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Mr. David Cobrain  
New Mexico Environment Department  
Hazardous Waste Bureau  
2905 Rodeo Park Dr. East  
Building One  
Santa Fe, NM 87505

RE: Evaluation of Responses to Notice of Disapproval (NOD) comments on the *Investigation Work Plan for Determination of Background Concentrations, Western Refining Southwest, Inc., Bloomfield Refinery.*

Dear Mr. Cobrain:

This letter serves as a deliverable and provides our draft technical evaluation of response to Notice of Disapproval (NOD) comments on the *Investigation Work Plan for Determination of Background Concentrations, Western Refining Southwest, Inc., Bloomfield Refinery.* A revised report was also provided to evaluate the inclusion of responses.

Unless otherwise addressed below, the inclusion of the responses in the revised report and the responses to the NODs were adequate as provided. A new comment on the *Investigation Work Plan for Determination of Background Concentrations* was also drafted and included below.

Comment No. 3. Western explains that the two depth intervals that will be sampled (0-6 inches below ground surface [bgs] and 18-24 inches bgs) are representative of deeper soils due to similar lithology throughout the vadose zone. Western has added a more detailed description of the lithology of the vadose zone in Section 2.2.2. However, there is still concern whether the proposed sample intervals (0-6 inches bgs and 18-24 inches bgs) are representative of all of the exposure interval (down to 10 feet bgs) that receptors are expected to encounter as well as deeper subsurface soil that may be sampled to assess vertical migration. Section 4.2 should be modified to state that if differences in lithology in subsurface soils are discovered during the site investigation for which the established background data set is not appropriate, additional background samples representative of the new lithology will be collected and the background data set expanded to include these data.

Comment No. 6. As indicated in the response, Western has agreed to collect additional soil samples at the two monitoring well locations. However, Western has not agreed to reevaluate the proposed background soil sampling locations. The sampling grid size is approximately 170 feet by 70 feet, and would result in background soil sample locations that are approximately 28

*The contents of this deliverable should not be evaluated as a final work product.*

feet apart. The background sampling area comprises less than 1% of the total area of the site. Even though uniform lithology is expected throughout the site, this small background sampling area would not likely capture the natural variation of metals concentrations that are likely to be observed throughout the site. An increased likelihood of encountering a Type I or Type II error may result from this limited background sampling area. It is for the benefit of Western to have greater confidence in the representativeness of the background dataset. Thus, the background soil sampling locations must be reevaluated in order to capture the natural variability in soil at the Bloomfield Refinery.

Comment No. 14. Western indicates in the response that multiple groundwater samples will be collected from each background monitoring well over sufficient time to avoid auto correlated, non-independent data. However, the work plan does not explain: 1) over what period of time the multiple sampling events will occur; 2) how many sampling will be collected over the specified period of time; and 3) the amount of time that will pass between the repeated sampling events. This is relevant information that should be included in the work plan to ensure that the sampling events will yield independent samples and that there will be a sufficient number of samples to calculate summary statistics. The work plan should be revised accordingly.

New Comment. The work plan does not indicate what will be done with the data once the soil and groundwater sampling results are obtained. For example, what statistics will be calculated and used as background metals concentrations? How will outliers and non-detects be handled? Revise the work plan to include the statistical objectives of the background study and how the data will be used to establish background metals concentrations in soil and groundwater.

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

Thank you,



Paige Walton  
AQS Senior Scientist and Program Manager

cc: Hope Monzeglio Petrie, NMED (electronic)  
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