



## Western Refining Southwest LLC

A subsidiary of Marathon Petroleum Corporation

92 Giant Crossing Road  
Jamestown, NM 87347

March 4, 2021

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

**RE:        Scope of Work**  
**WMW-2 Benzene Exceedance Investigation (Phase III)**  
**Marathon Petroleum Company**  
**Wingate Refinery – Gallup, New Mexico**

Dear Mr. Billings,

The New Mexico Oil Conservation Department (OCD) requested an investigation into the benzene exceedances found in MWM-2 at the Marathon Wingate Facility (Wingate) located in Gallup, New Mexico in correspondence dated October 17, 2019. WMW-2 was installed in 1991 and the first sample collected was in July of 1991 with a benzene concentration 26 milligrams / liter (mg/L). Concentrations have been as high as 37 mg/L in 1993. Benzene exceedances have been recorded every year since installation.

The initial investigation (Phase I) was conducted in October 2019. Phase II was completed in December 2020. Additional investigation has been requested by OCD to determine if benzene has migrated beyond Wingate property to the south.

This Scope of Work covers Phase III of the WMW-2 Benzene Exceedance Investigation at the Marathon Petroleum Company (Marathon) — Marathon Wingate Facility (Wingate) in Gallup, New Mexico. Marathon recommends the collection and analysis of an additional 13 groundwater samples to determine the extent of groundwater contamination found near WMW-2, and the installation of a new groundwater monitoring well west and adjacent to sample location BH-23. The proposed well location and groundwater sampling locations are shown on Figure 1. Samples will be collected using Hydropunch™, or similar, technology and tested for benzene, toluene, and xylene (BTX) by Hall Environmental Laboratories. The investigation consists of the following major elements:

- a. Borehole locations will be cleared by GPRS using ground penetrating radar.
- b. Subsurface utility clearance to 5 feet will be conducted by Gallup Pipeline and Compliance Services using air excavation methods.
- c. 13 groundwater samples will be collected using Hydropunch™, or similar, technology. The samples will be collected through a disposable, single-use, screened PVC sampling point.



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- d. 13 groundwater samples will be analyzed for BTX.
- e. Analytical results for sample locations BH-40, BH-41, and BH-42 will be evaluated to determine if additional sample collection at off-site sample locations BH-43, BH-44, and BH-45 will be required.
- f. If sample collection is required at the off-site sample locations, an access agreement will need to be acquired.
- g. The proposed sampling locations will be accessible to a Direct Push Technology (DPT) track-mounted drilling rig.
- h. A new permanent monitoring well will be installed during this investigation. The well (WMW-9) will be installed near the location of BH-23 (Figure 1) and completed as a flush mount. Soil samples will be collected at the surface, at the interval with the highest PID reading, just above the water table, and at the bottom of the boring. Collected samples will be analyzed for BTX.

### Sample Collection

#### Groundwater Collection:

- a. As discussed above, 13 groundwater samples will be collected using Hydropunch™, or similar, sampling equipment mounted on a DPT track-mounted drilling rig.
  1. The DPT will push the sampling device to the target depth.
  2. The well screen in the sampler will then be exposed allowing for groundwater collection. Field parameters will be collected using a YSI water quality meter and flow through cell.
  3. The screened sampler will then be retrieved, and the borehole will be plugged with bentonite.
  4. Total organic volatiles and benzene readings will be collected and recorded at two-foot intervals during insertion of the sample tubing and directly above groundwater.
- b. Based on Phase I results, the estimated depths for drilling and collection of groundwater samples is 15-23 feet at each location. This information is based on depth to top of the first sand.
- c. Samples will be bottled by Trihydro personnel and placed in a cooler with ice.

#### Soil Sample Collection:

Soil samples will be collected using DPT methods, at the surface, at the interval with the highest PID reading, just above the water table, and at the bottom of the boring. Collected samples will be analyzed for BTX. Samples will be bottled by Trihydro personnel and placed in a cooler with ice.



