



SUSANA MARTINEZ
Governor

JOHN A. SANCHEZ
Lieutenant Governor

NEW MEXICO
ENVIRONMENT DEPARTMENT

ENTERED



DAVE MARTIN
Cabinet Secretary

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Phone (505) 476-6000 Fax (505) 476-6030
www.nmenv.state.nm.us

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

January 18, 2011

Ed Riege
Environmental Manager
Western Refining, Southwest Inc., Gallup Refinery
Route 3, Box 7
Gallup, New Mexico 87301

**RE: NOTICE OF DISAPPROVAL
CORRECTIVE MEASURES IMPLEMENTATION WORK PLAN
SOLID WASTE MANAGEMENT UNIT (SWMU) NO. 1
AERATION LAGOONS
WESTERN REFINING COMPANY SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-GRCC-09-003**

Dear Mr. Riege:

The New Mexico Environment Department (NMED) has received Western Refining Company Southwest Inc., Gallup Refinery's (the Permittee) *Corrective Measures Implementation Work Plan Solid Waste Management Unit (SWMU) No. 1 Aeration Basin (Revised)* (Work Plan), dated October 2010. The Permittee was required by Paragraph 100 of the Environmental Protection Agency's (EPA) *Complaint and Consent Agreement and Final Order (CAFO)* to submit a *Lagoon Corrective Measures Implementation Workplan* to NMED; the Work Plan submittal fulfills this requirement. However, NMED defers review of the Work Plan at this time for the reasons stated below.

The Post Closure Care Permit (dated, August 2000), Section IV.B7, requires the Permittee to submit a Corrective Measures Study (CMS) evaluating remedial alternatives for corrective action at the Aeration Lagoons. The Work Plan included a Corrective Measures Evaluation (CME Report) in Appendix F, which is analogous to a CMS. NMED has reviewed the CME Report

Ed Riege
Gallup Refinery
January 18, 2011
Page 2

(Appendix F). The Permittee must revise the CME Report in accordance to the following comments.

Comment 1

In the Executive Summary the Permittee discusses "clean" closure and closure in-place. The Aeration Lagoons are a Solid Waste Management Unit (SWMU) and are therefore subject to corrective action under 40 CFR 264.101 not closure under 40 CFR 264 Subpart G. Corrective action will be complete when the remedy is implemented and any long-term monitoring and maintenance is in place. Revise all references to closure throughout the CME Report (*see also* Section 3, Section 4, Section 5) to reflect the proper terminology for the regulatory framework.

Comment 2

The Permittee states in the Executive Summary that "[t]he Aeration Basin, which is listed in the facility's Post-Closure Care Permit as Solid Waste Management Unit (SWMU) No. 1, includes AL-1, AL-2, and EP-1." NMED considers Evaporation Pond 1 (EP-1) to be part of SWMU 2. Revise the CME Report accordingly.

Comment 3

The CME Report lacks sufficient discussion of the source(s) of contamination, the potential migration pathways for exposure to contaminants, fate and transport of contaminants, potential receptors (including ecological receptors) affected by contamination at the site, and the regulatory criteria (e.g., cleanup standards, risk-based screening levels) for the site. Revise the CME Report accordingly.

Comment 4

The CME Report lacks sufficient detail in the long-term monitoring and maintenance in Section 4 (Evaluation of Corrective Measures Alternatives) under the "Human Health and Ecological Protectiveness" heading. Revise the CME Report to discuss monitoring and maintenance in detail for all remedial alternatives that may be required, and include the costs of long-term monitoring and maintenance in the Cost Estimate section.

Comment 5

In Section 2.2 (Site Conditions), page 2, the Permittee states, "[i]n addition to geotechnical testing that was conducted to support design and construction of the new aerated impoundments, soil samples were collected from beneath the previously existing pond to evaluate vertical migration of constituents through the underlying soils. These analyses indicate that there had not been significant vertical migration of organic constituents through the lower permeability soils

Ed Riege
Gallup Refinery
January 18, 2011
Page 3

beneath the original Pond No.1 (see Appendix B). Soil sampling was also conducted near the aeration lagoons and EP-1 during the RCRA Facility Investigation (RFI) conducted in the early 1990s. The analytical results from the RFI samples indicated that no significant impact had occurred and thus no further action was required for the aeration lagoons and EP-1." Since the geotechnical report (1986) and the RFI Report (the early 1990s) were submitted, over twenty years of wastewater treatment has occurred creating a potential for contaminant migration into the native soil beneath the impoundments. The Permittee must present evidence that contamination has not infiltrated the native soil below the impoundments or reached shallow groundwater. The Permittee must propose to sample beneath the Aeration Lagoons and Evaporation Pond 1 as part of any corrective action remedy proposed in the CME, with the qualification that contamination discovered during the investigation may affect the implementation of the selected remedy.

Comment 6

A discussion of groundwater must be included in the CME Report. The Permittee must address the groundwater monitoring and any contamination found in the groundwater potentially related the Aeration Lagoons and EP-1. The Permittee may need to install additional monitoring wells. Revise the CME Report to include a discussion of groundwater monitoring for all alternatives.

