



# New Mexico Energy, Minerals and Natural Resources Department

**Bill Richardson**  
Governor

**Joanna Prukop**  
Cabinet Secretary  
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Deputy Cabinet Secretary

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Division Director  
Oil Conservation Division



September 3, 2009

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

**Re: Process Design Report for Wastewater Treatment Plant Upgrade (Rev. A) for OCD Discharge Permit (GW-032)**

Dear Mr. Riege:

The New Mexico Oil Conservation Division (OCD) has reviewed the *Process Design Report For Wastewater Treatment Plan Upgrade (REV. A)* (Work Plan), dated May 26, 2009, submitted on behalf of Western Refining Southwest (WRSW) - Gallup Refinery (the Operator).

The OCD discharge permit revised target date had been moved back to March 1, 2009 from December 31, 2007. The OCD received a process design report (OCD Discharge Permit Section 16(C)) dated February 26, 2009, which was later amended and resubmitted with a date of May 26, 2009.

During this period, WRSW expressed an interest in obtaining a National Pollutant Discharge Elimination System (NPDES) Permit with the EPA and was involved with meetings with the OCD and NMED-Surface Water Quality Bureau related to provisions within the Order. The OCD issued a letter dated July 30, 2009 outlining the process for an NPDES Permit through the OCD. WRSW later signed the Order on August 14, 2009. To date, the OCD has not received a "Modification" request under the OCD discharge permit for an NPDES permit to discharge at the facility.

On August 27, 2009, OCD received a forwarded e-mail from WRSW with an attached letter dated August 17, 2009 from the Operator to the New Mexico Environmental Department (NMED) stating "[t]his letter serves as Western Refining Gallup's ("Gallup") withdrawal from New Mexico Environment Department's (NMED) consideration of the Process Design Report For Wastewater Treatment Plan Upgrade (Rev. A) prepared by Brown and Caldwell and submitted to NMED on May 26, 2009. NMED issued an approval letter with conditions on the Process Design Report dated September 1, 2009.

In addition, the OCD recently reviewed the NMED's letter dated September 1, 2009 indicating NMED's approval with conditions. The OCD concurs with the NMED and hereby approves the



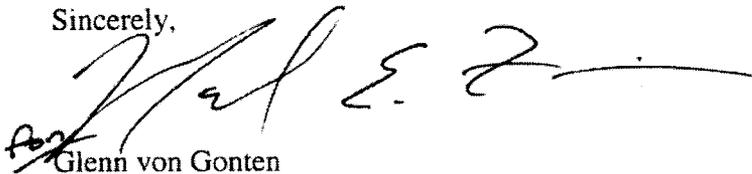
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design report with a final deadline for implementation of a waste water treatment system upgrade at the facility.

As indicated by the NMED in their September 1, 2009 letter, WRSW shall have an operational system in place by the September 4, 2010 deadline. WRSW adherence to this date will satisfy the OCD's discharge permit objective for an adequate waste water treatment system design under the discharge permit.

Please contact Carl Chavez at (505) 476-3490 or [carlj.chavez@state.nm.us](mailto:carlj.chavez@state.nm.us) if you have questions. Thank you for your cooperation in this matter.

Sincerely,



Glenn von Gonten  
Acting Supervisor, Environmental Bureau

Attachments: NMED letter dated September 1, 2009

GvG/cjc

xc: Hope Monzeglio, NMED- HWB  
OCD District Office



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RON CURRY  
Secretary

JON GOLDSTEIN  
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

September 1, 2009

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

**RE: APPROVAL WITH MODIFICATION  
PROCESS DESIGN REPORT FOR WASTEWATER TREATMENT PLANT  
UPGRADE (REV. A)  
WESTERN REFINING COMPANY, SOUTHWEST, INC., GALLUP REFINERY  
EPA ID # NMD000333211  
HWB-GRCC-09-002**

Dear Mr. Riege:

The New Mexico Environment Department (NMED) has reviewed the *Process Design Report For Wastewater Treatment Plan Upgrade (REV. A)* (Work Plan), dated May 26, 2009, submitted on behalf of Western Refining Company, Southwest Inc., Gallup Refinery (the Respondent). On August 17, 2009, NMED received an e-mail with an attached letter from the Respondent stating "[t]his letter serves as Western Refining Gallup's ("Gallup") withdrawal from NMED's consideration of the Process Design Report For Wastewater Treatment Plan Upgrade (Rev. A) prepared by Brown and Caldwell and submitted to NMED on May 26, 2009. As we discussed, Gallup intends to submit to NMED an alternative wastewater treatment system work plan." The

