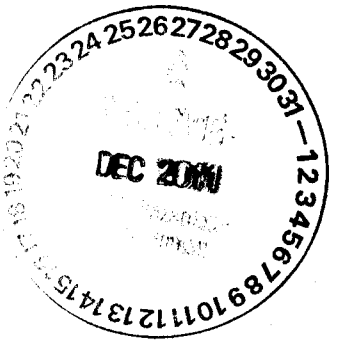
Certified Return Receipt: #7008 2810 0000 4726 1796



December 21, 2011

Mr. John Kieling, Acting Chief
NMED - Hazardous Waste Bureau
2905 Rodeo Park Drive East, Bldg 1
Santa Fe, NM 87505-6303

RE: Approval With Modifications
Request For Approval Of Process Design Changes
Western Refining Company, Southwest, Inc., Gallup Refinery
EPA ID #NMD000333211
HWB-WRG-11-003

Dear Mr. Kieling:

Western Refining Southwest, Gallup Refinery is pleased to submit the following response to the above referenced letter dated December 2, 2011. The HWB comments are underlined followed by Gallup's responses.

Comment 1
The description of the function of the tanks in the second point of the letter was difficult to interpret without a drawing. In the future, ensure that letters that describe changes to the process system are accompanied by the appropriate figures.

Response 1
Gallup will follow this directive for future letters.

Comment 2
Sludge that settles in Tanks 27 and 28 or 35 must be treated as hazardous waste if it is removed rather than entrained in the wastewater stream and sent through the treatment system. Solids recovery must be part of the tank system maintenance.

Response 2
Solids recovery is part of the tank system maintenance. The recovered solids/sludge will be treated as a hazardous waste or excluded under 40 CFR 261.4 (12) if managed as a oil bearing hazardous secondary material inserted into a petroleum refining process.

Comment 3

Provide a letter to OCD and NMED describing the factors that influence whether or not to divert the storm sewer, process sewer, RO reject and/or softener regeneration water to Tanks 27 and 28 instead of flowing directly to Tank 35. Recently an oily wastewater overflow at Tank 35 occurred due to a precipitation event. It appears that there may be a lack of wastewater handling capacity when reliance is placed on Tank 35 and Tanks 27 and 28 will likely help prevent overflows in the future.

Response 3a

This incident was due to Operator error, it was not caused by lack of capacity. At the time of the incident, tanks 27/28 had room to handle the normal rundown flow in addition to the storm surge.

Comment 3b

However, the manual diversion of wastewater to tanks is an issue when a rapid surge occurs, such as in the Tank 35 overflow incident. The Permittee must ensure that the tanks are frequently or continuously monitored and maintain a water level in Tank 35 that is low enough to avoid overflows.

Response 3b

The waste water tank operating procedure has been revised to provide improved guidelines for tank level monitoring and switching flows to control tank levels.

Comment 4

The Permittee must provide a letter describing the diversion system in more detail and discuss whether or not the existing tank diversion network has the capacity to handle the designed maximum volume of the waste water treatment system (WWTS). Discuss the lag time between sampling and shut off/diversion if samples indicate that the water is off-spec.

Response 4

Western's definitions are as follows:

1) WWTU = WWTP = Waste Water Treatment *Plant*. The WWTP includes the design & installation of the DGF Feed Tank, DGF unit, DGF Float Tank, MPPE unit & STP-1. The WWTP is all equipment and systems being installed between the API Separator and existing surface impoundment network.

2) WWTS = Waste Water Treatment *System* and is the all-inclusive work related to:
    a. Combining the refinery oily sewer, water conditioning sewer and stormwater sewer into a single 24" sewer,
    b. Construction of T35/27/28 for the purposes of equalization and diversion,
    c. Installation of the wastewater transfer pumps (P44/45/46),
    d. Design & installation of the WWTP.

