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March 29, 2011

DCN: NMED-2011-14

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 of Response to Notice of Disapproval (NOD) for the "Remedy Completion Report for Upper Los Alamos Canyon Aggregate Area, Former Technical Area 32," Los Alamos National Laboratory, Dated January 25, 2011

Dear Mr. Cobrain:

This letter addresses the draft technical review of responses to risk assessment related Notice of Disapproval (NOD) for the "Remedy Completion Report for Upper Los Alamos Canyon Aggregate Area, Former Technical Area 32," Los Alamos National Laboratory (LANL), Dated January 25, 2011. Specific Comment Nos. 1 and 6 were not risk-related and the responses were not evaluated. Unless specifically addressed below, all the responses to NODs were deemed adequate as provided.

General Comment No. 1 questioned rounded of risk and hazard levels to one significant figure. The response indicated that rounded is an acceptable procedure as recognized by Environmental Protection Agency (EPA) guidance. Since the supporting tables provided in the actual risk assessment typically are not rounded, a check of the results can be conducted and presentation of final results in the main text as rounded values does not impact evaluation of risk. However, in evaluating the response to this NOD, it was noted that there is a general inconsistency with how LANL treats this issue. Some of the investigation reports provide two significant figures while others present one significant figure. LANL should review reports for internal consistency. Rounding of risk in the main discussions of text is acceptable only if the supporting risk tables include at least two significant figures.

General Comment No. 2 addressed a concern for exposures to industrial and construction workers via inhalation of volatile organic compounds (VOCs) via the vapor intrusion scenario. The NOD requested a qualitative discussion of the vapor intrusion pathway with respect to these two receptors. While the response does provide this discussion, we are not in agreement with the conclusion that evaluation of the pathways was not warranted. These are potentially complete exposure routes, and while the residential analysis may be protective of these other receptors, the risk assessment should have addressed these risks. No additional response is needed.



The response to General Comment No. 3 is acceptable as addressed in the responses. However, note that for all future reports, total excess cancer risk and hazard must include the risk/hazard across all complete exposure pathways, regardless of whether the pathway significantly contributes to overall risk/hazard.

Specific Comment No. 5 addresses the prevalence of polynuclear aromatic hydrocarbons (PAHs) and whether the detections should be retained in the risk evaluation. LANL provides an argument that the detections of PAHs are not site-related but reflective of the industrial nature of the area. However, more recent sampling confirmed the previous elevated levels detected in 1996. Regardless of whether the PAHs can be tied directly to LANL activities or may be related to localized industrial activities, PAHs are present exceeding residential levels in an area where residential exposure pathways are complete, and as such, risks to PAHs need to be addressed.

Specific Comment No. 10 indicates that a minimum of eight (8) samples are required to calculate statistical exposure point concentrations. The response provided by LANL is that the ProUCL guidance allows for as few as five (5) data points in deriving a statistical based upper confidence level (UCL) of the mean. While this may be true, NMED has had numerous discussions with LANL concerning number of data points needed for statistical determinations. In agreements made with Dr. Rich Miranda, LANL acknowledged that they needed a minimum of eight samples (data points) and if these data were not available, the maximum detected concentration would be applied. The use of eight samples was agreed to by NMED. Therefore, the response to this comment is not adequate as provided. LANL must adhere to previous agreements concerning this issue and also provide for consistency between investigations and how site data are evaluated.

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: Neelam Dhawan, NEMD (electronic)
Joel Workman, AQS (electronic)