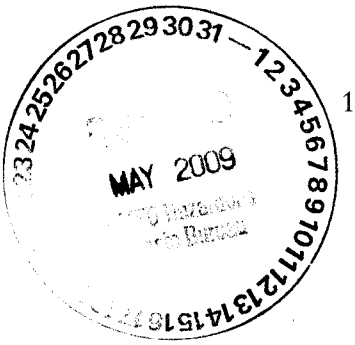
May 28, 2009



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Mr. James P. Bearzi
Chief, Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Subject: Response to Notice of Disapproval
Process Design Report for Wastewater Treatment Plant Upgrade
Western Refining Company Southwest, Inc. (Gallup Refinery)
EPA ID# NMD000333211
HWB-GRCC-09-022

Dear Mr. Bearzi:

This letter is in response to the Notice of Disapproval (NOD) for Western Refining's Process Design Report for Wastewater Treatment Plant Upgrade (Report). The comments from the NOD and the responses addressing those comments are included below. In addition, the Report has been revised and is being re-submitted with this response.

> **Comment 1**: "In Section 3.3 (Biological Treatment), the Permittee states '[t]he biological treatment technology selected for [Wastewater Treatment Plant] WWTP upgrade project was a Bioreactor without sludge (biomass) recycle. This technology is akin to an aerated lagoon, but in an above-ground steel tank.'
> The Permittee currently does not have a National Pollutant Discharge Elimination System (NPDES) Permit. Therefore, the wastewater treatment system (WWTS) upgrade is subject to the Resource Conservation Recovery Act (RCRA) and the New Mexico Hazardous Waste Act (HWA). The bioreactors, tank-based separator, and any future tanks must comply with 20.4.1.500, incorporating 40 CFR 264 Subpart J. The Permittee must revise the Report to show that the tanks comply with the Subpart J design requirements. The Permittee must revise the text and attachments as necessary."

Response 1: Western Refining is in the process of preparing a NPDES permit application to be submitted to USEPA Region 6. We have assumed that the permit will be approved and in-place by the time the upgraded WWTS is operational. Therefore, the design basis for the Report assumes that the upgraded WWTS is not subject to HWA 20.4.1.600 (incorporating 40 CFR 265 Subpart J). The NPDES permit should be issued within the next 9 months. Should at any time it become evident that a NPDES permit will not be issued prior to WWTS start-up, the tank design will then be modified to comply with 20.4.1.600 and 40 CFR 265 Subpart J and the Report will be resubmitted to NMED/OCD for approval. Contingencies will be built into the design approach to accommodate these potential modifications such that the schedule presented in Section 5 of the Report will not be jeopardized. Sections 4.2.4 and 4.2.5 of the Report have been modified to reflect this approach.

Note: 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.

> **Comment 2**: "In Section 3.3 (Biological Treatment), page 3-3, the Permittee states '[t]he shutdown of Benzene Stripper No. 3 will increase the benzene loading in the NAPIS effluent above current levels. In the detailed engineering phase, Brown and Caldwell will evaluate the impact of this change on the design conditions and evaluate whether or not MBBR media addition to the Bioreactors will be required as a result.' The Permittee must revise the Report to include all changes to the WWTS to account for the increased benzene load resulting from the removal of Benzene Stripper 3."

Response 2: Section 3.3 has been modified to reflect this comment. The design approach for the upgraded WWTS will be to add MBBR media to the Bioreactors in order to accommodate the higher benzene loading from the shutdown of Benzene Stripper No. 3. However, Western Refining reserves the right to conduct further wastewater treatability studies that may prove media addition is not required.

The modeling of benzene removal efficiency in the Bioreactors was based on a conservative benzene biodegradation rate. The biodegradation rate was taken as the default value from the USEPA WATER9 modeling. Brown and Caldwell's experience is that the WATER9 default biodegradation rates for individual volatile organic compounds typically under predict actual biodegradation rates observed in full-scale systems with acclimated biomass. USEPA recognizes the potential for this underestimation by allowing for the site-specific measurement of biodegradation rates through BOX testing as prescribed in 40 CFR 63 Appendix C.

Should Western Refining elect to perform BOX testing, and should that testing indicate that the addition of MBBR media is not required, then Western Refining will seek approval from OCD to modify the Bioreactor design to exclude media.

