

WRG

New Mexico Energy, Minerals and Natural Resources Department

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**Mark Fesmire**  
Division Director  
Oil Conservation Division



**MEMORANDUM**

TO: Glenn Saums, Acting Chief  
Surface Water Quality Bureau

FROM: Glenn von Gonten, Acting Environmental Bureau Chief  
Oil Conservation Division

SUBJECT: WESTERN REFINING SOUTHWEST, INC., GALLUP REFINERY  
APPLICATION TO DISCHARGE TO WATERS OF THE UNITED  
STATES - NPDES PERMIT NO. NM0031071

DATE: May 15, 2010



The Oil Conservation Division (OCD) has received a copy of the proposed National Pollutant Discharge Elimination System (NPDES) Permit for Western Refining Southwest, Inc. (Western), Gallup Refinery. In accordance with the Water Quality Control Commission's Delegation of Responsibilities, OCD administers and enforces applicable WQCC regulations pertaining to surface and ground water discharges at oil and gas industry sites in New Mexico, including oil refineries. Therefore, OCD has reviewed the proposed NPDES permit for Western's Gallup Refinery and has the following comments and concerns for EPA's consideration.

**Comment 1:** Western has not responded to OCD's November 20, 2009 "Administratively Incomplete" determination on Western's "Modification" Request to discharge to "Waters of the State" under OCD discharge permit (GW-032). It appears that Western has chosen to pursue a NPDES Permit and may wish to withdraw its Discharge Permit Modification Application. By letter dated May 13, 2010, OCD is requiring Western to submit a response to OCD's letter of November 20, 2009, in which OCD determined that Western's Modification Application was "Administratively Incomplete." If Western does not respond within 30 days, then OCD will deem that Western has withdrawn its modification request. Without a modification to its Discharge Permit, Western will not be permitted by OCD to discharge any effluent to the Puerco River and any discharge will be in violation to its Discharge Permit and the WQCC regulations, regardless of its possession of a NPDES permit. If EPA issues a NPDES permit to Western that indicates that Western may discharge to the Puerco River or any other ephemeral stream, then OCD will modify Western's Discharge Permit appropriately to ensure that Western's discharges do not impact ground water.



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**Comment 2:** It appears that Western and EPA may not be aware that in 1989 the Water Quality Control Commission delegated to OCD the authority to administer and enforce WQCC regulations pertaining to surface and ground water discharges at oil refineries and to conduct technical reviews of NPDES Permits at oil and gas facilities in its *Delegation of Responsibilities* memo of July 21, 1989. OCD has the responsibility and authority to enforce WQCC rules that regulate discharges to surface water at oil and gas facilities, such as Western's Gallup Refinery. Because OCD has determined that Western must address surface water effluent discharge issues that may impact ground water pursuant to the WQCC regulations, OCD cannot support Western's NPDES Permit at this time. OCD recommends that EPA not issue Western's final NPDES permit until Western has satisfactorily addressed all of OCD's concerns. Please note that OCD may request and/or require additional information during the Discharge Permit modification process to address technical issues associated with the proposed NPDES permit.

**Comment 3:** OCD concurs with most of the Hazardous Waste Bureau's (HWB) comments in its memo to the Surface Water Quality Bureau dated May 11, 2010. However, HWB's Comment 8 appears not to have considered some existing pond water quality monitoring data. OCD does not feel that a sampling point at the Old API Separator is appropriate because OCD and HWB have determined that Western must remove this sampling point due to a fire hazard and because of the new waste water treatment system.

**Comment 4:** Western's Discharge Permit for its Gallup Refinery includes a provision for spills and releases. Based on the current wastewater treatment system at the Gallup Refinery, surface water discharges at the proposed off-property NPDES Outfall may constitute a knowing and willful violation by Western of its Discharge Permit.

**Comment 5:** Western has moved the proposed Outfall location in its NPDES Permit application to a location off its property and onto state trust lands. This is a different location than what was proposed in Western's Modification Request to OCD. To accomplish this, Western must obtain permission from the State Land Office to access state land and permission from OCD to discharge to surface waters of New Mexico. OCD has already required Western to submit a workplan to install additional monitoring wells on state lands to monitor ground water quality at the NPDES outfall. Western will also need approval from the State Land Office for any additional monitoring wells.

