

# The University of Iowa

Iowa City, Iowa 52242

Radiation Protection Office  
311 Grand

June 1, 1979

(319) 353-3458



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U.S. Nuclear Regulatory Commission  
Region III

Attention: James G. Keppler, Director  
799 Roosevelt Road  
Glen Ellyn, ILL 60137

Gentlemen:

This is in reply to your letter of April 30, 1979 regarding an investigation conducted by Messers. G. A. Phillip and C. T. Oberg and Ms. F. A. Ferrell of your office, on February 28 and March 1, 1979, of activities at the University of Iowa authorized by NRC License No. 14-0238-07.

The following is in reply to Appendix A, Notice of Violation, regarding license No. 14-02938-07 received May 2, 1979.

1- The following actions have been taken in response to item #1 in addition to those already taken and discussed during the visit of the NRC February 28 and March 1, 1979.

(a) Personnel who are working with radioactive material in BSB 2-451 have received instructions in the applicable contents of the Radiation Protection Manual. A copy of 10 CFR Part 20 and 10 CFR Part 19 has been reviewed with those same individuals. Those individuals who will be working with I-125 in BSB 2-451 have received instruction provided by Radiation Protection Office personnel on the radiation hazards of I-125.

(b) A current updated copy of the Radiation Protection Manual was provided for the occupants in BSB 2-451. A copy of a document prepared by RPO personnel and reviewed by pertinent members of the Radiation Protection Committee entitled "Radiation Protection Considerations for Handling I-125" was read by the I-125 users of this lab and pertinent topics were reviewed with RPO personnel. A copy of this document was also sent to all I-125 users.

(c) The above was totally accomplished on 5/29/79

2- Regarding item #2:

(a) Dr. Sherman and responsible individuals in his lab were informed verbally and via a memo to all I-125 users dated 2/28/79 of the necessity to inform the Radiation Protection Office prior to the transfer of any I-125. 400 99 1979

(b) Dr. Sherman was subsequently informed in writing of the

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necessity of completing proper transfer forms for all such transfers. Copies of transfer forms were provided. The importance of maintaining records of receipts and disposals of all radioactive material was contained in the document referred to in 1(b) above which has been supplied to all I-125 users. The importance of maintaining a concise inventory of all receipts and disposals was also explained to Dr. Steele including materials provided free from fellow researchers.

(c) The above actions were completed at various periods from February 28 through May 22, 1979.

3- Regarding item #3:

(a) Personnel in BSB 2-451 who work with radioisotopes have been informed by Radiation Protection Office personnel of the importance and necessity of wearing gloves during the manipulation of radioactive material which may result in contamination. This topic as well as all of the general safety procedures in Section 7.1.1 of the Radiation Protection Manual were reviewed in detail with the parties concerned.

(b) The importance of wearing gloves while working with bound as well as unbound I-125 is contained in an informational document provided all I-125 users by the RPO.

(c) A specific date is difficult to state when full compliance was achieved for the above item; however, no failure to comply by personnel in BSB 2-451 has been observed since instruction was provided.

4- Regarding item #4

(a) This topic was discussed with the primary investigator in BSB 2-451. The materials for brewing and drinking coffee were removed from the lab soon after your visit. In addition, the individual responsible for the lab was advised of the importance of observing and enforcing the no smoking requirements. These areas were emphasized during RPO's review of Section 7.1.1 of the Radiation Protection Manual with the individuals who will be working in that lab.

(b) The importance of obtaining full compliance with various general safety procedures particularly regarding smoking, consumption and storage of food in areas where radioactive materials are used has been brought to the attention of certain administrative personnel responsible for the laboratory areas involved. Active involvement of the administrative staff and continued efforts on the part of the RPO should improve performance in the observance of all general safety procedures.

(c) A specific date is difficult to state when full compliance is achieved for an item such as above. However, during

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random unannounced visits by RPO personnel to the laboratory since your investigation, no evidence of consumption of food or smoking in this lab has been observed.

5- Regarding item #5

(a) Copies of a document entitled "Radiation Protection Considerations for Handling I-125" has been provided and discussed with users of I-125 in the affected lab. In addition, the importance of having written procedures available was discussed with the investigator and workers in the affected lab during review of general safety procedures. A memo was provided the investigator regarding items to be accomplished prior to the resumption of use of I-125 in BSB 2-451. The need for written procedures for operation and emergency were included in that memo.

Regarding the reported failure to post emergency procedures, it is realized that detailed written procedures were not posted. However, it should be noted that the primary entrance to this lab bore a radioactive material marking sign stating in case of emergency contact Radiation Protection Office with the telephone number. Compliance with this item will be achieved prior to resumption of use of I-125 in BSB 2-451.

6- Regarding item #6

(a) This item relates to item #2 above in that an investigator did not follow procedure by failing to execute a material transfer form. The recipient did maintain an inventory of all receipts and disposals of other isotopes but not I-125. Both individuals have been informed verbally and in writing of the importance of maintaining a current inventory of any and all isotopes.

(b) The importance of maintaining a system of documenting receipts and disposals was treated in a document provided to all I-125 users.

(c) Transfer forms have been executed on all known transfers of I-125 since 2/28/79.

Regarding your request in the body of your letter for a description of actions taken to assure the radiation safety of the activities of all users of Iodine 125 and changes in our management control program in the area of initial review of radioactive material use applications and subsequent reviews of renewal requests.

In response to the first portion of the request pertaining to I-125 users you are returned to a letter from W. E. Twaler, Director of the Radiation Protection Office dated April 18, 1979. That letter describes corrective actions taken to that point and observed effects.

James Keppler, Director

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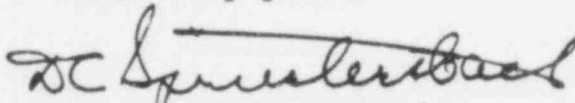
In addition the document "Radiation Protection Considerations for Handling I-125" which was prepared by the RPO and reviewed by pertinent Radiation Protection Committee members, has been distributed to all I-125 users.

The further developement of our thyroid monitoring program and the application of internal action levels has provided for early identification of potential problem areas. This has strengthened our overall posture with respect to control of I-125 at the University.

Regarding your request for changes in our management control in the area of initial review of radioactive material use applications and subsequent reviews and renewal requests, we recognized this to be a problem area in early 1978. The RPO initiated a redrafting of the application for use forms and procedures with the intent of strengthening requirements for initial approval and subsequent renewal. The Medical Bio-Science and Basic Science Sub Committees reviewed the approval and review procedures for use of radioactive materials and subsequent reviews of renewal requests in late 1978. As a result of this review, the applicaiton form and the renewal application form are being changed. These changes have been designed to assist the committee in their evaluations of radiation safety problems associated with the requested uses. The new application forms are to be incorporated in our pending license renewal. It is our plan to require all users of radioactive materials to complete these new forms as their present authorization expire. It is anticipated that this phase will be completed by September 1980. During this period, all renewals will be reviewed by the respective Committees.

Regarding the evaluation of I-125 uptake of the two individuals discussed during your visit of February 28 and March 1, 1979 the results of our continued thyroid measurements are essentially in agreement with your evaluation. Neither individual exceeded a reportable limit for the calendar quarter.

Sincerely yours,



Duane Spriesterbach  
Vice President for  
Educational Development and Research

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