> **Comment 3**: "In Section 4.5 (Secondary Containment and Leak Detection), page 4-5, the Permittee states '[t]he proposed design does not include leak detection or containment berms for the Bioreactors (T11 and T12)...However, the Bioreactors will be situated such that a potential leak would flow into EP-1, which is the destination of the Bioreactor effluent.' If the system has a leak, the discharge may not be completely treated and therefore may potentially be characteristic for benzene and/or be a F037/F038 listed waste, which would then enter EP-1. Hazardous waste must not be discharged to EP-1 since it is not permitted by the NMED to receive hazardous waste and requirements in the OCD Discharge Plan. Because the Permittee does not have a NPDES Permit for the WWTS, the tank systems within the WWTS are subject to the requirements of 20.4.1.500 NMAC, incorporating 40 CFR 264 Subpart J. The Permittee must revise this Report to reflect compliance with the requirements of 40 CFR 264 Subpart J and revise the attachments as applicable. The Permittee must also revise the Report to comply with Condition 9 (Above Ground Tanks) of the OCD Discharge Permit (GW-32), dated August 23, 2007. The WWTS cannot be retrofitted and does not qualify for the exemption (tanks that contain fresh water or fluids that are gases at atmospheric temperature and pressure are exempt) under Condition 9 of the OCD Permit."

Response 3: Section 4.5 of the Report has been modified to incorporate this comment. Leak

detection will be provided by installing channels in the concrete foundation under the tank or by an alternative method that is suitable to OCD. The secondary containment for the Bioreactors will be an earthen secondary containment berm (or by an alternative method that is suitable to OCD) and will meet the requirements of Condition 9 of GW-32. As discussed in Response 1, the leak detection and secondary containment for the Bioreactors will not be intended to meet 40 CFR 265 Subpart J requirements, unless it is later determined that a NPDES permit cannot be obtained.

> **Comment 4**: "The Permittee must revise the Report to include the following modifications:
> a. The WWTS must contain influent and effluent sampling ports to accommodate sampling at the new API separator, the tank-based separator, and the bioreactors.
> b. The WWTS must include air vents for the tank-based separator and the bioreactors. These locations must be constructed to allow for emissions sampling.
> The text and attachments must be revised as necessary to address items a and b above."

Response 4: Item (a) of Comment 4 has been addressed by the addition of Section 6.0 Sampling and Analysis to the Report. This new section includes the identification of sampling locations as well as the anticipated parameters and measurement frequencies. The process flow diagrams in Attachment A and Attachment C also include notations to indicate sampling locations.

Item (b) of Comment 4 has been addressed in Section 4.2.4 of the Report for the Tank-based Separator and in Section 4.2.5 of the Report for the Bioreactors. The Tank-based Separator will have an external floating roof that will maintain a condition of no air headspace above the liquid. Further, the roof will have appropriate primary and secondary seals per 40 CFR 60.693-2 (NSPS Subpart QQQ standards), which are designed to prevent a venting situation. Therefore, T10 will have near-zero air emissions and an air emission sampling point is not applicable. The roof will be equipped with pressure and vacuum vents for non-routine start-up/shutdown events. The roofs of the Bioreactors will be equipped with vents to allow the aeration air a means of exiting the tank. A mechanism for sampling the air emissions from the roofs will be included.

> **Comment 5**: "In Section 2.2 (Refinery Wastewaters), page 2-1, the Permittee states '[t]he sanitary wastewater generated at the Refinery and the seven adjacent homes owned by the Refinery currently discharges to the septic systems and not the WWTP. However, the WWTP upgrades will include the option for these sanitary sources to be redirected to the WWTP at a future date at Western Refining's discretion.' If and when the sanitary sources are redirected to the WWTS, the Permittee must notify the OCD and the Gallup Field Office (http://www.nmenv.state.nm.us/NMED/field_op.html) prior to implementing this change over and comply with all requirements. No revision is necessary."

Response 5: The text of Section 2.2 has been revised to affirm Western Refining's intent to implement this change. Ed Riege of Western Refining sent an e-mail to OCD and NMED HWB staff members on April 1, 2009 informing them of this change. Mr. Riege also included drawings for review. As requested above, the same information was emailed to Charles Lundstrom of the Gallup Field Office on April 29, 2009. Please advise if additional notification is required per Comment 5.

