[DNFSB LETTERHEAD]

May 18, 1993

Dr. Everet H. Beckner
Acting Assistant Secretary
for Defense Programs
Department of Energy
Washington, D.C. 20585

Dear Dr. Beckner:

Defense Nuclear Facilities Safety Board (DNFSB) staff members (R. Zavadoski and A. De La Paz) visited the DP-West facility at Los Alamos National Laboratory (LANL) on April 29, 1993. In addition, the DNFSB staff has reviewed recent direction given to LANL by Defense Programs (DP) concerning continued use of DP-West. The review included a memo dated April 26, 1993 by the DP Deputy Assistant Secretary for Facilities, and a memo dated April 29,1993 by the Los Alamos Area Office Manager.

The DNFSB understands from the above directives that you intend to have LANL conduct a review of hazards existing at DP-West. The enclosed DNFSB staff observations and comments are provided for your consideration in the review.

If you need any further information, please let me know.

Sincerely,

John T. Conway
Chairman

Enclosures

C: Mark Whitaker, Acting DOE/DR-1

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 13, 1993

MEMORANDUM FOR: G.W. Cunningham, Technical Director

COPIES: Board Members

FROM: Andrew F. De La Paz, Roger W. Zavadoski

SUBJECT: Los Alamos National Laboratory (LANL): Observations from a Review of the DP-West Facility

1. Purpose: This trip report documents a review conducted by the Defense Nuclear Facilities Safety Board (DNFSB) technical staff on April 29,1993 of the DP-West facility at LANL. This review was conducted in conjunction with a visit to LANL to review the Chemistry ad Metallurgy Research building upgrade program and site-wide seismic issues.

2. Background: DOE in a memo from the Defense Programs Deputy Assistant Secretary for Facilities dated April 26,1993 and a memo by the Los AIamos Area Office Manager dated April 29,1993 has directed that LANL review hazards at DP-West. The reviews are to include planning to relocate personnel from DP-West.

3. Summary:

   a. Worker and Public Health and Safetv

      A review of whether the radiological protection program assures that all DP-West workers are adequately trained, protected and monitored appears to be appropriate. Such a review would include the adequacy of training and the availability of respiratory protection to protect the workers from potential airborne hazards to which they may be exposed. Documents for use in the review include DOE Order 5480.11 (Radiation Protection for Occupational Workers); The Radiological Control (RadCon) Manual, which incorporates the Health Physics Manual of Good Practices for Plutonium Facilities (PNL-6534, May, 1988); and DOE Order 5480.20 (Personnel Selection, Qualification, Training and Staffing Requirements at DOE Reactor and Non-reactor Nuclear Facilities).

      The DOE RadCon Manual requires that the air be continuously monitored in facilities where there is a need to alert potentially exposed workers to unexpected increases in the airborne radioactivity levels. This involves using an adequate number of continuous air monitors (CAMs) in conjunction with the air sampling system. Alarms, which are part of a CAM system, can then warn the occupants to take protective actions. A review of whether the number and locations of alarming monitors are adequate to cover all occupied areas is appropriate.

To verify the adequacy of the air monitoring and air sampling systems, and consistent with the guidance in the RadCon Manual, consideration might be given to placing each occupant on a bioassay program which is capable of detecting the plutonium and uranium isotopes of interest.

It would appear appropriate to evaluate the ducts external to the facility for integrity and ability to withstand inclement weather in accordance with the guidance provided in the Nuclear Air Cleaning Handbook (ERDA 76-21). Currently, plastic and tape cover a portion of the process exhaust systems exterior ducts. A more permanent covering is preferable. In addition, it is not clear that the final HEPA filters on the process and room exhausts have had a recent valid DOP (Dioctylphthalate) test, conducted in accordance with Testing of Nuclear Air Treatment Systems, to assure their integrity.

In addition, programs for radiological surveys of all DP-West areas might be reviewed to ensure that they provide current radiological hazard information, consistent with guidance in the DOE RadCon Manual.

b. Hazards Analysis

Consistent with guidance in DOE Order 5480.23 (Nuclear Safety Analysis Reports), it would be appropriate for the preliminary hazards analysis (PHA) requested by DOE to consider potential events and accidents involving the release of plutonium and uranium from accumulations in duct work and HEPA filter housings. One event to consider is any adverse interaction involving the ventilation systems when decontamination efforts are occurring simultaneously with laboratory operations. It is understood that decontamination will take place shortly. Another potential event is the release of plutonium and uranium from the external duct work and HEPA filter housings. The presence of these materials in the external ducting and HEPA filter housings indicates that they may be transportable.

Consistent with DOE Order 5500.3A (Planning and Preparedness for Operational Emergencies), initiators such as natural phenomena and airplane crashes, with resulting fires, are typically considered in the hazards analysis, along with issues related to the proximity of public highways, airports, and the public in general.

The PHA is an opportunity to clearly address known facility deficiencies and compensatory measures, consistent with Order 5480.23 (Nuclear Safery Analysis Reports), including the bases for interim operations and restrictions. Identifying equipment important for preventing and mitigating the known hazards would be appropriate.