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August 22, 1996

CAL No. RIII-96-010

Cecil R. Smith, Dr. P.H.
Assistant Vice President
Office of Environmental and Occupational
Health and Safety
The Ohio State University
1314 Kinnear Road, Rm 210
Columbus, OH 43212-1168

SUBJECT: CONFIRMATORY ACTION LETTER

Dear Dr. Smith:

This refers to a routine safety inspection conducted by Messrs. Wayne Slawinski and Robert Gattone of this office on June 24-28 and July 10-12, 1996, of activities authorized by NRC Byproduct Material License Nos. 34-00293-02 and 34-00293-14. That inspection identified numerous problems involving failure to inventory sealed sources, security of radioactive materials and failure to characterize radioactive wastes. These issues were discussed with you and members of your staff at the conclusion of the site inspection on July 12, 1996.

On August 13, 1996, a teleconference was held with you, Mr. Robert Peterson, and Ms. Jeanne McGuire of your staff, and Messrs. Wayne Slawinski and Robert Gattone of the NRC Region III staff. The purpose of the teleconference was to obtain an understanding of the corrective actions Ohio State University (University) has taken, or plans to take, for the problems identified during the inspection. Based on that telephone conversation, it is our understanding that you have implemented, or plan to implement the following specific actions:

1. Provided training to the Radiation Safety Office (RSOF) and Radiation Oncology (RO) staffs to emphasize the need to immediately notify the Radiation Safety Officer (RSO) when sealed sources containing licensed material are identified as missing. The University has informed the staff that a source is "missing" when it is not physically accounted for. Additionally, a Standard Operating Procedure (SOP) will be developed and implemented by September 30, 1996, for conducting physical inventories of sealed sources including those in storage, and RSO notification in the event of a missing source.
2. Provided training to the RSOF staff to emphasize the need to immediately notify the RSO when sealed sources containing licensed material are identified as leaking. Additionally, a SOP will be implemented by September 30, 1996, that includes procedures for RSO notification in the event of a leaking source.

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3. Provided training to RSOF and RO staffs to emphasize the need to conduct quarterly physical inventories of all brachytherapy sources including those that are in long-term storage and located outside of the RO department. Additionally, the University will perform an audit of sealed source inventory records at the end of each calendar year. The University will complete a campus-wide physical inventory of all sealed sources by September 1, 1996. The University stated that it currently has sufficient staff and other resources to maintain compliance with inventory requirements.
4. Contracted Auxier and Associates to characterize, package, and dispose of radioactive waste within the Bulk Chemical Warehouse (BCW) and Corrosive Storage Bunker (CSB) by December 1996, pending waste broker access to the Barnwell, South Carolina burial site. To prevent the future buildup of radioactive waste, the University has developed a running log of radioactive waste and committed to dispose of accumulated wastes by transfer to an authorized waste burial site on at least an annual basis.
5. Issued a memo to all Approved Supervisors of licensed material on July 8, 1996, detailing the security provisions and the need to secure licensed material from unauthorized persons at all times. The University supplemented its lab surveillance program to include security audits of selected labs during evenings and other off-normal hours to monitor security of licensed material. The radiation safety committee is developing a laboratory security and enforcement policy, which will be implemented by October 30, 1996.
6. Verified that persons handling licensed material are wearing gloves and adhering to other basic laboratory protocol requirements during routine RSOF lab audits. The University will remind Approved Supervisors of the need to comply with RSO approved lab protocols in the next radiation safety newsletter to be issued in October 1996. Events involving licensed material will be followed up by RSOF staff and reviewed for compliance with lab protocols.
7. Plan to complete an evaluation of sewer effluent water solubility. The evaluation will cover sewer releases made from 1994 - 1996, and will include information obtained from review of: (1) responses to questionnaires recently distributed to all licensed material users; and (2) approved lab protocols and licensed material receipt records.
8. Included radiation surveys of normal trash receptacles as part of the lab audit program. The need to dispose of radioactive trash in designated receptacles will be emphasized in the University's radiation safety course. Additionally, the RSOF will continue to discuss the importance of proper radioactive waste disposal during its meetings with Authorized Supervisor applicants.

9. Provided training to the RSOF staff regarding provisions for proper blocking and bracing of packages in transport and stowage of shipping papers. By October 30, 1996, the University will provide training to other staff involved with transporting licensed material (e.g., portable moisture/density gauge users). Additionally, the University has included monitoring for proper transportation of licensed material in its lab audit program.
10. Tested the conductivity of water collected near the location of the cobalt-60 sources and determined that there was no discernable difference from surface water measurements. Therefore, the University determined that future conductivity testing near the pool bottom is unnecessary. The University will perform a gamma spectrometry analysis of a water sample collected from near the bottom of the pool by October 1996.
11. Plan to contact the NRC Region III Materials Licensing Branch prior to introducing reactor fuel or other potential contaminants into the irradiator pool to determine the need for a license amendment.
12. Plan to augment procedures for distribution of labeled packages containing licensed material to include: (1) a liner within the transport vehicle to contain potential leakage; and (2) procedures to ensure that packages delivered to laboratories are accepted only by radiation workers. The planned effective date for the procedures is August 30, 1996.
13. Implemented a 40 hour minimum experience/training requirement for review of proposed users effective July 1996.
14. Plan to inform research laboratory staff of the need to include floors and other potentially contaminated surfaces as part of the routine radiation survey program. The information will be disseminated: (1) during lab audits; (2) as a topic in the radiation safety short course; and (3) in the next quarterly radiation safety newsletter due to be issued in October 1996.
15. Plan to inform the NRC whether previously identified missing sealed sources were found as soon as the contractor work on uncharacterized radioactive waste is completed in the BCW and CSB.

Please plan to inform the NRC's Region III office, in writing, of the status of Item 4 regarding waste disposal with the projected date of completion and the completion of the remaining items by October 31, 1996.

Pursuant to Section 182 of the Atomic Energy Act, 42 U.S.C. 2232, and 10 CFR 2.204, you are required to:

1. Notify me immediately if your understanding differs from that set forth above;
2. Notify me if for any reason you cannot complete the actions within the specified schedule and advise me in writing of your modified schedule in advance of the change.

Issuance of this Confirmatory Action Letter does not preclude issuance of an order formalizing the above commitments or requiring other actions on the part of The Ohio State University. Nor does it preclude the NRC from taking enforcement action for violations of NRC requirements that may have prompted the issuance of this letter. In addition, failure to take the actions addressed in this Confirmatory Action Letter may result in enforcement action.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and your response will be placed in the NRC Public Document Room (PDR). To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. However, if you find it necessary to include such information, you should clearly indicate the specific information that you desire not to be placed in the PDR, and provide the legal basis to support your request for withholding the information from the public.

We will gladly discuss any questions you may have concerning these matters.

Sincerely,

Original signed by

A. Bill Beach
Regional Administrator, Region III

Docket Nos. 030-02640; 030-31605
License Nos. 34-00293-02; 34-00293-14

cc: State of Ohio

bcc: Office of Enforcement
H. Thompson, OEDO
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K. Null, RIII
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