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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

November 16, 2018

John Moore
Environmental Superintendent
Western Refining, Southwest Inc., Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301

**RE: DISAPPROVAL
INVESTIGATION WORK PLAN UP-GRADIENT MKTF WELLS
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-18-011**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *Investigation Work Plan Up-Gradient MKTF Wells* (Work Plan), dated August 2018, submitted on behalf of Western Refining Southwest Inc., Gallup Refinery (the Permittee). NMED hereby issues this Disapproval. The Permittee must address the following comments.

Comment 1

In the *Executive Summary*, page E1, the Permittee states, “[f]our new wells are proposed; one well to the south of monitoring well MKTF-35, a new well to the east of MKTF-37, one well to the east of MKTF-39, and the fourth well on the north side of crude Tank 101.” Comment 24 in the NMED’s *Disapproval for Interim Measures Report Hydrocarbon Seep Area*, dated February 1, 2018 directs the Permittee to investigate the subsurface and groundwater conditions north of Tank 102, rather than Tank 101. The Permittee proposed to install a well north of Tank 101; however, in order to address the comment more accurately, the proposed well must be installed north of Tank 102 and south of Tank 101. A recommended well location is shown on Figure A below:

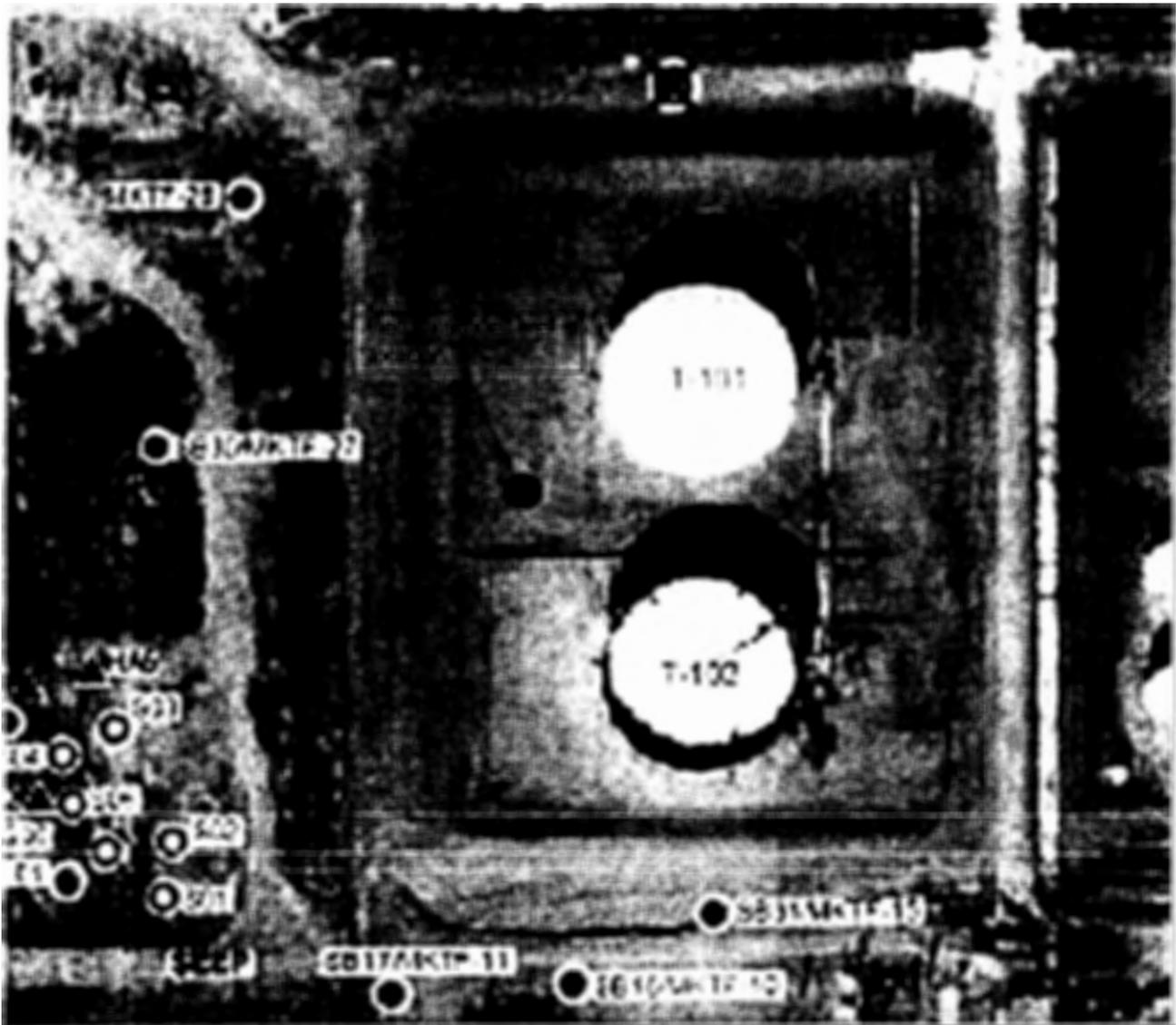


Figure A: Recommended Well Location

The Permittee may adjust the final well location shown on Figure A as necessary to avoid underground pipelines and structures but must attempt to install the well as close as possible to NMED's recommended location. The Permittee still must install the proposed groundwater monitoring well north of Tank 101 as shown in Figure 5, *Proposed Well Locations Map*. Revise the Work Plan accordingly.

Comment 2

In Section 2.1, *Hydrocarbon Seep Area*, page 2-2, the Permittee states, "[t]he chemical analyses from groundwater samples at the MKTF wells are summarized in Table 1." Table 1 is not included in the Work Plan. The referenced table appears to be "Table 2, *Groundwater Analyses Summary*". Resolve the discrepancy in the revised Work Plan.

Comment 3

