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**Department of Energy**

Albuquerque Operations Office  
Los Alamos Area Office  
Los Alamos, New Mexico 87544

JUL 25 1997

VIA HAND DELIVERED

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

Dear Mr. Garcia:

Subject: Notification of Drum Puncture at TA-54

The purpose of this letter is to provide a written report notifying the New Mexico Environment Department (NMED), of the emergency puncturing of twelve, 30-gallon drums of repackaged Mixed Low Level Wastes (MLLW) and one 55-gallon drum of Transuranic (TRU) mixed waste. These activities occurred after Hilary Noskin of Los Alamos National Laboratory's (LANL), Hazardous and Solid Waste Group (ESH-19), discussed the situation with Mr. Mark Coffman of the NMED via telephone on July 21, 1997. A special work permit was not prepared for either emergency drum venting operation due to the urgent need to mitigate the high potential for human injury.

On July 21, 1997, twelve drums located in the Area L Permacon were observed to be severely bulged. These drums were the result of a repackaging operation on Friday, July 18 during which mixed waste aerosol cans were repackaged from 55-gallon steel drums to 30-gallon poly drums per the Department of Transportation packaging specifications for aerosol cans (49 CFR 173.306). These wastes, as well as the one TRU mixed waste drum vented at Area G, covered wastes currently included in LANL's Site Treatment Plan inventory. The cause of the bulging drums is apparently due to the pliable nature of the poly drums during normal internal air expansion on a hot day and the off-gassing of the aerosol propellants. The severity of the bulging and the imminent threat to human health prompted Environmental Management-Solid Waste Operations (EM-SWO), personnel to immediately contact the LANL HAZMAT Team for emergency drum venting. The appropriate health and safety personnel were notified and LANL's Air Quality Group (ESH-17) was contacted to determine potential impacts associated with venting the gases. ESH-17 personnel determined that release of the pressurized gases from these drums did not pose an air quality problem.



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At 1315 hours, on July 21, 1997, the twelve drums in the Area L Permacon were remotely punctured and vented by the LANL HAZMAT Team. The drums were vented to the air inside the Permacon which is processed through a HEPA-filtered air ventilation system before release to the atmosphere. Prior to the venting, two gas samples were collected and are currently being analyzed. The Area L drum puncturing and venting operation was complete at 1430.

On July 22, 1997, LANL's transport contractor (Laidlaw Environmental) received an exemption to the DOT aerosol can packaging requirements. Therefore, repackaging of aerosol cans to 30-gallon poly drums is no longer necessary and over-pressurization due to aerosol can repackaging is not expected.

The bulging 55-gallon drum of TRU mixed waste at Area G, Dome 226, was discovered on July 21 as a result of normal container inspections. The cause of the internal pressure buildup was presumably due to hydrogen gas generation. This container of TRU mixed waste has the same characterization as the drum required emergency venting on July 11, 1997 (NMED notification letter dated July 17, 1997). This waste contains "TA-55-38 Cemented Inorganics and Spent Samples", with chromium (D007) and lead (D008). As part of the Transuranic Waste Inspectable Storage Project (TWISP), the drum was in the process of being retrieved from the TRU waste Storage Pad 1. The drum, number 9999, did not have any radioactive surface contamination.

All drums retrieved during TWISP operations are vented to release internal hydrogen gas using the Drum Vent System located in Building 33 at TA-54, Area G. However, due to the obvious distortion of the drum from internal pressure, it was determined that immediate venting of internal gases was in order to prevent a possible explosive release. Consultation with LANL's Emergency Management and Response organization and NMED supported this decision.

At 1656 hours, on July 21, 1997, the Area G TRU waste drum was remotely punctured by LANL's HAZMAT Team. The gases were collected in a bag attached to the HAZMAT team's drum puncture device. The drum puncturing and venting operation for this drum was successfully completed at 1710 hours with none of the vented gasses being released to the atmosphere. A visual inspection of the collection bag revealed that no particulates were released into the bag, nor was there any indication of liquids or condensation within the bag.

The collection bag is currently being stored in Building 226 at TA-54, Area G. Based on the analytical results, ESH-17 will be contacted to determine air quality impacts and to make appropriate notifications prior to releasing the contents of the collection bag. Analytical results will also be used to characterize the collection bag, associated personal protective equipment and other materials generated during the puncturing operation.

As stated in our July 17, 1997 letter concerning emergency drum venting, hydrogen gas

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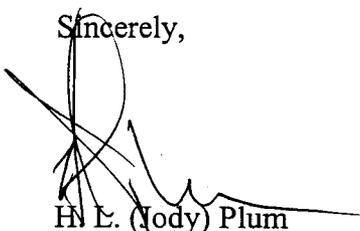
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generation in retrieved TRU mixed waste drums is expected to be an ongoing problem which may necessitate further activities of this sort in the future. Standard procedure is to utilize the Drum Vent System in Building 33. However, in the event a dangerously overpressured drum is discovered that cannot be safely moved to Building 33, LANL's intent is to remotely vent the drum in the same manner described in this letter. A standing, special work permit has been developed for the procedure and, if at all possible, your office will be notified prior to the drum puncturing operation. In the event that notification cannot be made prior to the operation, due to imminent threat to human health or the environment, your office will be contacted via telephone within 24 hours and a written report will be sent to you within five working days.

Should you have any questions, please call me at 505/665-5042.

Sincerely,

A handwritten signature in black ink, appearing to read 'H. E. (Tody) Plum', with a long horizontal flourish extending to the right.

H. E. (Tody) Plum

Office of Environment and Projects

LAAMEP:9JP-063

cc:

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Mr. Benito Garcia

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cc:

Stuart Dinwiddie

Hazardous and Radioactive Materials Bureau

New Mexico Environment Department

2044 Galisteo St., Bldg. A

P. O. Box 26110

Santa Fe, NM 87505

Steve Zappe

Hazardous and Radioactive Materials Bureau

New Mexico Environment Department

2044 Galisteo St., Bldg. A

P. O. Box 26110

Santa Fe, NM 87505

Janice Archuleta

Hazardous and Radioactive Materials Bureau

New Mexico Environment Department

2044 Galisteo St., Bldg. A

Santa Fe, NM 87505