Two diversions may occur within the WWTP. They are:

1) Diversion after the DGF unit (resulting from high turbidity and/or conductivity (TSS, O&G, etc.)) is intended to protect the MPPE unit from contamination. If post-DGF water is diverted, the MPPE unit will go into automatic shutdown and flow of WWTP effluent to STP-1 & EP-2 will stop. The sanitary sewer will continue to flow into STP-1 for treatment. The DGF Feed Tank system and DGF unit will continue to operate for a pre-programmed period of time to allow the problem to be

remedied. The wastewater transfer pumps at T35/27/28 will stop to prevent the WWTP from being flooded. If repairs take longer than this pre-programmed period of time, the entire WWTP will go into automatic shutdown and wastewater volumes will build in T35/27/28 until the problem is remedied. This diversion is completely automated and no operator intervention is required. Turbidity and conductivity instrumentation monitor the DGF effluent water quality real-time and control a set of automated block valves.

2) Diversion after the MPPE unit (resulting from the inability of the WWTP to reduce benzene concentration to less that the required 0.5ppm) is intended to prevent high benzene discharge into Evaporation Pond #2 (EP-2). If post-MPPE water is diverted, the DGF Feed tanks system, the DGF unit and the MPPE unit will continue to operate. Flow of WWTP effluent to STP-1 & EP-2 will stop. The sanitary sewer will continue to flow into STP-1 for treatment. The DGF Feed tanks system, DGF unit and MPPE unit will continue to operate for a pre-programmed period of time to allow the problem to be remedied. The wastewater transfer pumps at T35/27/28 will stop to prevent the WWTP from being flooded. If repairs take longer than this pre-programmed period of time, the entire WWTP will go into automatic shutdown and wastewater volumes will build in T35/27/28 until the problem is remedied.

The lag time between sampling and Post-MPPE diversion if samples indicate that the water is off-spec is approximately four hours, as described in Section 4.4, paragraph two, of the approved Process Design Report for Wastewater Treatment Plant Work Plan A (Alternate Design, Revision A) April 2010. This section reads "The MPPE process monitoring will consist primarily of two daily measurements (at approximately 7:00 am and 7:00 pm) of benzene in samples of wastewater. These samples will be analyzed at Gallup Refinery's onsite testing laboratory using gas chromatograph/Mass Spectrometer (GC/MS). The results will be available almost immediately – that is, within a few hours of sample collection. To account for the fact that our onsite method is not identical to the EPA approved method, and to divert proactively, we will use the 0.4 Mg/L of benzene as a trigger for diversion."

Comment 5

Provide a figure or design drawing depicting the sampling port design(s) per location, if different, for the WWTS monitoring system.

Response 5

Please find Attachment 1, containing the revised Block Flow Diagram showing all of the sample points and flowmeters within the WWTS.

Comment 6

The Permittee states that the "DGF Feed Tank is sized to accommodate the required material in the WWTS itself that might need to be drained to facilitate maintenance and access to equipment." Provide a description of the size of the DGF Feed Tank and the steps necessary to divert the waste stream when this tank is taken out of service (i.e., diversion of influent containing VOCs to Tanks 27, 28 and 35).

Response 6

The permittee stated "DGF Feed Tank is sized to accommodate the required material in the WWTU itself that might need to be drained to facilitate maintenance and access to equipment." As stated in Response 4 above, the WWTU is the same as the WWTP.

The DGF Feed Tank has a diameter of 16ft and is 6ft tall, with a nominal volume of 9030 gallons. Two liquid volumes were considered when sizing and locating this tank. The nominal liquid volume equals 4000 gallons, resulting in the tank being approximately one-half full. This nominal volume provides DGF Feed pump suction. The emergency liquid volume also equals 4000 gallons, resulting in the tank approaching full. This emergency volume is reserved for emergency back flow during system anomalies, such as power failures.
During normal WWTP operations, the DGF Feed tank will maintain this nominal liquid volume and be one-half full. If a power failure is experienced, the operator can manually drain the DGF unit back to the DGF Feed tank. This will utilize the emergency liquid volume and increase the tank to near full. The emergency liquid volume is protected because the wastewater transfer pumps at T35/27/28 will stop. The emergency liquid level was selected to be six inches below the normal API level, so that this emergency volume does not overflow back into the API.

If maintenance is required on the DGF Feed tank (or any other WWTP equipment), the WWTP will be off-line and wastewater volumes will build in T35/27/28 until maintenance is complete. Once maintenance is complete, the WWTP will sequentially startup (unit-by-unit) so that benzene discharge limits are not exceeded.