> **Comment 6**: "In Section 3.3 (Biological Treatment), page 3-3, the Permittee states '[b]iomass will exit the Bioreactors by being carried out in the Bioreactor effluent. The biomass will settle out in the downstream evaporation ponds, primarily [Evaporation Pond] EP-1. Over time, the settled

biomass may accumulate in EP-1 to the extent that dredging will be required.' The Permittee has allowed upsets with the current WWTS resulting in hazardous waste being discharged to EP-1. Therefore the follow requirements apply and the Permittee must revise the Report to address these requirements.

a. Within 30 days of demonstration that the new WWTS is achieving cleanup criteria, the Permittee must dredge EP-1. The dredged material must be properly characterized and managed for proper disposal. All dredging and waste disposal activities must be approved by both NMED and OCD prior to implementation. The Report must be revised to describe the dredging process, alternatively, the Permittee may submit a separate work plan to NMED and OCD for approval that addresses the dredging activities.

b. After the initial dredging of EP-1, the Permittee must dredge the biomass from EP-1 anytime the biomass accumulation is greater than one foot. The dredged biomass must be properly characterized as nonhazardous if considered for placement in the OCD landfarm to assist the remediation of contamination soil, pending OCD approval. NMED must be included on all correspondence."

Response 6: Dredging 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 future dredging events can allow for more than one foot of accumulation.

Comment 7: "In Section 4.2.1 (Stormwater/Diversion tanks), page 4-1, the Permittee states '[i]n the new system, stormwater will flow by gravity to two Stormwater/Diversion Tanks. These tanks are existing with a numerical designation of Z84-T27 and T-28...Stormwater that collects in the tanks will be pumped at a rate of 50 to 200 gpm to the process sewer that feeds to the NAPIS.' Since the stormwater and process wastewater at the refinery comingle, any sludge removed from the bottom of the Stormwater/Diversion tanks must be managed as hazardous waste."

Response 7: Section 4.2.1 of the Report has been revised in to address this comment. This material will normally be recycled to an off-site refining process. If recycling to a refining process is not available, the material removed from the bottom of the Stormwater/Diversion tanks will be managed as a hazardous waste.

Comment 8: "In Section 4.2.1 (Stormwater/Diversion tanks), page 4-1, the Permittee states '[c]leanouts will be installed on the conveyance pipelines to and from the Stormwater/Diversion Tanks. Cleaning events will be scheduled on a regular, recurring basis.' Any sludge removed during the cleanouts of the pipelines must be managed as hazardous waste. The Permittee must revise the Report to address the management of this sludge."

Response 8: Section 4.2.1 of the report has been revised to address this comment. This material will normally be recycled to an off-site refining process. If recycling to a refining process is not available, the cleanout sludge will be managed as a hazardous waste.

Comment 9: "In Section 4.2.5 (Bioreactors), page 4-3 and 4-4 the Permittee states '[t]here will be provisions for diverting the Bioreactor effluent away from EP-1 in the event that the treated water quality it not acceptable. A diversion line will be connected to the combined Bioreactor effluent, with its valve normally closed. To divert, this valve would be opened and the valve to EP-1 closed' and the Permittee later states in Section 4.4 (Management of Off-Spec Wastewater),

page 4-5, that '[i]f at anytime the Bioreactor effluent were deemed unsuitable for discharge to EP--1, it could be diverted to the new Stormwater/Diversion Tanks as described in Section 4.2.5' The Permittee must provide a sampling plan that explains how the Permittee will characterize the effluent from the bioreactors entering EP-1. The sampling plan must identify the location of samples that will be collected and address sampling frequency, water quality parameters, and test methods. The effluent must comply with the Water Quality Control Commission standards found in 20.6.2.3103."

Response 9: Section 6.0 Sampling and Analysis has been added to the Report to provide a sampling plan for the Bioreactor effluent/EP-1 influent.

Meeting the 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.

Comment 10: "In Section 4.3.3 (OAPIS), page 4-5, the Permittee states 'the [Old API Separator] OAPIS will no longer be required and can be decommissioned.'
The OAPIS is Solid Waste Management Unit (SWMU) No. 14. This SWMU is subject to correction action under the Refinery's RCRA Permit. The Permittee must provide a schedule for the submittal of an investigation work plan to assess releases from the OAPIS."

Response 10: A schedule for submitting this investigation work plan will be included in the Corrective Measures Implementation Work Plan due to NMED on July 31, 2009.

Closing

A hardcopy of the revised report is included with this response letter. Additionally, an electronic red-line version of the Report is being emailed. The distribution list for these submittals includes NMED HWB, OCD, and EPA Region 6.

I can be reached at (505) 722-0217 or ed.riege@wnr.com.

Very truly yours,

Ed Riege
Environmental Manager