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### Monitoring Well Installation

- a. Initially, the location will be drilled using DPT drilling methods.
- b. Hollow stem augers will be used to install the monitoring well after completion of soil sample collection. The well will be constructed using 2-inch schedule 40 PVC well casing and a 0.010-inch slotted well screen.
- c. Based on Phase I and II results, the estimated depth for drilling and completion of the monitoring well is 25' – 30' below grade.

### Chemical Analyses

All samples collected for laboratory analysis will be submitted to Hall Environmental Laboratories, an accredited laboratory. The laboratory will use the most recent standard EPA and industry-accepted analytical methods for target analytes as the testing methods for each medium sampled. Each groundwater and soil sample will be analyzed for BTX using EPA method 8260B.

### Waste Management

- a. Waste soil and groundwater generated during installation of the monitoring well will be placed in drums, labeled. And placed on the facility's 90-day pad.
- b. Decon water generated at the decontamination area will be managed by Marathon's water treatment system.
- c. Miscellaneous debris (i.e. empty sacks, buckets, etc.) shall be disposed into waste containers designated by Marathon.

If you have any questions or comments, do not hesitate to contact John Moore at 505-879-7643 or via email at [JMoore5@Marathonpetroleum.com](mailto:JMoore5@Marathonpetroleum.com).