Comment 7
The drawing provided to NMED (Wastewater Treatment Plant (WWTP) Work Plan Flow Diagram) no longer shows the location of flow meters; NMED assumes that flow meters are still part of the system and the meters should be depicted in the diagram and identify the type of instrument. If this is not the case, the Permittee must explain why flow meters are no longer part of the system.

Response 7
Please find Attachment 1, containing the revised Block Flow Diagram showing all of the sample points and flowmeters within the WWTS. For clarity, the following table gives more information:

Sample Point #	Sample Point Description
SP-1	Oil & Grease, Total Suspended Solids & pH Verification Prior to DGF unit
SP-2	Nitrogen Super-Saturation Verification Prior to DGF Unit
SP-3	Oil & Grease and Total Suspended Solid Separation Test
SP-4	DGF Float Tank Water Decant
SP-5	Oil & Grease, Total Suspended Solids & pH Verification After DGF unit
SP-6	Primary Oil & Grease, Total Suspended Solids & pH Verification After MPPE Filters
SP-7	MPPE Return Water
SP-8	Secondary Oil & Grease, Total Suspended Solids & pH Verification After MPPE Filters
SP-9	Secondary Benzene Compliance
SP-10	Recovered Benzene Quality
SP-11	Primary Benzene Compliance

SP-12	Sanitary Sewer
SP-13	Combine Benzene & Sanitary Sewers for South Bay of STP-1
SP-14	Combine Benzene & Sanitary Sewers for North Bay of STP-1
SP-15	Benzene Compliance & Treated Sanitary Quality after WWTP

If you have any questions regarding Western's responses, please do not hesitate to contact me at (505) 722-0217.

Sincerely,

Ed Riege
Environmental Manager

cc: K. Van Horn, NMED HWB
C. Chavez, OCD
M. Turri, Gallup
F. Keys, Gallup

WWTU = WWTP

STORM SEWER

PROCESS SEWER

RO REJECT & SOFTENER REGEN

T-27 & T-28 OVERFLOW TANKS

OIL RECOVERY

T-35 EQUALIZATION TANK

OIL RECOVERY

EXISTING EQUIPMENT

API SEPARATOR (NAPIS)

SOLIDS RECYCLE

OIL RECOVERY

DGF FEED TANK

TO ATMOS

H2S & CARBON CANISTERS

COAGULANT & FLOCCULANT

VENT

SP-1 SP-2

SP-3

DISSOLVED GAS FLOATATION (DGF)

FLOAT

NITROGEN

FLOAT TANK

SP-4

WATER DECANT

SOLIDS TO OFFSITES DISPOSAL

SP-5

POST-DGF DIVERSION

STEAM

VENT TO FLARE

POST-MPPE DIVERSION

SP-6
SP-7
SP-8
SP-9

MACRO-POROUS POLYMER EXTRACTION (MPPE)

SP-10

RECOVERED BENZENE

SP-11

RCRA COMPLIANT WATER

SP-13 SP-14

SANITARY POND

TREATMENT (STP-1)

SP-15

EXISTING EVAPORATION PONDS # 2 - 12

EXISTING EVAPORATION POND #1 (EP-1) TO BE CLOSED IN PLACE

EXISTING AERATION LAGOONS (AL-1 & AL-2) TO BE CLOSED IN PLACE

SP-12

SANITARY SEWER

(FROM PILOT TRAVEL CENTER AND REFINERY)

LEGEND

SAMPLE POINT

FLOWMETER

REV.	REVISION DESCRIPTION	RFC No.	DATE
3			
2			
1	For June 2011 Process Design Review	n/a	07/01/11
0	For April 2010 Process Design Review	n/a	09/23/09

Western Refining
Gallup Refinery

Wastewater Treatment Plant (WWTP)
Work Plan Flow Diagram

DRN. BY: FK	DATE: 09/15/11	RFE No: n/a
CHK'D. BY: DR	DATE: 09/15/11	CAD REF:
APP'D. BY: DR	DATE: 09/15/11	n/a

DRAWING NO. FIGURE 1 REV 1