



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

August 26, 2005

Docket No. 030-01244  
EA No. 05-116

License No. 06-00819-03

Arthur P. Lemay, M.S, R.Ph.  
Executive Director, Oncology Services  
Yale-New Haven Hospital  
20 York Street  
New Haven, CT 06504

**SUBJECT: RESPONSE TO DISPUTED VIOLATION REGARDING THE IMPROPER  
DISPOSAL OF LICENSED RADIOACTIVE MATERIAL**

Dear Mr. Lemay:

This is in response to your letter of May 10, 2005 responding to our April 7, 2005 letter and Notice of Violation (NOV) to Yale-New Haven Hospital. The NOV addressed failure to properly dispose of two waste packages containing licensed radioactive material in accordance with 10 CFR 20.2001. Specifically, (1) on February 16, 2004, a medical waste package containing Tc-99m with a dose rate of 5 mrem/hr was disposed of at a facility in Oneonta, New York, and (2) on February 24, 2005, a general hospital waste package containing Tc-99m with a dose rate of 0.02 mrem/hr was sent for disposal to Wheelabrator Bridgeport, L.P., Waste-To-Energy plant (formerly Bridgeport RESCO), located in Bridgeport, Connecticut. Neither of these facilities were authorized to receive radioactive licensed material for disposal.

In your letter of May 10, 2005, you acknowledged that the first example regarding improper disposal of licensed material in New York was accurate, and you provided a response describing the reason for the violation, your corrective actions taken to prevent future violations, and the date when full compliance was achieved. We have reviewed your response to the first example and we have no further questions concerning the corrective and preventative actions that you implemented. These actions will be examined during a future inspection of your licensed program.

However, in response to the second example regarding improper disposal of licensed radioactive material in Connecticut, you contended that the Notice of Violation was issued in error and you requested that the violation be retracted. In support of your contention, you stated that 1) the package contained a marginal level of radioactivity; 2) the radioactivity level was likely below your minimum detection capacity of your radiation alarm system; and 3) the reported dose rate was within the normal fluctuation of background radiation in the state of Connecticut. Further you stated that background radiation levels at the Connecticut shore line are approximately 0.02 mrem/h and background levels in Connecticut can vary as high as two to four times this value.

We have reviewed the basis for your denial of the second example of the referenced violation, and have concluded that the waste contained detectable radioactive licensed material. We noted in our review that upon arrival at the waste plant on February 24, 2005, the waste was

transported through a truck monitor (radiation detector) and set off an alarm. The waste plant then notified the Connecticut Department of Environmental Protection (CDEP) that radioactivity was detected in a packing dumpster that originated from Yale-New Haven Hospital. On February 24, 2005, CDEP performed a radiation survey of the packing dumpster using a Ludlum Model 14C geiger counter, and confirmed the presence of radioactive material. CDEP also determined that the package measured 0.04 mrem/h including a background dose rate of 0.02 mrem/h. We contacted representatives from the CDEP, who confirmed that the truck monitor alarm and the elevated radiation levels measured with the hand-held survey instrument were due to radioactivity originating from the packing dumpster rather than fluctuations in normal background radiation levels. At the time of the improper disposal (February 24, 2005), your survey program had been upgraded to monitor all general hospital waste through the use of sodium-iodide detectors. As a general matter, sodium-iodide detectors are more sensitive than the Geiger-Mueller detector used by the CDEP physicist who measured elevated levels of radiation and therefore, your program should have identified the radioactivity in the waste package prior to release. Therefore, the NRC maintains that the violation occurred as stated in the Notice, and we are requesting additional information regarding your corrective and preventative actions for the second example of the improper waste disposal violation. You must follow the instructions specified in the Notice of Violation when responding to our letter.

In accordance with 10 CFR 2.309 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (The Public Electronic Reading Room).

Your cooperation with us is appreciated.

Sincerely,

*/RA/*

George Pangburn, Director  
Division of Nuclear Materials Safety

cc:  
Michael J. Bohan, Radiation Safety Officer  
State of Connecticut

**SISP Review Complete:** PJHenderson 6/13/05

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