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BILL RICHARDSON
Governor

DIANE DENISH
Lieutenant Governor

**NEW MEXICO
ENVIRONMENT DEPARTMENT**

Hazardous Waste Bureau

**2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Phone (505) 476-6000 Fax (505) 476-6030
www.nmenv.state.nm.us**



RON CURRY
Secretary

SARAH COTTRELL
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

October 8, 2010

George J. Rael, Federal Project Director
Environmental Projects Officer
U.S. Department of Energy/National
Nuclear Security Administration
Los Alamos Site Office
3747 West Jemez Road, MS A316
Los Alamos, NM 87544

Michael J. Graham
Associate Director Environmental Programs
Los Alamos National Security, L.L.C.
P.O. Box 1663, MS M991
Los Alamos, NM 87545

**RE: NOTICE OF DISAPPROVAL
NEST BOX MONITORING REPORT
FOR THE UPPER PAJARITO CANYON WATERSHED
LOS ALAMOS NATIONAL LABORATORY
EPA ID #NM0890010515
HWB-LANL-10-075**

Dear Messrs. Rael and Graham:

The New Mexico Environment Department (NMED) has received the United States Department of Energy (DOE) and the Los Alamos National Security L.L.C.'s (LANS) (collectively, the Permittees) *Nest Box Monitoring Report for the Upper Pajarito Canyon Watershed* (Report), dated August 2010 and referenced by LA-UR-10-5469/EP2010-0353. NMED has reviewed the Report and hereby issues this Notice of Disapproval (NOD). While NMED finds generally that the Permittees have not collected sufficient data to justify eliminating continued monitoring, we nevertheless provide the following specific comments

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Specific Comments:

1. The conclusion of the Report indicates that further characterization of metals for cavity-nesting birds and their food in the Pajarito watershed reaches is not warranted based on the exposure evaluation calculated using nest box insects collected in 2009. This conclusion is based upon limited data. Metals data (excluding mercury) were available for two sampling events (2007 and 2009), while mercury data were only available for a single sampling event (2009). As noted in the *Pajarito Canyon Biota Investigation Work Plan*, (July 2006) (IWP), “[t]he primary tool for risk characterization of potential effects on abundance is trend analysis versus predicted hazard quotient (HQ) for constituents of potential ecological concern (COPECs) (e.g., polychlorinated biphenyls (PCBs) and inorganic constituents). Concentrations in eggs and insects will be used to generate central tendency estimates and upper bound concentrations (95% upper confidence limit) of inorganic chemicals, PCBs, and semi-volatile organic chemicals (SVOCs) in eggs and insects.”

Sufficient data have not been collected to adequately develop any trends or conduct statistical analyses. One year of data for mercury is not adequate to assess trends or develop a central tendency estimate or upper bound concentration. Based on the limited data provided in the Report, the data objectives of the biota investigation work plan have not been met and additional data for inorganics (in addition to the proposed PCB data) are needed.

2. The IWP indicates that nest box studies will include an evaluation of the potential impacts from semi-volatile organic chemicals (SVOCs). It is not clear from the Report that sampling is proposed or planned for SVOCs. The Permittees must indicate when they will be evaluated or provide sound technical reasoning for not evaluating them.
3. The nest box report further states that, “Other lines of evidence for evaluating risks to cavity-nesting birds include field measures of nest success. Such studies have not identified any potential for ecological risk in the Pajarito watershed. For example, robust evaluations based on a long record of observations of sex ratios of fledgling birds have shown no statistically significant differences in sex ratios between canyons or watersheds (Fair et al. 2009, 106686). Thus, there is no indication of contaminant effects on sex ratios across the monitoring network or based on the field measures of nest success evaluated in this report. Overall, the weight-of-evidence indicates that COPECs in the Pajarito reaches do not pose a potential risk to population abundance or persistence and species diversity of avian ground invertivore feeding guild species.”

State whether the referenced data consist of a sole year or several years of observations (e.g., 2006 to present). The biota work plan indicates that shell thickness would also be monitored and that scatter plots to evaluate trends in nest success and eggshell thickness along gradients in elevation or COPEC concentrations will be developed. The Permittees must indicate whether or not these data have been collected. Discuss whether or not sufficient data have been collected to develop a trend analysis. The Permittees must indicate whether or not any robust analysis of all the data has been conducted.

4. Several of the hazard quotients provided in Table 3 are significantly elevated (one to two orders of magnitude) compared to the target hazard level of 1.0. Based on the limited amount of available data combined with the elevated HQs, sufficient lines of evidence have not been provided to adequately demonstrate that there are no adverse impacts to cavity-nesting birds. Additional data and refinement of the risk assessment is needed to draw any conclusion as to impact on this class of birds.
5. In light of the results of recent air emissions modeling associated with Technical Area 16, dioxin/furan congeners must be included in the Upper Pajarito Canyon Biota Investigation.

NMED agrees with the Permittees that LANS must submit insects collected in 2010 from nest boxes in the upper Pajarito Canyon watershed reaches for SVOC, PCB, and dioxin/furan congener analyses if sufficient sample mass is available. If sample mass is insufficient for these analyses, samples from 2010 must be combined with samples from subsequent years. These data must be reported by August 31, 2011, or by August 31 of subsequent years if sample submission is delayed because of insufficient sample mass.

The Permittees must address these comments and submit a revised Report by or before **November 8, 2010**. As part of the response letter that accompanies the revised Report, the Permittees shall include a table that details where all revisions have been made to the revised Report and that cross-references NMED's numbered comments. All submittals (including maps) must be in the form of two paper copies and one electronic copy in accordance with Section XI.A of the Order. The Permittees must submit a redline-strikeout version that includes all changes and edits to the Report (electronic copy) with the response to this NOD.

Please contact Daniel Comeau at (505) 476-6043, if you have any questions.

Sincerely,



James P. Bearzi
Chief
Hazardous Waste Bureau

cc: J. Kieling, NMED HWB
D. Cobrain, NMED HWB
N. Dhawan, NMED HWB
D. Comeau, NMED HWB
S. Yanicak, NMED DOE OB, MS J993
T. Skibitski, NMED DOE OB
L. King, EPA 6PD-N
S. Veenis, LANS, EP-CAP, MS K490
S. Schulman, DOE-LASO, MS A316

File: 2010 LANL, Nest Box Monitoring Report for the Upper Pajarito Canyon Watershed