



UNIVERSITY OF MISSOURI SYSTEM

Office of the Vice President for Academic Affairs

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October 29, 1990

Nuclear Regulatory Commission  
Region III  
799 Roosevelt Road  
Glen Ellyn, IL 60137

Licenses Nos. 24-00513-32; SNM-247  
Docket Nos. 030-02278; 070-00270

ATTN: John A. Grobe, Chief

Dear Dr. Grobe:

Enclosed is the University's response to the special safety inspection conducted by Messrs. S. Mulay, J. Mumper, and J. Lynch on July 9-10, 1990. Your letter, dated October 5, 1990, listed four violations and two areas of concern. You also asked that we investigate a new allegation and provide a report to you. We have initiated that investigation but have not completed it. A letter was recently sent to you requesting an extension of the reporting date. The two areas of concern are addressed in a separate letter.

In response to the four violations, I offer the following corrective actions that have been taken:

1. "During the second quarter of 1990, at least nine Category II research radioisotope laboratories were not inspected by Environmental Health and Safety personnel."

We do not dispute the finding. Corrective action has been completed. The University of Missouri-Columbia laboratory inspections by Health Physicists have been established in accordance with risk categories in effect at the beginning of the second quarter of 1990. The quarterly survey schedule of Category II laboratories is current. Recent staff additions and reassignment of tasks should assure continued compliance with program schedules.

2. "Since approximately 1985, a large quantity of neptunium-237 (1.4 millicurie) in a concentrated solution has been stored in a fume hood in a laboratory located in the Chemistry Building."

The 1.4 millicurie neptunium source is contained in a sealed metal container with desiccant and remains in the hood. It will be transferred to the Environmental Health & Safety radioactive storage facility by health physicists and will then be stored in a metal D.O.T.-approved container. The material will remain under the control and surveillance of Environmental Health & Safety until an authorization from NRC is received approving the transfer of the material. A letter has been prepared and will be mailed to Dr. William Adam to request assistance in amending our Broad license, if necessary, prior to moving the source.

3. "From January 1990 to March 1990, operations involving the handling of sulfur-35 in the Tucker 216 research laboratory were not supervised by technical personnel who were completely aware of required University procedures needed to evaluate radiation hazards in the laboratory."

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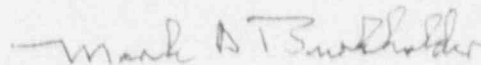
The University does not dispute the finding and has taken significant corrective action to improve that situation and to preclude future occurrences. Dr. Sage, the authorized user responsible for operations in the Tucker 216 laboratory, has received additional training and instruction in the proper use of radioactive materials, in radiation protection, and in the rules, regulations, and procedures of the University of Missouri and the Nuclear Regulatory Commission. Specifically, he has been instructed by health physicist Jamie Shotts in private training sessions. Dr. Sage also participated in a four-hour health physics information meeting and attended the two-hour radioisotope review training session. He is enrolled in the 20-hour radioisotope workshop scheduled for November 5-9, 1990. Dr. Sage's laboratory personnel attended several of these formal training sessions with him. The attendance of Dr. Sage at these and future training sessions should preclude any further violations.

4. "An investigator, Richard Sage, Ph.D., failed to keep adequate records of phosphorus-32 receipt, use and disposal (transfer) and, therefore, in 1990 could not calculate the amount of material on hand at any one time."

The University does not dispute the finding and has taken significant action to correct the violation. Dr. Sage and his laboratory staff have been instructed in the proper methods and procedures for maintaining a radioisotope inventory. They have been informed of the importance of requirements for authorized user inventory records. Current inspections and inventory reviews by Environmental Health & Safety have confirmed that Dr. Sage is in compliance. Continued surveillance and inspection by a health physicist should prevent any further problems.

If you have any questions concerning this response, please do not hesitate to contact me

Sincerely yours,



Mark A. Burkholder  
Associate Vice President  
for Academic Affairs