to guide final excavation quantities. Since achieving "clean closure" is not anticipated at this industrial site, Western intends to remove impacted material to reach industrial/commercial cleanup standards (1 foot [ft] below ground surface [bgs]) and construction worker standards (1 ft bgs to 10 ft bgs) and add institutional controls as part of the corrective action.

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 by me or under my direct supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated 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,

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

Attachments

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

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FIGURE

NOTES:

-POND AND TOE SAMPLES INCLUDED SURFACE SOIL, POND, AND CLAY SAMPLED SEPARATELY.
-TOE SAMPLE - SAMPLE COLLECTED AT THE BASE OF THE BERM.
-EP - EVAPORATION POND
-AL - AERATION LAGOON

SWMU 1-5
SB-0101
GWM-3
SWMU 1-6
SWMU 1-11 BERM
1.5'
2.5'
5'
7.5'
SWMU 1-11 (TOE)
STP B-9
SWMU 1-12 (TOE)
1.5'
5'
2.5'
7.5'
EP-1 S1
SB-0102
SWMU 1-12 BERM
SWMU 1-24
Test Pit 4
SWMU 1-1
EP1-SL
EP-1 S2
SWMU 1-2
EP-1 S3
SWMU 1-7
SWMU 1-4
EP-1 S4
EP-1 S5
SWMU 1-13 (TOE)
9'
7.5'
1.5'
5'
2.5'
SWMU 1-13 BERM
EP-1 S6
SWMU 1-4
SWMU 1-3
EP-1 S7
EP-1
GWM-1
SB-0106
GWM-2
EP-1 S8
SWMU 1-14 BERM
SWMU 1-14 (TOE)
SWMU 1-15 BERM
7.5'
5'
2.5'
2.5'
1.5'
1.5'
AL-2
AL-2 S1
AL2-SL3
SWMU 1-20 BERM
1.5'
2.5'
SB-0103
SWMU 1-16 BERM
1.5'
2.5'
SWMU 1-16 (TOE)
SWMU 1-15 (TOE)
SWMU 1-20 (TOE)
SWMU 1-7
AL-2 S2
AL-1 S2
AL1-SL3
SWMU 1-3
SWMU 1-19 BERM
SWMU 1-8
AL-2 S3
AL-1 S1
NAPIS-3
AL2-SL2 (SLUDGE B)
1.5'
2.5'
AL1-SL2 (SLUDGE B)
SWMU 1-9
SWMU 1-19 (TOE)
SWMU 1-21 (TOE)
AL-2 S4
SWMU 1-8
SWMU 1-21 BERM
1.5'
NAPIS-2
AL-1 S3
SWMU 1-17 BERM
SWMU 1-17 (TOE)
2.5'
1.5'
Test Pit 3
SB-1072-1
SB-0105
SWMU 1-5
AL2-SL1 (SLUDGE A)
SWMU 1-10
AL-1 S4
AL-1 S5
AL1-SL1 (SLUDGE A)
SWMU 1-18 (TOE)
AL-2 S5
SWMU 1-6
AL-1
5'
SWMU 1-22 (TOE)
2.5'
1.5'
SWMU 1-18 BERM
SWMU 1-2
2.5'
1.5'
Test Pit 2
SWMU 1-1
SWMU 1-22 BERM
SB-0104
SWMU 1-37
OAPIS-1
Test Pit 1
DEC. 2018 TRIHYDRO UAS IMAGERY.

EXPLANATION

- TEST PIT LOCATION
- 2021 WASTE PROFILING SAMPLE
- 2020 TOE SAMPLING LOCATION
- 2020 BERM SAMPLING LOCATION
- 2020 POND SAMPLING LOCATION
- 2008 SAMPLE LOCATION
- MONITORING WELL
- 2008 BORING LOCATION
- BERM SAMPLING GROUP

N

0 40'

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

FIGURE 1

SAMPLING LOCATIONS
SWMU 1

WESTERN REFINING SOUTHWEST LLC
MARATHON GALLUP REFINERY
GALLUP, NEW MEXICO

Drawn By: BR	Checked By: BM	Scale: 1 " = 40 '	Date: 8/4/22	File: 1_SampleLoc_Jan2020_Fig1.mxd