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May 26, 2009 Work Plan is referenced in the EPA Compliant and Consent Agreement and Final Order dated August 26, 2009 (CAFO), paragraph 100.C which states "[t]he Respondent submitted, on May 30, 2009, a Process Design Report for Wastewater Treatment System Work Plan for NMED and OCD approval for the design and construction of the upgraded wastewater treatment system. Upon NMED and OCD approval, all deadlines, work/design requirements, and sampling and monitoring requirements in a Process Design Report for Wastewater Treatment System Workplan shall become part of, and enforceable under, this CAFO."

Comments to the Work Plan already submitted are provided below. NMED understands that the Respondent may submit a work plan for the wastewater treatment system. Nevertheless, the Respondent must adhere to Comments C and D below and all other applicable comments.

**Comment 1/Response 1**

In the Response Letter (dated May 28, 2009), Response 1, the Respondent states "[n]ote: the Refinery is an interim status facility so the correct regulatory citations are HWA 20.4.1.600 and 40 CFR 265 as indicated in the response, rather than 20.4.1.500 and 40 CFR 264 stated in the original comment." In Section 1.5 (Regulatory Criteria) of the Work Plan, page 1-2, the Respondent states "[o]nce a [National Pollutant Discharge Elimination System] NPDES Permit is issued, the WWTP will be regulated under the Clean Water Act and thus exempt from RCRA's 40 CFR 265<sup>1</sup> requirements. Therefore, the design basis for the WWTP upgrades assumes the compliance with RCRA 40 CFR 265 is not required. If for some reason a NPDES permit cannot be obtained, the design will be revised and resubmitted to reflect compliance with 40 CFR 265." Footnote 1 states "[n]ote: The Refinery is an interim status facility so New Mexico Hazardous Waste Act [sic] 20.4.1.600 and 40 CFR 265 apply rather than 20.4.1.500 and 40 CFR 264."

**NMED Response**

The following corrections and requirements apply to the Respondent:

- a. The Gallup Refinery is not an interim status facility. If the Respondent considered Aeration Lagoons 1 and 2 (AL-1 and AL-2) as interim status units, then the Respondent would have needed to submit a revised Part A Permit Application for those units in accordance with 20.4.900 NMAC (incorporating) 40 CFR 270.10 and a Part B permit application would have been required. In addition, interim status requires compliance with the requirements found in 20.4.1.900 NMAC (incorporating) 40 CFR 270.70 and 270.10(e)(ii). AL-1 and AL-2 are solid waste management units (SWMU), as indicated in Appendix A of the Post-Closure Care Permit (Permit).

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- b. As long as the Respondent continues to treat wastewater in AL-1 and AL-2 that is characteristically hazardous for benzene, the facility is treating hazardous waste. The CAFO allows the Respondent 120 days from NMED's approval of an Interim Measure Work Plan to achieve compliance.
- c. The regulations cited by the Respondent ("HWA [sic] 20.4.1.600 and 40 CFR 265") are incorrect. The Respondent has not met the requirements for interim status; therefore, 40 CFR 265 (20.4.1.600 NMAC) does not apply.
- d. The CAFO appropriately requires the Respondent to comply with the hazardous waste generator requirements found in 20.4.1.300 NMAC (incorporating) 40 CFR 262.34(a).

**Comment 2/Response 2**

In the Response Letter, Response 2, the Respondent states "[s]hould Western Refining elect to perform BOX testing, and should that testing indicate that the addition of the MBBR media is not required, then Western Refining will seek approval from OCD to modify the Bioreactor design to exclude media."

**NMED Response:** The Respondent must also obtain approval from NMED to modify any portion of the wastewater treatment system.

**Comment 4/Response 4**

In the Response letter, Comment 4, NMED states "[t]he WWTS must contain influent and effluent sampling ports to accommodate sampling at the new API separator...."

**NMED Response:** From review of Section 6.1 (Sampling Locations), the influent to the API separator cannot be sampled. NMED reserves the right to require sampling of the influent entering the new API separator and the Respondent must be capable of collecting such samples.

