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**. CERTIFIED MAIL – RETURN RECEIPT REQUESTED .**

August 17, 2015

Mr. Ed Riege  
Environmental Manager  
Western Refining, Southwest Inc., Gallup Refinery  
92 Giant Crossing Road  
Gallup, New Mexico 87301

**RE: DISAPPROVAL  
INVESTIGATION WORK PLAN SWMU NO. 4 OLD BURN PIT  
AND SWMU NO. 5 LANDFILL AREAS  
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY  
EPA ID # NMD000333211  
HWB-WRG-14-004**

Dear Mr. Riege:

The New Mexico Environment Department (NMED) has reviewed the *Investigation Work Plan Solid Waste Management Units (SWMU) No. 4 Old Burn Pit and SWMU No. 5 Landfill Areas* (Work Plan), dated June 2014, submitted on behalf of Western Refining Southwest Inc., Gallup Refinery (Permittee) and hereby issues this Disapproval with the following comments.

The Permittee did not propose to conduct any sampling activities at either of the SWMUs in the Work Plan although the Work Plan was submitted to fulfill the requirement for corrective action submittals in Table E-2 of the RCRA Permit.

Many of the comments are similar to the comments provided in NMED's *Disapproval No Further Action Report and Supplemental Information* (NFA Comments); dated April 13, 2015.

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### **Comment 1**

The Permittee states in the Executive Summary, page 2, “[w]hile EPA had authority over the project during the earlier investigation phase, NMED received authorization on January 2, 1996 to implement the Hazardous and Solid Waste Act Corrective Action Program in New Mexico and was afforded an opportunity to intercede prior to and during the remedial actions. There is no record of NMED expressing concerns about or opposition to the remedial actions that were completed at the Old Burn Pit or the Landfill Area.” The previous owner of the refinery submitted documentation regarding the closure of the SWMUs as well as information in the *Petition for No Further Action* (NFA Report) and supplemental information requested by NMED soon thereafter. At the time, NMED reviewed the information, but no comments were sent regarding the submittals. Based on review of historical documents, NMED believes that further investigations are needed to define the extent of potential contamination at the SWMUs. Some of NMED’s concerns regarding historical investigations are further outlined in the NFA Comments correspondence noted above. The Permittee must complete further investigations so that NMED has adequate data and information to make corrective action complete decisions. If corrective action complete determinations are made, then NMED will prepare a statement of basis to change the status of the SWMUs from “corrective action required” to “corrective action complete” in the RCRA Permit in accordance with 20.4.1.900 NMAC (incorporating 40 CFR §270.42).

### **Comment 2**

Some of the detected arsenic levels reported for the historic soil investigations (Work Plan Tables 1 and 2) exceed the current residential soil screening level (3.9 mg/kg). There are several options the Permittee may pursue to address elevated metals concentrations. The Permittee may conduct a soil background study which may address the higher levels of arsenic in order to reach corrective action complete status depending on whether or not corrective action complete without controls status is preferred. The Permittee may also conduct a risk assessment to determine whether or not the arsenic levels are a risk to human health or the environment. No revision to the Work Plan is necessary.

### **Old Burn Pit (SWMU 4)**

#### **Comment 3**

It is not clear whether or not the Permittee sampled native soil during the soil sampling conducted during the 1994 Investigation. In the revised Work Plan the Permittee must propose to install one soil boring at SWMU 4. The soil boring must be advanced to a minimum of two feet into the native soil. Soil samples must be collected from the waste/native soil interface and from the bottom of the boring. Additional deeper soil samples must be collected, if field screening (e.g., headspace vapor, visual identification) or soil sample chemical analysis indicates potential contamination in deeper intervals (e.g., if the black layer of soil is encountered again (see Comment 6)). Soil samples must be analyzed for RCRA 8 (total) metals, total petroleum hydrocarbons (as gasoline, diesel and oil range organics), methyl tertiary-butyl ether (MTBE),

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VOCs, and semi-volatile organic compounds (SVOCs). In order to protect the integrity of the soil cap, the Permittee must propose to properly abandon the borehole and include a description of the abandonment procedures in the revised Work Plan.

**Comment 4**

In the NFA Report, a page titled "Unit Area Characteristics" under the heading "Operating Practices (Past and Present)" the description states, "[a]n old metal box uphill from the pit was used in the past to feet [sic] oil through a metal pipe in the burn pit. The area was then covered with soil." Please revise the Work Plan to discuss whether or not the metal box and pipe were removed from the site and whether or not soil samples were collected to determine if there were spills or leaks from the box or pipe. If soil samples were not collected at these locations, the Permittee must propose to collect soil samples from the location of the metal box and along the pipeline to the burn pit in the revised Work Plan.

**Comment 5**

The information provided in the NFA Report and Supplemental Information does not provide site-specific information concerning the presence and condition of groundwater beneath SWMU 4. Provide information regarding groundwater at SWMU 4. Additionally, the Permittee must propose to collect groundwater samples, if groundwater is encountered during soil sampling activities, in the revised Work Plan.