\\TRIHYDRO.COM\CLIENTS\TITONWA\RATHON\GIS\GALLUP\MAPPING\SWMU1_EVAPPONDCLOSUREINVESTIGATIONSREPORT\1_SAMPLELOC_JAN2020_FIG1.MXD

TABLES

TABLE 1. TCLP ANALYTE LIST - SWMU 1
WESTERN REFINING SOUTHWEST, LLC
D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

Analyte	Max Detect (mg/L)	Detect Rate	TCLP Exceedance Rate	Sample Count	Detect Count	Location of Maximum Detect	Number of CFR TCLP Exceedances	USEPA CFR TCLP Screening Level[1] (mg/L)
1,2-Dichloroethane (EDC), TCLP	ND	ND	ND	1	0	ND	0	0.5
1,4-Dichlorobenzene, TCLP	ND	ND	ND	1	0	ND	0	7.5
2-Butanone, TCLP	ND	ND	ND	1	0	ND	0	NA
Antimony, TCLP	ND	ND	ND	6	0	ND	0	NA
Arsenic, TCLP	0.039	100.0%	0.00%	6	6	AL2-SL-1	0	5
Barium, TCLP	1.09	16.7%	0.00%	6	1	AL1-SL-1	0	100
Benzene, TCLP	0.27	66.7%	0.00%	9	6	SWMU 1-10 (4-4.5 ft)	0	0.5
Beryllium, TCLP	ND	ND	ND	6	0	ND	0	NA
Cadmium, TCLP	ND	ND	ND	6	0	ND	0	1
Carbon Disulfide, TCLP	0.282	100.0%	0.00%	6	6	AL2-SL-3	0	NA
Carbon Tetrachloride, TCLP	ND	ND	ND	1	0	ND	0	0.5
Chlorobenzene, TCLP	ND	ND	ND	1	0	ND	0	100
Chloroform, TCLP	ND	ND	ND	1	0	ND	0	6
Chromium, TCLP	0.0154	66.7%	0.00%	6	4	AL1-SL-3	0	5
Cobalt, TCLP	ND	ND	ND	6	0	ND	0	NA
Lead, TCLP	0.0178	3.2%	0.00%	63	2	AL2-SL-3	0	5
Mercury, TCLP	0.0015	9.5%	0.00%	63	6	SWMU 1-22 (berm) (2.5 ft), SWMU 1-16 (berm) (1.5 ft)	0	0.2
Nickel, TCLP	0.071	66.7%	0.00%	6	4	AL1-SL-1	0	NA
Selenium, TCLP	ND	ND	ND	6	0	ND	0	1
Silver, TCLP	ND	ND	ND	6	0	ND	0	5
Tetrachloroethene (PCE), TCLP	ND	ND	ND	1	0	ND	0	0.7
Thallium, TCLP	ND	ND	ND	6	0	ND	0	NA
Trichloroethene (TCE), TCLP	ND	ND	ND	1	0	ND	0	0.5
Vanadium, TCLP	0.0299	16.7%	0.00%	6	1	AL1-SL-1	0	NA
Vinyl chloride, TCLP	ND	ND	ND	1	0	ND	0	0.2
Zinc, TCLP	2.1	100.0%	0.00%	6	6	AL1-SL-1	0	NA

Notes:
AL - Aeration Lagoon
CFR - Code of Federal Regulations
mg/L - milligram per liter
NA - Not Applicable
ND - Not Detected
SWMU - Solid Waste Management Unit
TCLP - Toxicity Characteristic Leaching Procedure
USEPA - United States Environmental Protection Agency

References
[1] CFR Title 40 part 261 subpart C

TABLE 2. MAXIMUM DETECT ANALYTE LIST - SWMU 1
WESTERN REFINING SOUTHWEST, LLC
D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

