



TA48

J. Myer's file

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

MAY 21 1998

VIA HAND DELIVERY

Mr. Benito Garcia, Bureau Chief
Hazardous and Radioactive Materials Bureau
New Mexico Environment Department
2044 Galisteo St., Building A
P. O. Box 26110
Santa Fe, NM 87505

Dear Mr. Garcia:

Subject: Emergency Chemical Destruction at Los Alamos National Laboratory (LANL),
Technical Area 48

The purpose of this letter is to provide a written report notifying you of the emergency chemical destruction of six containers of potentially unstable chemicals. Approval to perform this activity was provided by Stu Dinwiddie of your staff via telephone on Friday, May 15, 1998, and Tuesday, May 19, 1998, following discussions with Hilary Noskin and Alice Barr of LANL's Hazardous and Solid Waste Group.

During chemical laboratory operations, personnel found four 1-liter cans of ethyl ether that had exceeded their shelf life, a 50-milliter bottle of dioxane, and a 250-gram bottle of old isopropyl ether. Upon review of the Material Safety Disposal Sheets, and in consultation with LANL's Emergency Management and Response Group (EM&R), it was determined that the items were potentially a threat to human health and safety. The containers showed evidence of crystal formation around the necks and one container was slightly bulged. Because ethers can form explosive peroxides over time that are shock and heat sensitive, the Hazardous Devices Team (HDT) and Hazardous Material Response Team (HAZMAT) were contacted to assist in the disposal of the chemicals. It was determined that an emergency chemical destruction was the safest means to address the problem.

Air modeling calculations performed by LANL's Air Quality Group determined that the planned release of the material generated during the destruction would not result in significant toxic release concentrations at public access points. Two of the containers were located in radiochemistry laboratories. These items were surveyed and cleared for disposal before being placed in the mobile bunker. The other items were in "cold" laboratories and presented no radiological concerns. The material to be destroyed was moved in two separate operations. After evacuating the buildings where the containers



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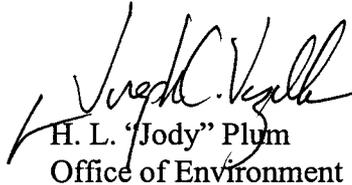
were located, the containers were placed into the mobile bunker and safely transported to the TA-49 destruction/burn area by the HDT. Safe standoff distances for chemical destruction personnel were calculated and observed.

All operations were conducted following the Standard Operating Procedures (SOP) contained in the LANL Emergency Management Plan (EMP), HDT SOP for Emergency Destruction of Unstable Chemicals, and the HDT Operations Guide.

Destruction of the ethers and containers was completed in two separate operations. The first on Friday, May 15, 1998, destroyed 1 ethyl ether container and the isopropyl ether. Another operation on Tuesday, May 19, 1998, destroyed 3 ethyl ether containers and the dioxane. An inspection of the surrounding area after the destruction process was completed revealed no unusual occurrences. The HDT technician's observation of the destruction and inspection of the burn boxes afterwards revealed that the ethers did contain peroxides and were hazardous. The residue in the burn box has been sampled and is undergoing analysis. When analysis is complete, the residue will be characterized and managed accordingly.

If you have any questions, please call me at (505) 665-5042.

Sincerely,



H. L. "Jody" Plum
Office of Environment

LAAME:6JP-067

cc:
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