

March 28, 2011

DCN: NMED-2010-12

Mr. David Cobrain  
New Mexico Environment Department  
Hazardous Waste Bureau  
2905 Rodeo Park Dr. E, Bldg 1  
Santa Fe, NM 87505



RE: Draft Technical Review Comments on the "Investigation Report Group 2 SWMU No. 2 Drum Storage Area North Bone Yard; SWMU No. 8 Inactive Landfill; SWMU No. 9 Landfill Pond; SWMU No. 11 Spray Irrigation Area; SWMU No. 18 Warehouse Yard" Bloomfield Refinery, Revised March 2010

Dear Mr. Cobrain:

This letter addresses the draft technical review of the "Investigation Report Group 2 SWMU No. 2 Drum Storage Area North Bone Yard; SWMU No. 8 Inactive Landfill; SWMU No. 9 Landfill Pond; SWMU No. 11 Spray Irrigation Area; SWMU No. 18 Warehouse Yard" Bloomfield Refinery, Revised March 2010. As noted in an email (March 10, 2011) from Ms. Hope Monzeglio Petrie, there were questions concerning risk screening for total petroleum hydrocarbons (TPH) and the dilution attenuation factor (DAF). The following comments were noted during this review.

1. The screening level for C11-C21 aromatics as provided in the NMED TPH Guidance was updated to reflect more current toxicity information. The TPH levels contained within the NMED TPH Guidance were based on methodologies provided in the Massachusetts Department of Environmental Protection's Contingency Plan Standards. The methodology applied to derive a new TPH value for the C11-C21 aromatics (Equation 1 in Appendix F) is based upon the standard equation for deriving a soil screening level (SSL) from the NMED SSL Guidance. The methodologies for developing a TPH level are different between NMED's TPH and SSL Guidance's. However, the methodologies are not dissimilar enough to warrant Bloomfield Refinery to revise the calculations. In addition, the methodology applied in Appendix F is not too dissimilar from other State's TPH SSL derivations. The screening level for C11-C21 aromatics is acceptable.
2. The facility indicated that use of screening levels for evaluation migration to groundwater based on a DAF of one (1) was overly conservative and not applicable to conditions at the Bloomfield Refinery. It is not clear why they did not apply screening levels based on the DAF of 20, as the NMED SSL Guidance does indicate that this is appropriate for most facilities. However, Bloomfield chose to derive a site-specific DAF (Appendix G). The methodologies used to derive the site-specific DAF are consistent with the NMED SSL

Guidance, and use of the site-specific DAF is a more conservative approach than applying generic SSLs based on the DAF of 20.

3. Assumptions concerning risk are presented in the document although there are no quantitative risk calculations. It is noted that some sites, such as Solid Waste Management Unit (SWMU) 9 had multiple constituents with levels exceeding corresponding SSLs, but no cumulative risk/hazard calculations are provided in the report. Since revisions to this report are anticipated (e.g., to include recommended site attribution analysis for metals), the revised report should include quantitative risk assessment.
4. Some volatile organic compounds (VOCs) were detected at the SWMUs. In addition, there are soil vapor screening data. It is not clear how the soil vapor data were evaluated or if they were incorporated into making risk determinations (there is no analysis of the vapor intrusion scenario). However, at a minimum a qualitative analysis of the vapor intrusion pathway should be included for sites where VOCs are present.
5. Table 8 includes screening levels used to assess levels of contaminants detected in groundwater. It is not clear why the NMED SSLs for tap water were not included in this table.

If you or any of your staff have questions, please contact me at (801) 451-2864 or via email at [paigewalton@msn.com](mailto:paigewalton@msn.com).

Thank you,



Paige Walton  
AQS Senior Scientist and Program Manager

CC: Hope Monzeglio Petrie, NMED (electronic)  
Joel Workman, AQS (electronic)