**Comment 6:** Western's spent cooling tower and boiler blow-down effluent currently bypass the existing treatment system and discharge directly into the pond network upgradient from the proposed NPDES outfall location. Sanitary effluent from the facility and the nearby Travel Center is mixed with waste water and presently serves as the biotic food source for bioremediation at the aeration lagoons of the existing treatment system. While EPA's proposed discharge monitoring program includes many appropriate constituents, it is not clear how the "Conventional and Nonconventional Pollutants Required to be tested by Existing Dischargers if expected to be Present" would be implemented by Western. OCD is also concerned with the frequency of monitoring, (*i.e.*, "monthly or 1/year") when daily discharges would be occurring at the NPDES Outfall. OCD notes that Western told OCD that daily discharges were never the

intent of the NPDES Permit when it was applying for a NPDES permit and a modification to its Discharge Permit.

OCD recommends that EPA require Western to conduct more frequent sampling following emergencies, upsets, *etc.* that could result in a discharge at the proposed NPDES Outfall. OCD also recommends that EPA require Western to install more monitor wells to determine the integrity of the evaporation pond network and any emergency discharges at the proposed NPDES Outfall. OCD recommends that EPA require Western to routinely monitor effluent, at least weekly, for a comprehensive list of constituents concern. OCD recommends that EPA require Western to install a treatment system down gradient from Evaporation Pond 2 to treat all wastewater.

**Comment 7:** OCD is concerned about the lack of adequate wastewater containment at the refinery. Western's current wastewater treatment system has experienced upsets during power failures and precipitation events. Consequently, Western installed mobile pumps to redirect the API Separator overflow back into the treatment system or into holding tanks for eventual processing. The proposed NPDES Permit would allow effluent to be discharged directly onto the surface as opposed to being redirected to the holding tanks at the facility. OCD has determined that the native soil does is permeable and that a discharge to the surface may migrate vertically to contaminate ground water.

**Comment 8:** Western is currently installing a new wastewater treatment system that is scheduled to be operational by September 2010. OCD recommends that EPA require Western to include the new wastewater treatment system in its NPDES permit to ensure that the quality of effluent discharging into the pond network meets state and federal water quality standards in the event of an emergency discharge to the proposed NPDES Outfall. Also, OCD recommends that EPA require Western to install pumps pipelines to redirect pond water to prevent off-property discharges.

**Comment 9:** OCD is concerned that Western originally specified the effluent discharge volume to the outfall as 100,000 GPD but the proposed NPDES Permit specifies the maximum discharge volume to be 400,000 GPD. OCD understands that the NPDES Permit is supposed to be for a one-time emergency discharge and Western has previously informed OCD that daily discharges will not occur. Because there is no definition what would constitute an "Emergency" situation, OCD must assume that effluent may be discharged to the Puerco River on a daily basis. OCD recommends that EPA require Western be required to monitor the quality of its effluent discharge on a weekly basis at a minimum if this happens.

**Comment 10:** OCD will require Western to install more monitor wells downgradient of the NPDES outfall along Puerco River to monitor the saturated zones between the refinery and the Puerco River and the mixing zone where pollutants may migrate vertically to ground water.

**Comment 11:** OCD has concerns about contaminated storm water at the refinery. Western has unsuccessfully attempted to identify and prevent the mixing of stormwater drainage with process

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fluids. Therefore, consistent with HWB's Comment 6, OCD feels that EPA should require Western to install a treatment system downgradient from Evaporation Pond 2.

Please contact me if you have questions at (505) 476-3488.  
GvG/cjc

cc: Diane Smith, EPA Region 6  
Daniel Sanchez, OCD  
Gail Macquesten, OCD  
Carl Chavez, OCD  
OCD District III Office, Aztec  
Marcy Leavitt, NMED  
James Bearzi, NMED-HWB  
Dave Cobrain, NMED-HWB