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May 24, 1994

William L. Axelson  
Director, Division of Radiation Safety and Safeguards  
U.S. Nuclear Regulatory Commission - Region III  
801 Warrenville Road  
Lisle, Illinois 60532-4351

Dear Mr. Axelson:

**Subject: Reply to a Notice of Violation - Battelle Memorial Institute License No. SNM-7, Docket No. 070-00008**

**Reference: Letter from Axelson (USNRC) to Brog (Battelle) dated 4-26-94, Subject: Special Inspection of Licensed Activities [Report No. 070-0008/94001 (DRSS)]**

Battelle Memorial Institute (BMI) has reviewed the report of the special inspection conducted by the U.S. Nuclear Regulatory Commission (NRC) and the incorporated Notice of Violation (NOV). In response to your request, we have prepared a response to the NOV for each of the four areas that are required to be addressed.

1. **The reason for the violation**

BMI believes that the violation was primarily due to the failure of a principal investigator (PI) and the laboratory staff to exert proper control over the radioactive material in that laboratory. The violation was an oversight and not indicative of a programmatic or wide spread deficiency in the BMI radiation protection program. Follow-up inspections of this laboratory (Room 7314) as well as others have demonstrated that they were either locked or attended to prevent unauthorized access or removal of radioactive materials. BMI has also ensured that the proper control of radioactive material is appropriately addressed in program requirements. The Battelle Columbus Operations Radiation Protection Plan (Rev. 1, September 1993) requires that "all materials must be stored or used in a restricted area" and that "when the restricted area is unattended, all access to the material shall be secured" (Section 3.3.2.2). In addition, ES&H Procedure RS-2.3, "Radiological Posting Area and Access Control" (Section 4.14) requires that restricted areas shall be locked when not occupied. BMI therefore believes that this violation was an isolated occurrence.

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2. **The corrective actions that have been taken and the results achieved**

The corrective actions were that the laboratory was immediately locked by radiation safety services staff and the responsible PI was instructed in the requirements to secure access to all unattended radioactive materials. In addition, a message was promptly (2/14/94) sent to the appropriate PIs and environment, safety, and health (ES&H) staff detailing the violation and reiterating the requirement to secure unattended material. The results of the corrective actions have been highly effective based on follow-up inspections of this specific laboratory and other laboratories.

3. **The corrective steps that will be taken to avoid further violations**

To avoid any further violations of this type, BMI will take the following additional corrective actions:

- a. follow-up on the original message to the appropriate PIs and ES&H personnel with a formal memorandum describing the violation and detailing the responsibilities of the radioactive material users,
- b. individually contact the appropriate PIs and ES&H personnel to ensure they understand the requirements and their responsibilities, and
- c. incorporate the NOV and the corrective actions taken as a lessons-learned case study in General Employee Training (GET) for radiation protection.

4. **The date when full compliance will be achieved**

BMI is currently in full compliance with the requirements of 10 CFR 20.1801 and 10 CFR 20.1802; however, the corrective actions in Section (3) will be completed on the following schedule:

Action (3)a. 5/31/94  
Action (3)b. 6/10/94  
Action (3)c. 6/30/94

BMI believes that these corrective actions provide a comprehensive approach to prevent reoccurrence of violations of this type.

In your letter, you also requested confirmation that BMI will notify the NRC of any additional information regarding the final disposition of the nine (9) sources which could not be located. BMI will provide the NRC with any further information obtained on these sources. At this time, the disposition of one (1) addition source has been resolved. Source #9 (Pu-239, 0.05 uCi, disk) was disposed on 9/22/93 according to the radioactive material shipment manifest.

W.L. Axelson  
May 24, 1994  
Page 3

If there is any further information that you require on these matters please contact me at 614-424-3885 at your convenience.

Sincerely,

A handwritten signature in cursive script, appearing to read "S. J. Layendecker".

Stephen J. Layendecker, CHP  
BMI ES&H Coordinator

SJL:srb