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**Los Alamos**  
NATIONAL LABORATORY  
**memorandum**

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**Subject: Incinerator Summaries: 43-002**

The following is a summary of several site visits to the Health Research Laboratory.

1-15-93

Watanabe, Martell, Michael, and Black interviewed Julie Wilson. Wilson said the incinerator was used about 15 years between 1960-1975 to destroy animal carcasses contaminated with tracer quantities of non-transuranic isotopes. The spectrum of isotopes used were Cesium, Cobalt, Niobium, Strontium, Cadmium, Mercury, Zinc, Iron, and Lead in pico-curie quantities (10<sup>-12</sup>). The room where the incinerator was located has been routinely screened for radiation with negative results (Watanabe 1993, 23-0039).

1/20/93

Watanabe and Martell interviewed Joe Gatewood (5-2906). Gatewood was in charge of removing the incinerator. The incinerator was sampled for asbestos after removal and no trace was found (Archive 23-0044 for asbestos report). According to Gatewood's historic records, no transuranic incineration occurred in the incinerator. Screening tests were done in B137 for alpha, beta, and gamma radioactivity and came up negative. Gatewood has worked at HRL for three years. He has also written a memo documenting a brief history of the incinerator (archive 23-0042). Ron Browne (HS-1) is the HPT who worked in at HRL when the incinerator was removed and took several swipes of the incinerator and area for radioactivity. He has said that the swipes were all negative and the record for this should be at the HRL. Jeff Eichorst(HS-1) is the current HPT at HRL. He said that he would look for Browne's swipe results.

Joe Gatewood has said via phone (1-22-93) that the chimney for the incinerator is still there. It is located on the exterior of HRL. The chimney has been walled off at the bottom and cupped off on the top. Inside B137,



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the opening to the chimney is sealed with a steel plate and covered with concrete. The top of the chimney has a wooden cover over it.

1/25/93

Julie showed us the incinerator room B137. There had been a drain in the room but it is plugged with concrete. The incinerator did not have a bottom so the floor where the incinerator had sat was also newly concreted as was the opening into the chimney. It is reported by the HRL people that the top of the chimney has also been plugged. We went outside to view the chimney where it was noted that a clean out door (12" x 18") existed. Inside the door was a small pile of ash. It was suggested that the ash be checked for radioactivity. Later, Julie Wilson called to say she had the HPT Jeff Eichorst HS-1 check the ash in the cleanout door. Jeff reported that nothing was detected.

1/27/93

Watanabe and Martell interviewed Ernesto A. Vigil (7-0858). Vigil worked at HRL from the early '60s to the mid '70s and was in charge of the incinerator during those years. Vigil stated that the incinerator was used to burn mice, rats, fecal, and fecal contaminated paper. Vigil did have some knowledge about the experiments. Each experiment averaged around 90 animals, but varied depending on the type of experiment being run. He believed that the experiments used only nano Curie (10<sup>-9</sup>) amounts of isotopic elements. In the early '70s, HRL stopped burning the animal carcasses in the incinerator and began freezing them. Only fecal contaminated paper was burned. In the late '60s early '70s, the incinerator was modified. A second burner was added, and the stack was heightened. The second burner was added because the air flow in the incinerator was not moving correctly. Smoke would recurrently enter the room until the air flow in the incinerator was well established. The stack was heightened because smoke would periodically blow into well occupied areas at HRL. To Vigil's knowledge, the incinerator was cleaned only few times by ZIA. He is not sure how the ashes were disposed of.

1/27/93

Cal Martell investigated if CLS-1 would be able to analyze a sample of ash for beta and gamma activity. David Martinez indicated there would be no problem in bringing such a sample into the CMR. Nelson Stalnaker said he would be able to do the analysis. I contacted Jeff Eichorst HPT at HRL to ask if he would meet me at the clean out door to the chimney. I filled two glass jars with ashes from the incinerator chimney which Jeff monitored for beta/gamma activities and found nothing. I took the samples to Nelson for analysis.

Nelson Stalnaker reported (2/3/93) finding Cs-137 by gamma scanning in the ash sample I had brought to him.

Cs-137 has a  $t_{1/2} = 30$  years. It has a 663 keV gamma peak. Within a factor of 2 to 3, Nelson estimated Cs at  $6 \text{ nCi}$  ( $10^{-9}$ ). Nelson is going to leach the ash sample and analyze that. I have asked Jan Beck to estimate a risk assessment for 20 - 30 nCi Cs-137.

Jeff Eichorst faxed copies of two Swipe Survey Reports taken in Sept 1992. One is of room B137 where the incinerator was located. Walls, floors, and equipment were checked and there was No Detectable Activity. The other survey was of the incinerator. 1000 dpm fixed was found on the interior of the incinerator, and swipes of the exterior found No Detectable Activity (Archive # 23-0058).