

UNIVERSITY OF DELAWARE  
NEWARK, DELAWARE  
19711

OFFICE OF PERSONNEL & EMPLOYEE RELATIONS  
SAFETY & RADIATION SAFETY  
417 ACADEMY STREET  
PHONE: 302-738-8475

August 25, 1982

Thomas T. Martin, Director  
Division of Engineering & Technical Programs  
U. S. Nuclear Regulatory Commission  
Region I  
631 Park Avenue  
King of Prussia, Pennsylvania 19406

License Nos. 07-01579-06  
07-01579-19

Docket Nos. 30-06892  
30-10925

Subject: Inspection No. 82-02

Dear Mr. Martin:

This refers to the actions taken by the University of Delaware to correct violations listed in the Notice of Violation dated August 18, 1982 as a result of the inspection conducted on July 13, 1982.

- A. Surveys of effluent volumes for ventilation systems used in conjunction with iodination procedures have been conducted. The data has been used to demonstrate compliance to 10CFR20.106 with regard to the release of iodine-125 to unrestricted areas. Iodinations at the University of Delaware are conducted in closed systems. The estimated release of iodine-125 has been set at 1% of the amount purchased. For the purpose of these calculations, concentrations have been averaged over a period of one year (7/1/81 - 6/30/82) in accordance with 10CFR20.106(a). The attached table demonstrates iodine-125 levels in unrestricted areas are not likely to exceed the MPC specified in Appendix B, Table II of 10CFR20, 8E-11uCi/ml (air).

Similar measurements and calculations will be conducted whenever a new location for iodinations is established or whenever there is any other reason to suspect an increase in the amount of iodine-125 released.

In addition, the University of Delaware will periodically monitor effluent air discharges during iodinations when the highest concentrations of iodine-125 are likely to occur. Monitoring results will be forwarded to the USNRC, if requested. We believe this action has achieved full compliance with regulation.

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Thomas T. Martin, Director, USNRC

August 25, 1982

- B. On August 12, 1982 the Division of Fuel Cycle and Material Safety issued amendment number 11 to license number 07-01579-06. Amendment number 11 removed the requirement that the cobalt-60 irradiator room be equipped with continuously operating radiation monitors with audible and visible alarms as previously stated in item 15.D of the application dated February 3, 1981. We believe this action has achieved full compliance with regulation. In addition, the audible portion of the cobalt-60 irradiator room radiation monitor was repaired and back in service by 1630 hours, July 13, 1982 (the date of the inspection). A copy of the amendment request and amendment 11 are attached.

Please contact me if additional information is required. Your consideration will be appreciated.

Sincerely,

UNIVERSITY OF DELAWARE

*Stuart W. Kline*

Stuart W. Kline  
Associate Director of Safety  
Radiation Safety Officer

for

C. Harold Brown, Vice President  
Personnel and Employee Relations

SWK/Ch

Attachments

cc: L. Leon Campbell, Provost  
University of Delaware

John T. Brook, Director  
Public Safety  
University of Delaware

State of Delaware

ESTIMATES OF IODINE-125 RELEASED  
TO UNRESTRICTED AREAS

<u>Building</u>	<u>Effluent Volume Per Year</u>	<u>I-125 Purchased For Iodination 7/1/81-6/30/82</u>	<u>Estimated Release 7/1/81-6/30/82</u>
Worrilow	2.95E13 ml	1.70E4uCi	1.70E2uCi
Brown	2.32E14 ml	1.80E4uCi	1.80E2uCi
McKinly	2.23E15 ml	5.00E4uCi	5.00E2uCi

Estimated Average  
I-125 Concentration  
in Effluent  
7/1/81 - 6/30/82

Estimated %  
MPC Released  
7/1/81 - 6/30/82

5.76E-12uCi/ml

7.20%

7.76E-13uCi/ml

0.97%

2.24E-13uCi/ml

0.28%