Analyte	Max Detect (mg/kg)	Detect Rate	NMED Residential SSL Exceedance Rate	NMED Industrial SSL Exceedance Rate	Sample Count	Detect Count	Location of Maximum Detect	Number of NMED Residential SSL Exceedances	Number of NMED Industrial SSL Exceedances	2021 NMED Residential SSL[1] (mg/kg)	2021 NMED Industrial SSL[1] (mg/kg)
1,1,2,2-Tetrachloroethane	0.43	1.3%	0.00%	0.00%	235	3	SWMU 1-16 (toe)	0	0	7.98	39.4
1,1-Dichloroethane	0.22	8.1%	0.00%	0.00%	235	19	SWMU 1-19 (toe) (0.5-6 ft)	0	0	78.6	383.3
1,2,4-Trimethylbenzene	37	63.6%	0.00%	0.00%	228	145	SWMU 1-1 (2-4 ft)	NA	NA	NA	NA
1,2-Dibromoethane	0.081	6.4%	0.00%	0.00%	234	15	SWMU 1-11 (toe) (2.5 ft)	0	0	0.672	3.309
1,3,5-Trimethylbenzene	5.8	39.2%	0.00%	0.00%	199	78	SWMU 1-1 (2-4 ft)	NA	NA	NA	NA
1-Methylnaphthalene	360	36.9%	1.64%	0.00%	428	158	SWMU 1-5 (2.5-5 ft)	7	0	172	813
2,4-Dimethylphenol	0.64	0.4%	0.00%	0.00%	235	1	SWMU 1-4 (17-18 ft)	0	0	1,230	18,330
2-Hexanone	1.4	16.6%	0.00%	0.00%	229	38	SWMU 1-22 (toe) (2.5 ft)	NA	NA	NA	NA
2-Methylnaphthalene	640	36.7%	3.74%	0.00%	428	157	SWMU 1-10 (4-4.5 ft)	16	0	232	3,368
2-Methylphenol	14	3.0%	0.00%	0.00%	235	7	SWMU 1-15 (toe) (4-5 ft)	NA	NA	NA	NA
3,4-Methylphenol	150	18.7%	0.00%	0.00%	235	44	SWMU 1-1 (0.5-3 ft)	NA	NA	NA	NA
4,4'-Methylenebis(2-chloroaniline)	42.6	16.7%	0.00%	0.00%	6	1	AL1-SL-3	NA	NA	NA	NA
4-Methyl-2-Pentanone	2.3	24.9%	0.00%	0.00%	205	51	SWMU 1-20 (toe) (5 ft)	0	0	5,810	81,650
Acenaphthene	23.7	1.3%	0.00%	0.00%	234	3	AL2-SL-1	0	0	3,480	50,520
Acetone	54.1	60.0%	0.00%	0.00%	235	141	SWMU 1-28 (1.5-2 ft)	0	0	66,300	960,100
Anthracene	64.8	2.6%	0.00%	0.00%	234	6	AL2-SL-2	0	0	17,400	252,600
Antimony, Total	62	4.0%	1.01%	0.00%	199	8	SWMU 1-11 (toe)	2	0	31.3	519.1
Arsenic, Total	47	29.4%	20.61%	0.44%	228	67	SWMU 1-11 (toe)	47	1	7.07	35.88
Barium, Total	1300	100.0%	0.00%	0.00%	228	228	SWMU 1-2 (19.5-20 ft)	0	0	15,600	254,700
