



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

MAY 29 1998



CERTIFIED MAIL - RETURN RECEIPT REQUESTED

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 (TA) 49 Destruction/Burn Area

The purpose of this letter is to provide a written report notifying you of the emergency chemical destruction of two half-liter glass bottles of potentially unstable chemical. Approval to perform this activity was provided by Stu Dinwiddie of your staff by telephone on Thursday, May 21, 1998, following a discussion with Alice Barr of LANL's Hazardous and Solid Waste Group (ESH-19).

During chemical laboratory operations involving the identification of legacy chemicals, personnel found two half-liter bottles of perchloric acid, both three-quarters full, that had exceeded their shelf life. Upon review of a Material Safety Data Sheet, and in consultation with LANL's Emergency Management & Response and ESH-19 personnel, it was determined that the two bottles of perchloric acid were potentially a threat to human health and safety. Both bottles showed a precipitate on the outer surface of the bottles, one bottle had evidence of crystal formation on the inside, and the perchloric acid in the other bottle had turned milky in color. Because perchloric acid may explode if exposed to shock, friction or heating, and because it is a strong oxidizer, the Hazardous Device Team (HDT) and the Hazardous Response Team (HAZMAT) were contacted to assist in the disposal of the acid. It was determined that an emergency chemical destruction was the safest means to address the problem.

Air modeling calculations were performed by the Environmental, Safety and Health, Air Quality Group. It was determined that the planned release of the material generated during the destruction would not result in significant toxic release concentrations at public access points. Both bottles were located in a radiochemistry laboratory. These bottles of perchloric acid were surveyed and cleared for release from the Radiological



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TK

Benito Garcia

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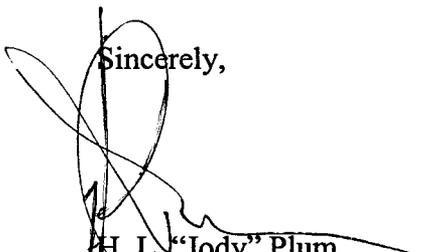
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Control Area before being placed in the mobile bunker. After evacuating affected areas of the building where the bottles were located, the bottles were placed into the mobile bunker and safely transported to the TA-49 destruction/burn area by the HDT. Safe standoff distance for the chemical destruction personnel was calculated and observed.

All operations were conducted following the plans and procedures contained in the LANL Emergency Management Plan (EMP), HDT Safe Operating Procedures for Emergency Destruction of Unstable Chemicals, and HDT Operations Guide. Destruction of the perchloric acid was completed on May 21, 1998, at 1900 hours. 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 box afterwards revealed that the perchloric acid was consumed during the destruction. 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 questions, please call me at (505) 665-5042.

Sincerely,



H. L. "Jody" Plum
Office of Environment

LAAME:6JP-070