Comment 7

In Section 3 (Identification and Preliminary Screening of Corrective Measures Alternatives), the Permittee states that, "[t]he following response action alternatives have been subject to preliminary screening and removed from further evaluation in Section 4 of the CME Report." The Permittee then lists the no action alternative and in-situ biological treatment. The Permittee must retain the no further action alternative as a baseline comparison for the remaining proposed alternatives. Additionally, the Permittee must use the same criteria to eliminate or retain the alternatives and must analyze the alternatives separately. While the CME Report seems to be written with the on-site disposal option as the optimal choice, the Permittee must nevertheless present all remedial alternatives objectively. Revise Section 4 of the CME Report to reflect these changes.

Comment 8

In Section 4 (Evaluation of Corrective Measures Alternatives), under the "Technical Feasibility" heading, regarding off-site disposal, the Permittee states, "[h]owever, it may not be feasible to remove all the affected soils to affect a "clean closure" of the surface impoundments in the event that it becomes technically infeasible or cost prohibitive to remove all the contaminated soils and/or groundwater from the closure area." This statement is overly vague. Provide much more detail as to the reasons why it may not be technically feasible to remove the contaminated soil from the aeration lagoons and EP-1. Revise the CME Report to discuss in detail the reasoning

behind elimination and/or retention of remedial alternatives. Additionally, *see* Comment 1.

Comment 9

In Section 4 (Evaluation of Corrective Measures Alternatives), under the "Effectiveness" heading, regarding off-site disposal, the Permittee states, "[t]he successful removal of all wastes and associated contaminated soils would obviously eliminate the potential of future exposure to waste constituents at the closure area. If all waste and/or impacted media could not be removed, then "clean closure" would not be achieved." If all waste and affected media cannot be removed, the Permittee would implement institutional controls, groundwater monitoring, engineering controls, and other methods to protect human health and the environment. The metric of achieving "clean closure" seems out of place when the other alternative also does not achieve "clean closure." This section should adhere to the description of "effectiveness" in Section 1 (Introduction) which states "assesses the ability of the corrective measure to mitigate the measured or potential impact of contamination in a medium under the current and projected site conditions." Generally, use the definitions in Section 1 (applicability, technical feasibility, effectiveness, implementability, human health and ecological protectiveness, and cost) to guide the discussion of the remedial alternatives. Additionally, use the same criteria to eliminate or retain the alternatives and must analyze the alternatives separately. Revise the CME Report to discuss the effectiveness of the remedial alternatives in more detail and more clarity.

Comment 10

In Section 4 (Evaluation of Corrective Measures Alternatives), under the "Effectiveness" heading, regarding in-place closure, the Permittee states, "[t]hese activities in combination with the low permeability of the natural subsoils will act to prevent any future releases of hazardous constituents to groundwater. Information concerning the design and construction of the surface impoundments is included in Appendix B. An extensive effort was conducted to ensure that the impoundments would retain free liquids. The resulting construction will also be very effective in containing the stabilized waste materials." While the soils underlying the impoundments have low permeability, the Permittee has not shown that contamination has not migrated into the native subsoil or to groundwater (*see* also Comment 5). Additionally, the statement "[a]n extensive effort was conducted" is overly vague; the Permittee must describe the effort since Appendix B is a design plan and no report of the construction activities (e.g., the work plan recommends a foundation treatment, but it is not clear whether this was done or not) are provided. Also, the statement "[t]he resulting construction will also be very effective in containing the stabilized waste materials" does not explain how the resulting construction will be effective in containing the waste. Provide more detail and explanation as to how the construction will be effective. The Permittee must show that the impoundments were properly constructed, that contamination has not migrated into the subsurface, and how the construction of the in-place alternative will effectively contain the contamination. Revise the CME Report to address these issues.

Ed Riege
Gallup Refinery
January 18, 2011
Page 5

Comment 11

In Section 4 (Evaluation of Corrective Measures Alternatives), under the "Human Health and Ecological Protectiveness" heading regarding in-place closure, the Permittee states "[i]n addition, the institutional control will prevent unknowing disturbance of the closure area." Revise the CME Report to discuss institutional controls that will be used at the site, particularly those used to protect the area from disturbance.

Comment 12

The Cost Estimates (Appendix A) do not contain the level of detail necessary for NMED to conduct and adequate evaluation. Include line-item cost estimates for each activity, including, but not limited to, unit costs for labor, equipment, materials, waste management and disposal, maintenance, sampling and reporting. Revise the CME Report accordingly.

The Permittee must address all comments contained in this NOD and submit a revised CME Report to NMED on or before **April 14, 2010**. The revised CME Report must be submitted with a response letter that details where all revisions have been made, cross-referencing NMED's numbered comments. In addition, an electronic version of the revised CME Report must be submitted that identifies where all changes have been made in red-line strikeout format.

The Permittee must submit the revised CME as a Class 3 Permit modification request in accordance with 20.4.1.900 NMAC (incorporating 40 CFR 270.42(c)) including the specific public notice requirements for Permittees for submitting a permit modification request listed in 40 CFR 270.42(c)(2).

NMED will use the CME Report to select a remedy for corrective action at the Aeration Lagoons and develop a statement of basis for the selected remedy. The Permittee will be required to provide a public notice for the proposed remedy and required permit modification (20.4.1.900 NMAC, incorporating 40 CFR 270.42(c)).

Ed Riege
Gallup Refinery
January 18, 2011
Page 6

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

Sincerely,



James P. Bearzi
Chief
Hazardous Waste Bureau

cc: J. Kieling, NMED HWB
D. Cobrain NMED HWB
K. Van Horn, NMED HWB
C. Chavez, OCD
File: Reading File and WRG 2011 File
HWB-GRCC-09-003