In Section 2.1, *Hydrocarbon Seep Area*, page 2-2, the Permittee states, “Figures 4 and 5 show the distribution of benzene and MTBE in groundwater, which appear to have sources in the vicinity of the leaking process sewer line discussed above and the main truck loading racks.” Separate-phase hydrocarbon (SPH) may also be an indication of source areas. Include a figure showing the distribution of SPH and provide a discussion of SPH in the revised Work Plan. In addition, the figures included in the Work Plan were prepared based on 2015 data, which are outdated. Since review of more recent data will help the Permittee to propose more effective investigation and also help NMED to provide more appropriate direction to execute the Work Plan, the most recent data that has previously been reported to NMED must be used in the figures. Prepare the figures using newer data in the revised Work Plan.

Comment 4

In Section 4.1, *Plume Delineation*, page 4-1, the Permittee states, “[i]t is noted that the new locations east of MKTF-37 and MKTF-39 will actually be physically closer to the process area than the either the truck loading rack or the process sewer line that was found to be leaking.” Discuss the implications of installing groundwater monitoring wells closer to the process area in the revised Work Plan.

Comment 5

In Section 4.2, *Soil Sample Field Screening and Logging*, page 4-1, the Permittee states, “[v]isual screening includes examination of soil samples for evidence of staining caused by petroleum related compounds or other substances that may cause staining of natural soils such as elemental sulfur or cyanide compounds.” The proposed analyses for soil and groundwater samples are limited to VOCs, SVOCs, TPH-GRO, DRO and ORO, and metals. If any signs of analytes that may not be included in above analytical suite are observed (e.g., elemental sulfur), revise the Work Plan to propose to include appropriate additional analyses that address the potential impacts.

Comment 6

In Section 4.2, *Soil Sample Field Screening and Logging*, page 4-3, the Permittee states, “[e]quipment blanks will be collected from all sampling apparatus at a frequency of one per day.” The Permittee did not include field blanks for soil samples as a measure for quality control and quality assurance (QA/QC). Permit Section IV.J.2.d.vii (Soil, Rock, and Sediment Sample Types) requires collection of field blanks at a frequency of one per day. Provide a justification for why field blanks are not proposed for QA/QC on this investigation or propose the additional QA/QC measure in the revised Work Plan.