Benzo(a)anthracene	48	2.6%	2.56%	1.28%	234	6	SWMU 1-9	6	3	1.53	32.3
Benzo(a)pyrene	25	3.0%	2.99%	0.43%	234	7	SWMU 1-9	7	1	1.12	23.58
Benzo(g,h,i)perylene	12	0.4%	0.00%	0.00%	234	1	SWMU 1-9	NA	NA	NA	NA
Beryllium, Total	1.4	87.9%	0.00%	0.00%	199	175	SWMU 1-3 (3 ft), SWMU 1-12 (toe) (3 ft)	0	0	64,400	313,000
Bis(2-ethylhexyl)phthalate	1.5	0.4%	0.00%	0.00%	234	1	SWMU 1-14 (0-0.5 ft)	0	0	380	1,832
Bromodichloromethane	0.12	1.7%	0.00%	0.00%	235	4	SWMU 1-21 (toe), SWMU 1-10	0	0	6.19	30.18
Bromomethane	0.36	6.0%	0.00%	0.00%	235	14	SWMU 1-19 (toe) (0.5-6 ft)	0	0	17.7	94.52
Cadmium, Total	6.6	13.6%	0.00%	0.00%	228	31	SWMU 1-6 (0-5.5 ft)	0	0	85,900	417,000
Carbon Disulfide	5.8	16.2%	0.00%	0.00%	229	37	SWMU 1-7 (2.5 ft)	0	0	1,550	8,541
Chloroethane	0.1	1.7%	0.00%	0.00%	235	4	SWMU 1-5 (2.5-5 ft)	0	0	19,000	89,540
Chloromethane	0.097	3.0%	0.00%	0.00%	235	7	SWMU 1-3 (0.5-3 ft)	0	0	41.1	200.8
Chromium, Total	400	100.0%	0.88%	0.00%	228	228	SWMU 1-1 (2-4 ft)	2	0	96.6	504.6
Chrysene	102	15.3%	0.00%	0.00%	235	36	AL2-SL-2	0	0	153	3,229
cis-1,2-Dichloroethene	0.3	8.5%	0.00%	0.00%	199	17	SWMU 1-19 (toe) (0.5-6 ft)	0	0	156	2,596
cis-1,3-Dichloropropene	0.022	0.4%	0.00%	0.00%	235	1	SWMU 1-9 (4.5 ft)	NA	NA	NA	NA
Cobalt, Total	11	100.0%	0.00%	0.00%	199	199	SWMU 1-2 (19.5-20 ft)	0	0	17,200	83,400
Cyanide, Amenable	44.2	100.0%	0.00%	0.00%	6	6	AL2-SL-2	NA	NA	NA	NA
Cyanide, Total	44.2	25.2%	3.88%	0.00%	103	26	AL2-SL-2	4	0	11.2	63.34
Dibromochloromethane	0.045	0.4%	0.00%	0.00%	235	1	SWMU 1-2 (2-2.5 ft)	0	0	13.9	67.37
Diethylphthalate	0.35	0.5%	0.00%	0.00%	205	1	SWMU 1-13 (berm) (9 ft)	0	0	49,300	733,000
Di-n-butylphthalate	0.38	1.5%	0.00%	0.00%	205	3	SWMU 1-15 (berm) (1.5 ft)	0	0	6,160	91,630
Diphenylamine	117	100.0%	0.00%	0.00%	6	6	AL2-SL-2	NA	NA	NA	NA
Ethylbenzene	30.1	45.1%	0.00%	0.00%	235	106	AL1-SL-2	0	0	75.1	367.6

