



Henry D. Baier, Director

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May 7, 1997

Gary L. Shear, Acting Director Nuclear Material Safety U.S. Nuclear Regulatory Commission, Region III 801 Warrenville Road Lisle, Illinois 60632-4351

RE: Reply to NRC Concern - University of Michigan Byproduct Material License No. 21-00215-04 (Docket No. 030-01988)

Dear Mr. Shear:

Per your correspondence dated March 31, 1997, the University of Michigan (U-M) would like to address the concern noted by the Nuclear Regulatory Commission (NRC) during the site inspection conducted February 13-14, 1997, with continued in-office review through March 19, 1997, and the continued on-site inspection March 19-21, 1997.

Please find below a description of the corrective actions the University has taken and intends to take regarding the concern noted in the NRC inspection report.

NRC CONCERN

The NRC expressed concern that on October 22, 1996, a spill was not immediately reported to the radiation safety office. The NRC is also concerned that corrective actions associated with this incident had not been instituted five months after the event.

Consequently, please describe any immediate or future actions you have or will implement to ensure licensee personnel properly characterize and report future incidents to the Radiation Safety Office in a timely manner and what actions have been or will be taken to ensure corrective actions to incidents are promptly implemented.

DISCUSSION

At approximately 7:15 am on October 22, 1996, a Pediatric Nuclear Medicine Technologist reported to the University of Michigan Hospital (UMH) - Nuclear Medicine Health Physicist that a spill involving approximately 350 microcuries of iodine-131 had just occurred in a camera imaging room. The syringe of I-131 was being used as a calibration source for a gamma camera.

The Nuclear Medicine Health Physicist responded immediately and initiated radiological surveys and decontamination procedures. No contamination had spread beyond the immediate gamma camera imaging room. It should be emphasized that the Nuclear Medicine Health Physicist is a degreed health physicist with 30 years of practical radiological safety experience.

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At approximately 1:15 pm the Nuclear Medicine Health Physicist notified the U-M Radiation Safety Service (RSS) health physicist staff for assistance in the decontamination effort. Another comprehensive contamination survey was conducted in adjacent unrestricted areas (hallways, adjacent rooms, etc) by the RSS staff health physicists and no contamination was identified. The contamination had been contained to the gamma camera imaging room; therefore, no contamination was spread to an unrestricted area.

The gamma camera imaging room was successfully decontaminated by RSS radiation safety personnel the afternoon of October 22, 1996. Thyroid bioassays for the Nuclear Medicine Technologist and Health Physicist involved in the early decontamination efforts of the spill revealed no uptake.

As noted by the chronology of events for the October 22, 1996 incident above, the Nuclear Medicine Health Physicist did notify the U-M Radiation Safety Service (RSS) approximately 6-hours into his decontamination effort. In addition, Nuclear Medicine personnel have been reminded (internal departmental memo) to notify RSS if residual contamination levels exceed specified trigger limits after appropriate decontamination efforts.

Following the incident, immediate actions included: relocating a survey meter to the camera imaging room, reviewing the calibration procedure to ensure the calibration source is enclosed within a protective covering, and discontinuing the calibration of the imaging camera using I-131 on a routine basis (none have been performed since the October 22, 1996 incident).

In addition, the emergency spill procedure has been revised to include notification of the radiation safety office in accordance with specified trigger limits.

Other U-M research and clinical personnel will be reminded of the proper manner in which to characterize and report future incidents during routine training and annual re-training sessions and a mass-mailing effort.

Thank you for your time and consideration with respect to this inspection response. Please do not hesitate to contact me at Radiation Safety Service / OSEH [(313) 764-4420] should you have any questions, comments, or concerns regarding any of the responses noted in this report.

Sincerely,

Mark L. Driecoll

Mark L. Driscoll Director / Radiation Safety Officer Radiation Safety Service

MLD/mld NRC0502

cc: Henry D. Baier, Director, Occupational Safety & Environmental Health James E. Carey, Chair, Radiation Policy Committee Paul A. Spradlin, Interim Associate VP, Business Operations