**Comment 6/Response 6**

In the Response letter, Comment 6/Response 6 addresses dredging of Evaporation Pond 1 (EP-1). The Respondent responded stating "[d]redging of EP-1 will be addressed in the Corrective Measures Implementation Work Plan due to NMED on July 31, 2009. Western Refining will take the position that the initial dredging is not warranted and that the frequency a [of] future dredging events can allow for more than one foot of accumulation."

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**NMED Response:** There have been documented releases when hazardous waste has entered EP-1; therefore, at a minimum, EP-1 contains listed hazardous waste (F037/F038). The upgraded wastewater treatment system is intended to ensure that hazardous waste will not enter EP-1. Dredging will remove residual contamination in order to enable the Respondent to demonstrate future compliance. The Respondent shall comply with the dredging requirements found in NMED's April 15, 2009 Notice of Disapproval (NOD), Comment 6. No revision is necessary.

**Comment 9/Response 9**

In the Response Letter, Response 9, the Respondent states "[m]eeting the [requirements of] 20.6.2.3103 standards is not a stated treatment objective of the upgraded WWTS. The treatment objectives (as stated in Section 1.4 of the Report) are for there to be no visible free oil and <0.5 mg/L benzene. The concentrations of other parameters are expected to be consistent with the historical data reported for the EP-1 inlet under the GW-32 monitoring requirements." Section 1.4 of the Work Plan states "[t]he treatment objectives for the WWTP upgrade are to provide water quality that is suitable for discharge to the unlined EP-1. Specifically, the objectives are for there to be no visible free oil and <0.5 mg/L benzene. This project design was developed based on these objectives."

**NMED Response:** As identified in the objectives, the effluent entering into EP-1 must not contain free oil, and benzene concentrations must be below <0.5 mg/L. However, these should not be the sole objectives of the WWTS upgrade. The WWTS and the effluent entering into EP-1 must comply with all applicable requirements found in the Oil Conservation Divisions (OCD) Discharge Plan GW-32, as well as comply with all other applicable regulations. Discharges to the unlined Evaporation Ponds must not create the potential for impacts to groundwater.

**Additional NMED/OCD Comments**

**Comment A**

In Section 4.2.1 (Stormwater/Diversion Tanks), page 4-1, paragraph 2, the Respondent states "[o]il that may accumulate on the surface of T27 and T28 [Stormwater/Diversion Tanks] will be captured from a skimmer device mounted on each tank's floating roof. The skimmed oil will be collected by a vacuum truck and transferred to the Refinery's slop oil system for recycling back to the refining process. Solid material that may settle on the bottom of T27 and T28 will be removed on a periodic basis and managed along with similar material collected from the NAPIS. This material is normally recycled to an off-site refining process. If recycling to a refining process is not available, the T27 and T28 bottom solids will be managed as a hazardous waste."

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**NMED Response:** Storm water at the refinery comingles with process water and therefore potentially contains hazardous waste (D018 and F037/F038 listed wastes). The Respondent is not allowed to accumulate hazardous waste in Tanks T27 and T28 for more than 90 days. Therefore, the Respondent's must design their storm water system to direct the ongoing low flow of process wastewater in the storm water system to the API separator except during storm events when higher flows trigger diversion of storm water to Tanks T27 and T28 at flow rates greater than approximately 30 gallons per minute (gpm) to prevent flow rates from exceeding capacity of the API separator or wastewater treatment system.

**Comment B**

In Section 4.2.4 (Tank-Based Separator), page 4-2, paragraph 5, the Respondent states "[t]he Tank-based separator is not designed to be compliant with 40 CFR 265 Subpart J due to Western Refining's intention to obtain an NPDES permit for the WWTP. If an NPDES permit cannot be obtained, the design of the Tank-based separator will be modified to be compliant with 40 CFR 265 Subpart J."

**NMED Response:** The CAFO requires the Respondent to comply with the requirements found in 20.4.1.300 NMAC (incorporating) 40 CFR 262.34(a). This applies to all applicable sections within the Work Plan (e.g. Section 4.2.5 (Bioreactors), paragraph 1 and Section 4.5 (Secondary Containment and Leak Detection)).

**Comment C**

In Section 4.6 (Alternative Upgrade Approach), page 4-6, last sentence, the Respondent states "Western Refining will submit the alternative design approach to OCD for approval prior to implementation."