TABLE 2. MAXIMUM DETECT ANALYTE LIST - SWMU 1
WESTERN REFINING SOUTHWEST, LLC
D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

Analyte	Max Detect (mg/kg)	Detect Rate	NMED Residential SSL Exceedance Rate	NMED Industrial SSL Exceedance Rate	Sample Count	Detect Count	Location of Maximum Detect	Number of NMED Residential SSL Exceedances	Number of NMED Industrial SSL Exceedances	2021 NMED Residential SSL[1] (mg/kg)	2021 NMED Industrial SSL[1] (mg/kg)
Fluoranthene	22.7	1.3%	0.00%	0.00%	235	3	AL2-SL-2	0	0	2,320	33,680
Fluorene	130	29.4%	0.00%	0.00%	235	69	AL2-SL-2	0	0	2,320	33,680
Fluoride, Total	942	100.0%	0.00%	0.00%	6	6	AL1-SL-1	0	0	4,690	77,850
Iron, Total	24000	100.0%	0.00%	0.00%	103	103	SWMU 1-37 (17-18 ft), SWMU 1-24 (32-34 ft)	0	0	54,800	908,400
Isopropylbenzene	2.6	25.3%	0.00%	0.00%	229	58	SWMU 1-10 (4-4.5 ft)	0	0	2,360	14,220
Lead, Total	220	94.7%	0.00%	0.00%	228	216	SWMU 1-22 (berm) (5 ft)	0	0	400	800
Manganese, Total	2800	100.0%	0.00%	0.00%	103	103	SWMU 1-1 (13-14 ft)	0	0	10,500	160,200
Mercury, Total	19	66.4%	0.00%	0.00%	229	152	SWMU 1-9	NA	NA	NA	NA
Methylene Chloride	0.23	28.9%	0.00%	0.00%	235	68	SWMU 1-16 (toe) (2.5 ft)	0	0	766	5,131
MTBE	1.1	15.3%	0.00%	0.00%	229	35	SWMU 1-10 (4-4.5 ft)	NA	NA	NA	NA
Naphthalene	110	28.8%	7.14%	0.00%	434	125	SWMU 1-10 (4-4.5 ft)	31	0	22.598	134.2
n-Butylbenzene	7	29.3%	0.00%	0.00%	229	67	SWMU 1-10	NA	NA	NA	NA
Nickel, Total	170	99.5%	0.00%	0.00%	199	198	SWMU 1-22 (berm) (5 ft)	0	0	595,000	2,890,000
N-Nitrosodiphenylamine	137	2.6%	0.00%	0.00%	235	6	AL2-SL-2	0	0	1,090	5,236
n-Propylbenzene	5.9	27.5%	0.00%	0.00%	229	63	SWMU 1-10 (4-4.5 ft)	NA	NA	NA	NA
Phenanthrene	361	38.7%	0.00%	0.00%	235	91	AL2-SL-2	0	0	1,740	25,260
Phenol	54	6.8%	0.00%	0.00%	235	16	SWMU 1-15 (toe) (4-5 ft)	0	0	18,500	274,900
p-Isopropyltoluene	1.2	25.1%	0.00%	0.00%	199	50	SWMU 1-10	NA	NA	NA	NA
Pyrene	140	23.0%	0.00%	0.00%	235	54	SWMU 1-9	0	0	1,740	25,260
Reactive Sulfide	405	33.3%	0.00%	0.00%	6	2	AL1-SL-3	NA	NA	NA	NA
sec-Butylbenzene	2	25.8%	0.00%	0.00%	229	59	SWMU 1-10	NA	NA	NA	NA
Selenium, Total	27	8.3%	0.00%	0.00%	228	19	SWMU 1-16 (toe)	0	0	391	6,489
Silver, Total	0.88	3.1%	0.00%	0.00%	228	7	SWMU 1-11 (berm) (1.5 ft)	0	0	391	6,489
Toluene	80	75.7%	0.00%	0.00%	235	178	AL1-SL-3	0	0	5,230	61,340
TPH DRO	370000	66.2%	38.16%	35.09%	228	151	SWMU 1-15 (toe)	87	80	1,000	3,000
TPH GRO	670	34.2%	10.53%	1.75%	228	78	SWMU 1-10 (4-4.5 ft)	24	4	100	500
TPH ORO	72000	47.8%	27.63%	23.68%	228	109	SWMU 1-16 (toe)	63	54	1,000	3,800
trans-1,2-Dichloroethene	0.069	0.5%	0.00%	0.00%	205	1	SWMU 1-10 (4-4.5 ft)	0	0	210.19	1,610
trans-1,3-Dichloropropene	0.12	3.4%	0.00%	0.00%	235	8	SWMU 1-7 (2.5 ft)	NA	NA	NA	NA
Vanadium, Total	53	99.0%	0.00%	0.00%	199	197	SWMU 1-24 (32-34 ft)	0	0	394	6,525
Xylenes, Total	184	58.7%	0.00%	0.00%	235	138	AL1-SL-2	0	0	871	4,275
Zinc, Total	7600	95.0%	0.00%	0.00%	199	189	SWMU 1-11 (toe)	0	0	23,500	389,300