**Comment 6**

During investigations in 1992 and 1994 a "black layer" or "asphalt burn residue" layer was encountered, but never sampled. The soil boring logs for the 1992 investigation include descriptions of a "black layer" encountered in soil boring RFI0402 at 20 inches below ground surface (bgs) and at RFI0403 from 2.5-3.5 feet bgs. The black layer was described as a "black layer w/some tar like material" and "the black layer required steaming, solvent, steaming, and then regular washing to get augers and equipment clean." It does not appear that samples were collected directly from the black layer – samples were collected from RFI0402 at the ground surface and from depths of, 3, and 4.5 feet bgs, respectively, and from the same intervals in soil boring RFI0403. The black layer was not encountered in soil boring RFI0401. The soil sample collected from RFI0403 that was within the black layer contained high levels of lead, ethyl benzene, total xylenes, and dimethyl phthalate compared to the other soil boring samples. The black layer was encountered again during the 1994 investigation and described as "asphalt burn residue" at 3.8 feet bgs (RFI0405) and 5 feet bgs (RFI0406); no samples were collected for laboratory analysis from that layer. The Permittee must propose to install a soil boring within the Burn Pit in accordance with RCRA Permit Section IV.J.2.d (Drilling and Soil, Rock, and Sediment Sampling). Ensure that if the "black layer" or "asphalt burn residue" are encountered that samples of the black material are collected and analyzed. The "black layer" / "asphalt burn residue" presents a potential risk to construction workers and if the cap was not properly maintained over the years, potential leaching is a concern. Soil sample analysis must include

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RCRA 8 (total) metals, total petroleum hydrocarbons (as gasoline, diesel and oil range organics), methyl tertiary-butyl ether (MTBE), VOCs, semi-volatile organic compounds (SVOCs), and dioxins and furans. Additionally, the soil boring must be advanced to a depth of two feet into the native soil. Soil samples must be collected from the waste/native soil interface and from the bottom of the boring. In order to protect the integrity of the soil cap, the Permittee must propose to properly abandon the borehole and include a description of the proposed abandonment procedures in the Work Plan.

### **Landfill Areas (SWMU 5)**

#### **Comment 7**

Discuss groundwater elevations at SWMU 5. The EPA's Approval with Modifications for the Phase III Investigation Report required that the Permittee install deeper borings at the landfill area to "1) to verify that saturated zones found in 3 of the 12 deepest soil boring intervals are isolated and are not connected to the groundwater; 2) ensure that the vertical delineation of waste emplacement has been identified (soil boring logs indicate waste at the 8-9' zone, the deepest samples were at 9.5'); and, 3) ensure that the vertical extent of metal contamination has been identified (some of the 9.5' samples had elevated metals." In the Additional Sampling Report (1994), the boring logs do not indicate if the soils encountered were moist and contain very general descriptions of the lithology encountered; therefore, it is difficult to determine whether or not the saturated intervals encountered in the Phase III investigation were present. The Permittee must propose to install additional soil borings at SWMU 5 and properly log the soil borings to identify soil types and saturated intervals. Additionally, the Permittee must propose to collect soil samples for laboratory analysis in the revised Work Plan. If saturated intervals are encountered, the Permittee must propose to collect groundwater samples for chemical analysis (total metals, VOCs, SVOCs, MTBE, TPH (DRO, MRO, ORO)), if sufficient water is present.

#### **Comment 8**

The Permittee must propose to advance one soil boring through the center of each landfill cell (for a total of four soil borings), in the revised Work Plan. The borings must be advanced to a minimum of two feet into native soil. Samples must be collected based on field observations of the waste and soils, from the native soil directly below the waste, and from the bottom of the boring. The Permittee must propose to install additional soil borings at SWMU 5 and properly log the soil borings to identify soil types and saturated intervals. If saturated intervals are encountered, the Permittee must propose to collect groundwater samples for chemical analysis, if sufficient water is present. The soil samples must be analyzed for RCRA 8 (total) metals, total petroleum hydrocarbons (as gasoline-, diesel- and oil-range organics), MTBE, VOCs, and SVOCs. The boreholes must be properly logged in accordance with Permit Section IV.J.2.d.v and describe any waste encountered. The boreholes must also be properly abandoned.

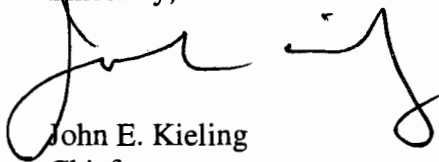
The Permittee must address all comments in this Disapproval and submit a revised Work Plan. Please include a red-line strikeout version in electronic format showing where all revisions have

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been made. The revised Work Plan must be accompanied with a response letter that details where all revisions have been made, cross-referencing NMED's numbered comments. The revised Work Plan must be submitted to NMED no later than **November 30, 2015**.

If you have questions regarding this Disapproval, please contact\***Kristen Van Horn** of my staff at 505-476-6046.

Sincerely,



John E. Kieling  
Chief  
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB  
N. Dhawan, NMED HWB  
K. Van Horn, NMED HWB  
C. Chavez, EMNRD OCD  
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L. King, EPA

File: Reading File and WRG 2015 File  
WRG-14-004