**NMED Response:** The Respondent discussed an alternative approach to the upgraded WWTS to NMED and OCD in a meeting on July 1, 2009 that addressed the use of Macro Porous Polymer Extraction and a dissolved gas flotation unit. On August 17, 2009, the Respondent submitted a letter withdrawing the Process Design Report For Wastewater Treatment Plan Upgrade (REV. A). If the Respondent chooses to pursue an alternative wastewater treatment system, a new work plan must be submitted to OCD and NMED for approval by both agencies. The new work plan must describe all aspects of the alternative design. The implementation of an alternative approach will not change the deadline established in Comment D below which provides a deadline for the start of operation of an upgraded WWTS.

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**Comment D**

The Respondent includes a Project Schedule in Section 5.

**NMED Response:** NMED does not approve the schedule presented in Section 5. The facility has had ample time to research and design an upgraded wastewater treatment system and first proposed upgrades in May 2007. Therefore, the Respondent must have the upgraded wastewater treatment system installed and operating by September 4, 2010.

**Comment E**

In Section 6.1 (Sample Locations), page 6-1, the Respondent states “[t]he WWTP upgrades will include wastewater sample stations at key locations for monitoring system performance. These locations are indicated by notations on the process flow diagrams in Attachments A and C and are listed below:”

**NMED Response:** The sampling ports were not described in the Work Plan. The Respondent must ensure that the sampling port mechanisms to be installed are capable of controlling the flow through the sampling ports to minimize volatilization. There are no notations for sample locations in Attachment C. No revision is necessary; the Respondent must install the sampling ports as required in the NMED’s April 15, 2009 NOD.

**Comment F**

In Section 6.3 (Sample Analysis for Regulatory Reporting), page 6-2, the Respondent identifies sampling parameters for the EP-1 influent. The Respondent must address the following:

- a. Table 6-2 lists the EPA method for semi volatile organic compounds (SVOCs) as “EPA 8260 C.” The correct analytical method for SVOCs is EPA Method 8270. The Respondent must revise Table 6-2 to include the correct EPA Method and submit a replacement page that includes the corrections.
- b. The EPA method proposed to be used to detect benzene is 8021B. In addition to benzene, EPA Method 8021B also analyzes for toluene, ethylbenzene, and total xylenes (BTEX). When reporting the analytical data, the Respondent must report all BTEX data. The Respondent must revise the Table 6-2 to include the analysis of toluene, ethylbenzene, and xylenes in addition to the benzene and submit a replacement page. If EPA Method 8260 is used, all analytes listed for the Method must be reported.
- c. The Respondent states in Section 6.3 that “Western Refining will seek approval from OCD to discontinue the regulatory reporting requirements for the Pilot Travel Center (i.e., “Effluent from the Pilot Gas Station to the Aerated Lagoon”) and the NAPIS

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Effluent (i.e., "Effluent from the new API Separator) as required by Condition 19 of GW-032...." The Respondent must also obtain approval from NMED. Since this page is being resubmitted, this proposed revision must be included with the replacement pages.

**Comment G**

During the month of June 2009, the refinery reported an overflow at the API separator due to intense rain events. The API separator must be able to handle storm water surges caused by rain events. The overflow at the API separator implies that the storm water and the process water sewer systems are still interconnected. The Respondent must account for intense rain events in the wastewater treatment system design to ensure API overflows do not occur in the future.

The Respondent must comply with all comments contained in this letter. The replacement page(s) as specified must be submitted to NMED and OCD on or before September 25, 2009 in the event that an alternate wastewater treatment system design plan is not submitted. Provided that the Respondent complies with all the requirements of this letter, NMED approves the May 26, 2009 Work Plan. In any event, the upgraded wastewater treatment system must be installed and operating by September 4, 2010.

If you have questions regarding this letter please contact Hope Monzeglio of my staff at 505-476-6045.

Sincerely,



James P. Bearzi  
Chief  
Hazardous Waste Bureau

cc: J. Kieling, NMED HWB  
D. Cobrain NMED HWB  
H. Monzeglio, NMED HWB  
C. Chavez, OCD  
G. Rajen, Gallup  
J. Dougherty, EPA Region 6  
D. Edelstein, EPA Region 6  
A. Allen, Western  
File: Reading File and GRCC 2009 File  
HWB-GRCC-09-002