



**Department of Energy**  
Albuquerque Operations Office  
Los Alamos Area Office  
Los Alamos, New Mexico 87544

OCT 26 1999

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ms. Lou Roberts  
PCB Spill Coordinator  
TSCA Program  
Environmental Protection Agency, Region 6  
1445 Ross Avenue  
Dallas, TX 75202-2733

Dear Ms. Roberts:

Subject: Polychlorinated Biphenals (PCBs) Contamination, Sandia Canyon,  
Los Alamos National Laboratory (LANL), Environmental Restoration (ER)  
Project Activities

The purpose of this letter is to provide your office with information regarding the preliminary data showing biological accumulation of PCBs in certain species of small mammals in Upper Sandia Canyon, LANL, Technical Areas (TA) 3 and 60. LANL is owned by the U. S. Department of Energy (DOE) and operated by its contractor the University of California (UC). The ER Project team at LANL (Project Team) is responsible for the investigation and, if necessary, undertaking corrective action at the solid waste management units (SWMU) from which release(s) may have occurred. This work is performed in accordance with Module III of LANL's Hazardous Waste Operating Permit as required by the Hazardous and Solid Waste Amendments Act (HSWA).

The Project Team is currently investigating Upper Sandia Canyon in accordance with the Sampling and Analysis Plan (SAP) that was submitted to the New Mexico Environment Department (NMED) in March 1998. Although the SAP has not been formally approved, NMED has provided verbal approval. The Project Team has been taking steps to begin implementing the basic requirements of the SAP. The SAP calls for the investigation of sediment, surface-water baseflow, and storm-water runoff. A copy of this document is attached for your review.

In addition to sampling sediment, surface-water baseflow, and storm-water runoff, adipose and fatty tissue samples have been taken from small mammals collected from the wetland area and submitted for analysis for PCBs. These mammals consisted of shrews, voles, and mice. The mammals were collected from the wetland area between



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1995 and 1996. As reported in the SAP submitted in March 1998, detectable levels of PCBs (Arochlor-1260), ranging from 0.1 to 19 mg/kg live tissue, were determined to be present in some samples. A copy of the Summary Report on these findings is enclosed for your review. The highest levels of PCBs were found in shrews, which exist at a higher level of the food chain than the rodents, i.e., voles and mice. Preliminary evaluation of the data indicates that the maximum PCB levels detected approach the minimum contaminate uptake levels for which physiological effects have been noted in laboratory mammals.

The LANL Project Team and ESH Division are coordinating efforts to gather additional information about Upper Sandia Canyon. These activities include:

- Identifying the relationship between the PCBs in the environment and those in the small mammals.
- Gathering more information on the toxicological implications for the small mammals and their predators.
- Gathering more information on the population status and condition of the small mammals in Upper Sandia Canyon.

To address the three areas identified above, the following activities are planned:

- On or about November 15, 1999, the *Small Mammal Sampling Report*, including a preliminary discussion of risk, will be finalized and provided to you.
- On or about February 1, 2000, evaluation of all existing relevant data (sediment, water, and small mammal) will be completed in the context of ecological risk. This is to determine if data currently available is sufficient to appropriately evaluate the ecological risk associated with PCBs in Upper Sandia Canyon, or if there are data gaps.
- The Project Team will conduct second and, if necessary, third phases of sediment sampling to complete the determination of nature and extent of contamination and support human health and ecological risk assessment, if required. If the evaluation of the existing data indicates the need, second phase sediment sampling may include or emphasize collection of samples in the mammal sampling area. This work will be conducted in accordance with the ER baseline.

Phase I of the SAP, i.e. sediment investigation, in Upper Sandia Canyon was begun in August 1998 and has been completed. This activity consisted of geomorphic mapping of sediments in the canyon bottom, and collection and analysis of samples. Sediment samples were collected from key sediment packages and represented multiple depths and

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the followup phases of the investigation to be more focused, which is in accordance with the SAP and the Core Document for Canyons Investigations, which was approved by NMED in March 1998.

As a part of the Phase I sampling effort, 72 sediment samples were submitted for PCB analysis. At this time, detailed evaluation of the data has not been completed; however, we can preliminarily summarize the results by stating that approximately 66 percent of the 72 samples had detections of PCBs ranging between 0.024 mg/kg (Arochlor-1016) and 0.79 mg/kg (Arochlor-1260). Two of the sediment samples collected in Phase I exceeded 1 mg/kg for Arochlor-1260. Those values were 2 and 11 mg/kg.

Surface-water baseflow samples were collected at six locations distributed between the head of Sandia Canyon and the toe (east end) of the wetland area, a distance of approximately 1 km. These samples were analyzed for a large suite of potential contaminants that includes PCBs. No PCBs were detected in any of the samples.

The surface-water baseflow sampling requirements in the SAP are completed. It is anticipated that the storm-water sampling requirements will largely be met by the proposed sampling under the Watershed Management Program.

DOE and UC welcome the continued assistance of the Environmental Protection Agency, Region 6 in our continuing efforts to address PCB issues at LANL.

Should you have further questions or require further clarification of the information provided, please contact me at 505-665-5042.

Sincerely,

H. L. "Jody" Plum  
Office of Environment

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Enclosure

cc

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cc w/enclosure:

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