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*Solid Waste Regulatory Compliance*

Date: August 11, 2005  
Refer to: ENV-SWRC:05-053

John Kieling  
Permits Management Program  
State of New Mexico Environment Department  
Hazardous Waste Bureau  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, New Mexico 87505-6303

**SUBJECT: Destruction of unsafe chemicals at Los Alamos National Laboratory (LANL)**

Dear Mr. Kieling:

The purpose of this letter is to provide a written report describing the destruction of two containers of chemicals that were potentially unstable and sensitive to shock, light, heat, and air. I notified you of these items on August 5, 2005; in a subsequent response to me (August 9) you indicated that I should provide a follow-up letter recounting the activity.

A drum of mixed waste received at TA-54 contained two glass bottles of commercial reagent. The bottles originally contained methyl lithium solvated in ether. The ether had evaporated and there was no liquid present. Peroxide crystals can form under these conditions and were possibly present in the bottles, making them potentially shock, light, heat, and air-sensitive. Although the bottles originated in a radiological control area, no measurable radiological contamination was associated with the containers or subsequent residue remaining after destruction. It was decided by the Emergency Management and Response Group (EM&R) that use of the burn-box was the most appropriate method to manage these items safely. On August 10, 2005, the drum was transported to a designated safe area, the two bottles were removed and placed in the burn-box by a bomb technician, and the burn was initiated, consuming the items.

Prior to destruction of the items, a special work permit was written that defined the scope of work, and identified the hazards, personnel and responsibilities. Based on mass balance calculations performed by the Environmental Stewardship Division's Meteorology and Air Quality Group, it was determined that no significant air emissions would be generated by these activities.

A walk-down of the job was conducted and pre-job briefings were held. Safe standoff distances were observed. The handling, transport and destruction of the items were performed in accordance with the Hazardous Devices Team (HDT) and EM&R procedures. Inspection of the area of activity after the destruction revealed no unusual occurrences. Residue that remained in the burn box after the destruction



Mr. John Kieling  
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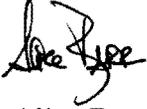
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was collected and submitted for Toxic Characteristic Leaching Procedure, volatile and semi-volatile organic, and gamma radiation analyses.

If you have any questions, please contact me at 667-0820.

Sincerely,



Alice Barr  
Solid Waste and Regulatory Compliance Group

AB:vc

Cy: A. Grieggs, LANL, SWRC, MS K490  
J. Ball, LANL, NWIS-DO, MS J910  
G. Montoya, LANL, NWIS-SWO, MS J595  
C. Duy, LANL, NWIS-SWO, MS J595  
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