Comment 7

In Section 4.3, *Groundwater Sample Collection*, page 4-3, the Permittee states, “[g]roundwater samples will be collected from the new monitoring wells within 24 hours of the completion of well purging using disposal bailers.” SPH may be present in the wells. If SPH is present, propose to gauge the well for SPH thickness and collect a SPH sample for hydrocarbon fingerprint analysis in the revised Work Plan.

Comment 8

In Section 4.7, *Data Quality Objectives*, page 4-8, the Permittee states, “[m]ethod detection limits should be 20% or less of the applicable background levels, cleanup standards and screening levels.” If there are analytes where the method detection limits are outside of the acceptable ranges, all of these analytes must be retained in the uncertainty discussion in the investigation report. No revision to the Work Plan is necessary.

Comment 9

In Section 4, *Scope of Services*, the Permittee did not discuss how the depth of the screened interval in each proposed well was determined. Include a discussion regarding how the depths of the proposed screened intervals were determined in the revised Work Plan. Since screened intervals in several existing MKTF wells did not intercept water table, the Permittee must ensure that the screen depths of the proposed wells are appropriate to intersect the water table. In addition, the total depths of proposed borings and wells were not discussed. Since the leaking sanitary sewer line was recently repaired, the depths to water may have changed. Propose to measure groundwater depths in the vicinity of the proposed wells to make appropriate decisions prior to installation of the wells, as necessary. Include the discussion in the revised Work Plan.

Comment 10

In Section 4, *Scope of Services*, soil borings designed to collect soil samples appear to be converted to groundwater monitoring wells; however, the text of the Work Plan does not clearly state the procedure. For example, Section 4.2.1, *Drilling Activities*, discusses the procedures regarding installation of the soil borings and well construction. However, it is not clear from the text of the Report whether the soil borings are proposed in order to collect soil samples, or to install wells or both. Provide a more detailed description of the investigative procedure in the revised Work Plan. In addition, Section 4.2.1 states, “[s]lotted (0.01 inch) PVC well screen will be placed at the bottom of the borings and will extend for 10 feet.” During the meeting between the Permittee and NMED/OCD on September 19, 2018, well screen lengths were discussed related to installing wells across the water table and the issue with tight clays at the refinery. Suggestions were made to try longer well screens, installation of well screens longer than 10 feet may be used for this project to ensure that the screens intersect the water table. Include the measure in the revised Work Plan.

Comment 11

In Section 5, *References*, some references are not found in the Work Plan (e.g., Geoscience Consultants, Ltd.). If some of the references are not used, remove them from the revised Work Plan; otherwise, indicate the page numbers where each reference was used.

Comment 12

Table 2 [sic], *Groundwater Analyses Summary*, presents historical concentrations of constituents in the groundwater samples collected from the relevant wells up to 2016. However, new data collected in 2017 and 2018 are not included in the table. Since review of recent data will help NMED to provide more appropriate direction to execute the Work Plan, new data must be provided. Prepare the table using new data in the revised Work Plan. See Comment 3.

Mr. Moore
November 16, 2018
Page 5

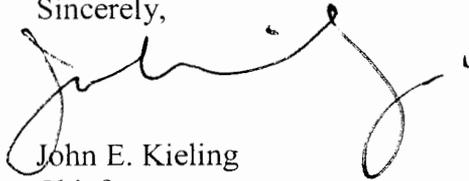
Comment 13

Table 2, *Fluid Level Measurements*, presents groundwater level measurement data collected in 2017. Since newer data collected in 2018 are available, they must be included in the revised Work Plan. If gauging data after the leaking sanitary sewer line was repaired are available, include the data in the revised Work Plan.

The Permittee must address all comments in this Disapproval in a revised Work Plan. The response must include a letter that cross-references where NMED's comments were addressed. Two bound copies of the revised Work Plan as well as an electronic redline-strikeout version of the Work Plan and a revised electronic copy of the Work Plan must be submitted to NMED no later than **February 4, 2019**.

If you have questions regarding this Disapproval, please contact Michiya Suzuki of my staff at 505-476-6059.

Sincerely,



John E. Kieling
Chief
Hazardous Waste Bureau

cc: K. Van Horn NMED HWB
M. Suzuki NMED HWB
C. Chavez OCD
L. King EPA Region 6

File: Reading File and WRG 2018 File
HWB-WRG-18-011