Notes:
AL - Aeration Lagoon
DRO -Diesel Range Organics
ft - feet
GRO - Gasoline Range Organics
HQ - Hazard Quotient
mg/kg - milligram per kilogram
MTBE - Methyl tert-butyl ether
NA - not applicable
NMED - New Mexico Environment Department
ORO - Oil Range Organics
SSL - Soil Screening Level
SWMU - Solid Waste Management Unit
TPH - Total Petroleum Hydrocarbons

References:
[1] NMED Risk Assessment Guidance for Investigations and Remediation, Volume 1 (November 2021)

TABLE 3. NON DETECT ANALYTE LIST - SWMU 1
WESTERN REFINING SOUTHWEST, LLC
D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

Analyte	Sample Count	Detect Count
1,1,1,2-Tetrachloroethane	205	ND
1,1,1-Trichloroethane	205	ND
1,1,2-Trichloroethane	205	ND
1,1-Dichloropropene	199	ND
1,2,3-Trichlorobenzene	199	ND
1,2,3-Trichloropropane	205	ND
1,2,4-Trichlorobenzene	205	ND
1,2-Dibromo-3-Chloropropane	205	ND
1,2-Dichlorobenzene	205	ND
1,2-Dichloropropane	205	ND
1,2-Diphenylhydrazine	6	ND
1,3-Dichlorobenzene	205	ND
1,3-Dichloropropane	199	ND
1,4-Dinitrobenzene	6	ND
1,4-Dioxane	6	ND
2,2-Dichloropropane	199	ND
2,3,4,6-Tetrachlorophenol	6	ND
2,4,5-T	6	ND
2,4,5-TP (Silvex)	6	ND
2,4,5-Trichlorophenol	205	ND
2,4,6-Trichlorophenol	205	ND
2,4-D	6	ND
2,4-DDD	6	ND
2,4-DDE	6	ND
2,4-DDT	6	ND
2,4-Dichlorophenol	205	ND
2,4-Dimethylaniline	1	ND
2,4-Dinitrophenol	205	ND
2,4-Dinitrotoluene	205	ND
2,6-Dichlorophenol	6	ND
2,6-Dinitrotoluene	205	ND
2-Acetylaminofluorene	6	ND
2-Chloro-1,3-Butadiene	6	ND
2-Chloroethyl vinyl ether	6	ND
2-Chloronaphthalene	205	ND
2-Chlorophenol	205	ND
2-Chlorotoluene	199	ND
2-Naphthylamine	6	ND
2-Nitroaniline	205	ND

TABLE 3. NON DETECT ANALYTE LIST - SWMU 1
WESTERN REFINING SOUTHWEST, LLC
D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

Analyte	Sample Count	Detect Count
2-Nitrophenol	205	ND
2-Sec-butyl-4,6-dinitrophenol	6	ND
3,3-Dichlorobenzidine	199	ND
3,3-Dimethoxybenzidine	6	ND
3-Methylcholanthrene	6	ND
3-Nitroaniline	199	ND
4,4-DDD	6	ND
4,4-DDE	6	ND
4,4-DDT	6	ND
4,6-Dinitro-2-methylphenol	205	ND
4-Aminobiphenyl	6	ND
4-Bromophenyl-phenylether	205	ND
4-Chloro-3-Methylphenol	205	ND
4-Chloroaniline	205	ND
4-Chlorophenyl-phenylether	199	ND
4-Chlorotoluene	199	ND
4-Dimethylaminoazobenzene	6	ND
4-Nitroaniline	205	ND
4-Nitrophenol	205	ND
5-Nitro-O-Toluidine	6	ND
a-BHC	6	ND
Acenaphthylene	205	ND
Acetonitrile	6	ND
Acetophenone	6	ND
Acrolein	6	ND
Acrylamide	6	ND
Acrylonitrile	6	ND
Aldrin	6	ND
Allyl Chloride	6	ND
Aniline	205	ND
Aramite	6	ND
Azobenzene	199	ND
b-BHC	6	ND
Benzo(b)fluoranthene	205	ND
Benzo(k)fluoranthene	205	ND
Benzoic Acid	199	ND
Benzyl Alcohol	199	ND
Benzylchloride	6	ND
Bis(2-chloroethoxy)methane	205	ND

