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Date: November 8, 2006
 Refer to: EP2006-0992

Mr. James Bearzi
 Bureau Chief
 Hazardous Waste Bureau
 New Mexico Environment Department
 2905 Rodeo Park Drive East, Building 1
 Santa Fe, NM 87505-6303

SUBJECT: RESPONSE TO THE NOTICE OF DISAPPROVAL LOS ALAMOS AND PUEBLO CANYONS SUPPLEMENTAL INVESTIGATION REPORT, LOS ALAMOS NATIONAL LABORATORY

Dear Mr. Bearzi:

Please find the attached response to the Notice of Disapproval for the Los Alamos and Pueblo Canyons Supplemental Investigation Report, dated October 4, 2006. This response addresses all four NMED comments

To facilitate review of this response, the New Mexico Environment Department's (NMED's) comments are included verbatim. Los Alamos National Laboratory's (LANL's or the Laboratory's) responses follow each NMED comment.

NMED Comment

1. *Appendix E notes that, "[a]nalytes thought to be naturally occurring (e.g., aluminum) were not plotted." The Report does not provide the basis used to establish the criterion, "thought to be naturally occurring," nor does the Report list those chemicals found to exceed screening criteria but excluded from the report based on that criterion, other than aluminum. Including such information is useful when considering potential cumulative chemical risks. This would, for example, allow the assessment of baseline risks provided by "naturally" occurring chemical conditions in the watershed, and allow an assessment of total chemical-based risks in the watershed. The Permittees must justify provide a basis for the criterion and justify why these constituents were not included in the risk assessment.*



LANL Response

1. The Laboratory acknowledges that the supplemental report did not provide the basis for establishing that observed concentrations of aluminum (and some additional constituents) in storm water are naturally occurring. However, the Laboratory believes that the NMED's concern that naturally occurring constituents need to be represented in the risk assessment is addressed through use of the sediment data in the risk assessment. These sediment data represent storm-water deposition, and are inclusive of both naturally occurring constituents and Laboratory contaminants.

NMED Comment

2. *In Appendix E is stated that, "[i]n Los Alamos and DP Canyons, the highest values are generally associated with gage stations E030, E040, and E042. In Acid and Pueblo Canyons, the highest concentrations are generally found at gage stations E060, and the concentrations of those same contaminants are also low at E110." The report continues with, "These spatial trends indicate that much of the suspended sediment is dropping out of floodwaters before reaching the Rio Grande and/or that analyte concentrations are being diluted from mixing during downstream transport." This conclusion is not the only possible explanation. An alternative hypothesis for this relationship, not considered or assessed in the report, is that flow volumes and frequencies at this most downstream site, which funnels flows together from the many smaller tributaries, effectively has more frequent and greater scour energies through the reach containing this site, effectively flushing sediments further downstream. The Permittees must more fully assess alternative hypotheses, including the one discussed above.*

LANL Response

2. The interpretation of the stormwater data that the Laboratory presented in the supplemental report is consistent with the observed spatial variations in the stormwater data and with observed deposition of fine-grained deposits on floodplains following large flood events. However, the Laboratory agrees that there are other (multiple) conceptual models that can be applied to these (and all) chemical and other environmental data. The Laboratory proposes that further refinement of the conceptual model(s) for storm water transport of contaminants is not warranted for this report and does not change the fundamental observations made at the gage stations.

NMED Comment

3. *The last sentence of Section 2.7 in the Report, Results of the Ecological Risk Screening for Dioxins and Furans, states the following: "Because adverse ecological effects to mammals were not identified in the original ecological assessment, the assessment implicitly demonstrated that there are no adverse ecological effects from dioxins and furans." From the Permittees' response to general comment # 3 in the April 29, 2005 Response to the Notice of Disapproval, dioxins and furans were not included in the risk assessment. Therefore, this conclusion is unsubstantiated. The Permittees appear to be concluding that risks are not present because analyses were not completed nor were effects observed. Ecological risks, even significant risks, can be present without effects being observed. This statement in the Report requires revision or clarification with a more complete presentation of the supporting analysis. Alternately, the Permittees may delete the statement.*

LANL Response

3. The Laboratory agrees that the initial ecological adverse affects assessment was conducted without inclusion of the dioxin data. However, the Laboratory contends that the initial conclusion that there are no observed adverse affects is inclusive of all contaminants present in the study area and is therefore independent of specific contaminant concentration data. The new dioxin data obtained to evaluate the potential influence from SWMU 73-002 ("airport ash pile") do not change the conclusion. The study design was already conservative in that it focused on the reaches with highest contamination, and the new dioxin results indicated that there were not higher concentrations of dioxins outside of the area of the small mammal study.

NMED Comment

4. *The note at the bottom of Table 2.6-2 refers to "Section 7." This appears to be a typographical error. The Permittees must clarify the note by referencing the correct section or state which document the Permittees are referencing.*

LANL Response

4. The Laboratory agrees that there is a typographical error in the note at the bottom of Table 2.6-2. The note was intended to reference Section 2.7 (not Section 7) of the supplemental report.

If you have any questions, please contact Danny Katzman at 667-6333 or Mat Johansen at 665-5046

Sincerely,



Andrew Phelps, Associate Director
Environmental Programs
Los Alamos National Laboratory

Sincerely,



David Gregory, Federal Project Director
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Los Alamos Site Office

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