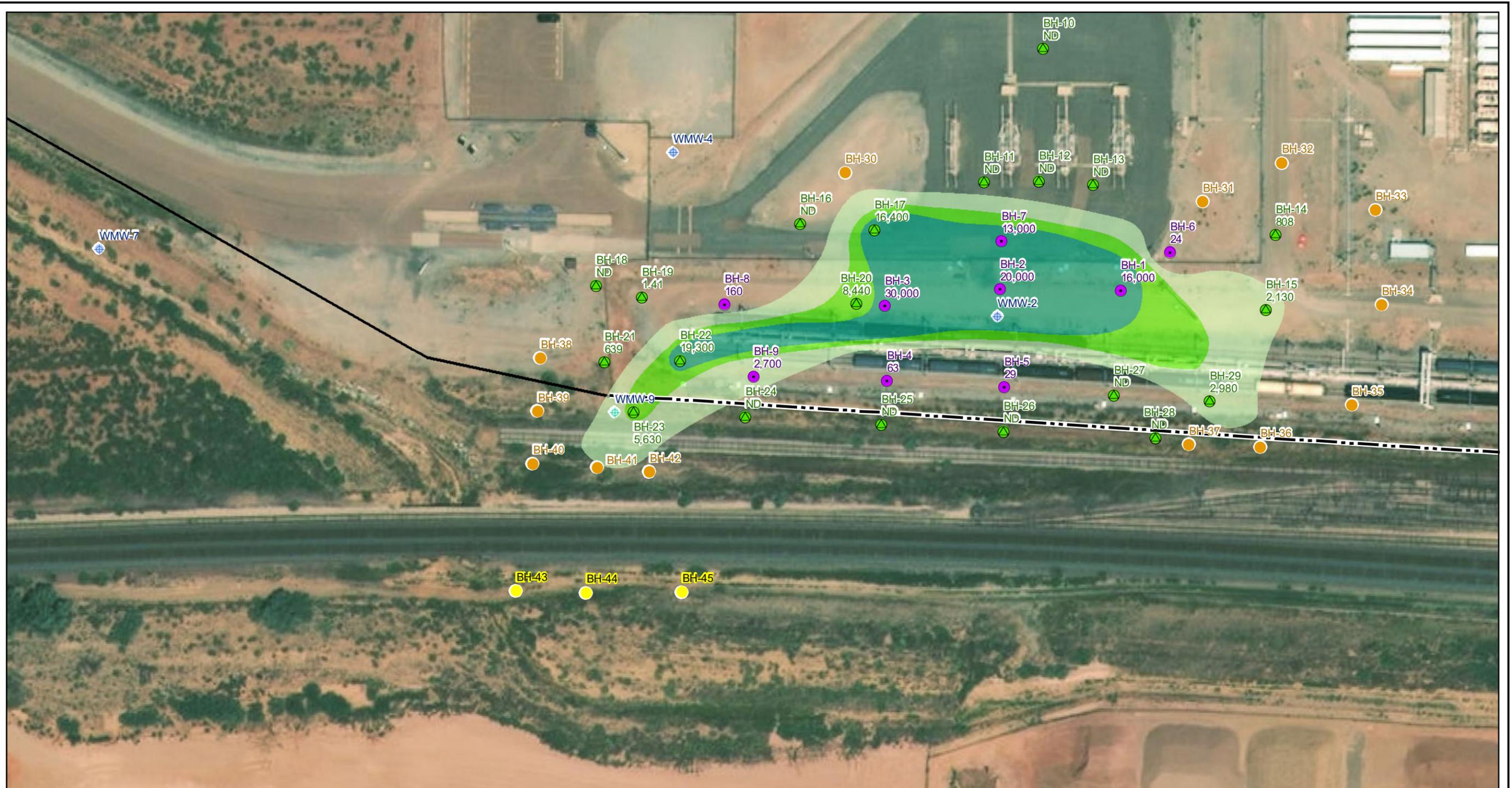
Sincerely,

**Marathon Petroleum Company LP, Gallup Refinery**

A handwritten signature in cursive script that reads "Robert S. Hanks".

Robert S. Hanks  
Refinery General Manager

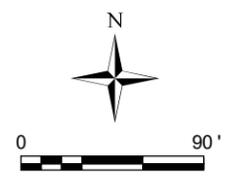
cc: D. Cobrain, NMED HWB  
M. Suzuki, NMED HWB  
G. McCartney, Marathon Petroleum Corporation  
K. Luka, Marathon Petroleum Corporation  
J. Moore, Marathon Gallup Refinery  
H. Jones, Trihydro Corporation



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

**EXPLANATION**

- GROUNDWATER MONITORING WELL
- PROPOSED GROUNDWATER MONITORING WELL
- BOREHOLE LOCATION (FOLLOWED BY BENZENE CONCENTRATION)
- PHASE II BOREHOLE LOCATION (FOLLOWED BY BENZENE CONCENTRATION)
- PROPOSED BOREHOLE LOCATION
- PROPOSED BOREHOLE LOCATION TO BE MODIFIED BASED ON RESULTS FROM BOREHOLES LOCATED TO THE NORTH
- FENCE LINE
- BENZENE PLUME**
- 1,000 ug/L
- 5,000 ug/L
- 10,000 ug/L
- APPROXIMATE PROPERTY BOUNDARY



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CORPORATION  
1252 Commerce Drive  
Laramie, WY 82070  
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**FIGURE 1**

**PROPOSED BOREHOLE LOCATIONS**

**MARATHON PETROLEUM COMPANY**  
**MARATHON WINGATE FACILITY**  
**GALLUP, NEW MEXICO**

Drawn By: KEJ    Checked By: PH    Scale: 1" = 90'    Date: 2/9/21    File: 1\_ProposedBoreholeLoc\_Fig1\_0115.mxd

C:\MOUNTAIN\GIBSON\PROJECTS\BENZENE INVESTIGATION\2021\11\_PROPOSEDBOREHOLELOC\_FIG1\_0115.MXD

**District I**  
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 Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**  
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**District III**  
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 Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**  
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 Phone:(505) 476-3470 Fax:(505) 476-3462

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

COMMENTS

Action 19674

**COMMENTS**

Operator: WESTERN REFINING SOUTHWEST, IN Suite 200 El Paso, TX79901		123 W Mills Avenue	OGRID: 267595	Action Number: 19674	Action Type: DISCHARGE PERMIT
Created By cchavez	Comment Permittee SOW Phase 3 Letter 3-4-2021			Comment Date 03/08/2021	

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CONDITIONS

Action 19674

**CONDITIONS OF APPROVAL**

Operator: WESTERN REFINING SOUTHWEST, IN Suite 200 El Paso, TX79901	123 W Mills Avenue	OGRID: 267595	Action Number: 19674	Action Type: DISCHARGE PERMIT
OCD Reviewer cchavez		Condition None		