TABLE 3. NON DETECT ANALYTE LIST - SWMU 1
WESTERN REFINING SOUTHWEST, LLC
D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

Analyte	Sample Count	Detect Count
Bis(2-chloroethyl)ether	205	ND
Bis(2-chloroisopropyl)ether	205	ND
Bromobenzene	199	ND
Bromoform	205	ND
Butanol	6	ND
Butylbenzylphthalate	205	ND
Carbazole	199	ND
Chlordane	6	ND
Chlorobenzilate	6	ND
Cyclohexanone	6	ND
d-BHC	6	ND
Dibenzo(a,e)pyrene	6	ND
Dibenzo(a,h)anthracene	205	ND
Dibenzofuran	199	ND
Dibromomethane	205	ND
Dichlorodifluoromethane	205	ND
Dichloromethylbenzene	1	ND
Dieldrin	6	ND
Diethyl ether	6	ND
Dimethylphthalate	205	ND
Di-n-octylphthalate	205	ND
Disulfoton	6	ND
Endosulfan I	6	ND
Endosulfan II	6	ND
Endosulfan sulfate	6	ND
Endrin	6	ND
Endrin aldehyde	6	ND
Ethyl acetate	6	ND
Ethyl Methacrylate	6	ND
Ethylene Oxide	6	ND
Famphur	6	ND
g-BHC (Lindane)	6	ND
Heptachlor	6	ND
Heptachlor epoxide	6	ND
Hexachlorobenzene	205	ND
Hexachlorocyclopentadiene	205	ND
Hexachloroethane	205	ND
Hexachloropropene	6	ND
Indeno(1,2,3-cd)pyrene	205	ND

TABLE 3. NON DETECT ANALYTE LIST - SWMU 1
WESTERN REFINING SOUTHWEST, LLC
D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

Analyte	Sample Count	Detect Count
Isobutyl Alcohol	6	ND
Isodrin	6	ND
Isophorone	199	ND
Isosafrole	6	ND
Kepone	6	ND
Methacrylonitrile	6	ND
Methanol	6	ND
Methapyrilene	6	ND
Methoxychlor	6	ND
Methyl Iodide	6	ND
Methyl Methacrylate	6	ND
Methyl Methanesulfonate	6	ND
Methyl Parathion	6	ND
m-Phenylenediamine	2	ND
Nitrobenzene	205	ND
N-Nitrosodiethylamine	6	ND
N-Nitrosodimethylamine	6	ND
N-Nitroso-di-n-Butylamine	6	ND
N-Nitrosodi-n-propylamine	205	ND
N-Nitrosomethylethylamine	6	ND
N-Nitrosomorpholine	6	ND
N-Nitrosopiperidine	6	ND
N-Nitrosopyrrolidine	6	ND
Parathion	6	ND
PCB-1016	6	ND
PCB-1221	6	ND
PCB-1232	6	ND
PCB-1242	6	ND
PCB-1248	6	ND
PCB-1254	6	ND
PCB-1260	6	ND
Pentachlorobenzene	6	ND
Pentachloroethane	6	ND
Pentachloronitrobenzene	6	ND
Pentachlorophenol	205	ND
Phenacetin	6	ND
Phorate	6	ND
Phthalic acid	1	ND
Phthalic Anhydride	6	ND

TABLE 3. NON DETECT ANALYTE LIST - SWMU 1
WESTERN REFINING SOUTHWEST, LLC
D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

Analyte	Sample Count	Detect Count
Pronamide	6	ND
Propionitrile	6	ND
Pyridine	205	ND
Safrole	6	ND
Styrene	199	ND
tert-Butylbenzene	199	ND
Tetrachlorobenzenes	6	ND
Total PCB	6	ND
Toxaphene	6	ND
Trichlorofluoromethane	205	ND
Trichlorotrifluoroethane	6	ND
Tris(2,3-dibromopropyl)phosphate	1	ND

Note:
ND - Not Detected