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July 29, 1992

Mr. W. John Arthur, III
Project Director
WIPP Project Integration Office
U.S. DOE - Field Office, Albuquerque
P.O. Box 5400
Albuquerque, NM 87115

Dear Mr. Arthur:

At the July 15, 1992 quarterly meeting, DOE staff informed EEG that the characterization of TRU Waste for the fifth bin for the first truckload for the experimental program was nearly completed. No one mentioned any problems. EEG has since learned that a Waste Acceptance Criteria (WAC) certified drum, Drum #4 for that bin, was rejected during visual characterization because a can full of liquid thought to contain xylene, a highly flammable liquid, was found.

We have the following concerns. Why weren't we informed of this at the quarterly meeting? Was the drum rejected because a can full of a liquid thought to be xylene was found? What was the volume of the can? Xylene, as noted by Dr. Matthew Silva in EEG-45, is a highly flammable organic compound and was identified in EEG-48 as one fuel contributing to the drum explosion at Argonne National Laboratories-East (ANL-E) in 1976.

According to your procedures, all drums selected for characterization for the dry bin tests using TRU wastes have been WAC certified. Was this drum miscertified for the WAC or was it incorrectly included as WAC certified for the bin experiments? This drum clearly violates the waste acceptance criteria. As noted in the WAC "All internal containers (e.g., bottles, cans, etc.) must be well-drained, but may contain some residual liquids" (Sec. 3.3.2.1). We also understand that real-time radiography (RTR) failed to detect this can of highly flammable liquid. Did the headspace analysis detect the xylene? Clearly, personnel at the WIPP Site need to be cautioned that flammable volatile organic compounds may be contained in WAC certified waste if this is indeed the situation. Would the information for this drum been included in the Bin Case Data Package Final Report?

DOE's "Position Paper on Flammability Concerns Associated With TRU Waste Destined for WIPP" (DOE/WIPP 91-018), maintained

"Waste for disposal at WIPP cannot be in free-liquid form. Only minor liquid residues remaining in well-drained bottles, cans, and other containers are acceptable.

It should be noted that RTR procedures at the DOE sites are considerably more stringent than the one percent free liquids by volume allowed by the WIPP-WAC thereby allowing a margin of safety in addition to the regulations. As an example, when implementing RTR at INEL, any container with greater that 0.75 percent by volume of free liquids is rejected" (DOE/WIPP 91-018, p. 5.3).

Yet it appears that the RTR procedures at INEL did not identify this problem in this drum and the drum was WAC certified. The incident undermines the DOE conclusion that flammable TRU waste cannot be WAC certified and could never be shipped to WIPP.

In issuing the No-Migration Variance Determination, EPA was specifically concerned about the presence of flammable organic compounds and questioned the reliability of process knowledge. What was the source of this particular can and how did it end up in a drum of TRU waste? Would process knowledge account for this can? Has DOE consulted with EPA on this particular drum? Has the chairman of the WACC committee taken action on this drum?

We need to meet with DOE to discuss this issue within the next thirty days. Meanwhile, please provide the documentation (reports, memos, letters, etc) on the presence of this can, suspected of containing xylene, in a drum of WAC certified TRU waste. Thank you.

Sincerely,

Robert H. Neill
Director

RHN:MKS:pdg

cc: Reid Rosnick, EPA/OSW
Matt Hale, EPA/OSW
Dave Leyland, EPA/OSW
Arlen Hunt, DOE/WIPP
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