

HOWARD UNIVERSITY

OFFICE OF RADIATION SAFETY
WASHINGTON, D.C. 20059

September 27, 1979

Mr. Boyce H. Grier, Director
U.S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Dear Mr. Grier:

With reference to IE Bulletin No. 79-19 dealing with the "Packaging of Low-Level Radioactive Waste for Transport and Burial", the following response summarizes the plan of action and schedule which are already in force or are to be implemented at Howard University, pursuant to the requirements of the items stipulated in the bulletin.

1. The Office of Radiation Safety maintains a current set of the U.S. Nuclear Regulatory Commission and Department of Transportation Regulations concerning the transfer, packaging and transport of low-level radioactive waste material.
2. A current set of requirements placed on the burial firm has been submitted to us by our collection contractor.
3. The overall responsibility for the safe transfer, packaging and transport of low-level radioactive waste lies with the Howard University Radiation Safety Committee. The Committee has secured the services of a technician whose prime responsibility will be to assure that proper procedures in waste handling are followed.
4. The attached memorandum had been sent to all users of radioactive materials at Howard University, prior to the release of NRC Bulletin 79-19. This letter was intended to assure that Howard University is taking every necessary step to limit the generation of radioactive waste at its facilities and where generated, to make sure that proper procedures are

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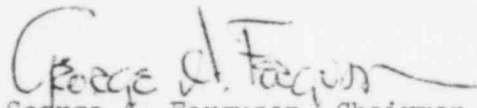
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followed for the eventual disposition of such wastes.

5. The packaging and disposal of radioactive wastes is a primary part of the radiation safety training course that has been offered (in some cases required) at Howard University for the past five years. As of August 1979, 91 persons have participated in the course and 77 have successfully passed the written examination. A written record of this training is already being maintained. Future training dealing specifically with radioactive waste will be initiated and appropriate records maintained.
6. The training and re-training of persons who generate wastes and those persons who package the waste has been and will continue to be a part of the training course mentioned in item 5 above.
7. Reports on the transfer, packaging and transport of radwaste are maintained in the files of the Office of Radiation Safety.
8. The most recent inspection of the radwaste procedures was performed by the Radiation Safety Officer on July 18, 1979. The results of that audit and previous actions regarding radwaste generation and processing are as follows:
 - a. New and more detailed instructions and procedures regarding radwaste processing became effective on July 26, 1979. A copy of those procedures is attached.
 - b. An entire laboratory (room 4104 in the College of Medicine) has been renovated and equipped to handle waste receipt, testing, storage and packaging.

- c. An area in the Service Building with a loading ramp has been assigned to radiation safety for the storage of approximately 75 drums of radwaste. Renovations to this area are currently being planned.
- d. Another radiation safety technician position has been recommended to the Dean of the College of Medicine and the Vice President for Health Affairs. This person will have the full-time responsibility in the management of the radwaste disposal system at Howard University.

Sincerely yours,



George A. Ferguson, Chairman
Howard University Radiation Safety
Committee

Enclosures

From:

Licensee: Howard University
Washington, D.C. 20059

To:

Boyce H. Grier, Director
NRC Region I
631 Park Avenue
King of Prussia, PA 19406

License # 08-00386-19/08-03075-07/08-03075-06
 SNM-563/SUD-584

QUESTIONS	1978	FIRST 6 MO. 1979
1. Number of Low Level Radioactive Waste Shipments	7	3
Volume of Low Level Waste Shipped	339 cubic ft	152.7 cubic feet
2. Curies of Radioactive material shipped	Approx. .122 Ci	Approximately 0.120 Ci
Major Isotopes shipped in low level waste shipments	H-3, I-125, I-131 Tc-99m, Co-57, Co-58, Cr-51, P-32 C-14, Ca-45	H-3, I-125, I-131, Co-57, Cr-51 P-32, C-14, Ca-45
3. Did you generate liquid low level radioactive waste	Yes	Yes
If answer is "Yes", what process was used to solidify the liquid waste	SEE ATTACHMENT	099 291

ATTACHMENT TO QUESTIONS RE: IE BULLETIN 79-19

Most of the liquid waste generated was scintillation cocktails in glass or plastic scintillation vials. These vials were packed in separate drums with vermiculite layers in the drum. Other liquids were absorbed on vermiculite inside non-breakable sealed containers. These containers were packed in plastic bags and surrounded with vermiculite.

HOWARD UNIVERSITY
WASHINGTON, D. C. 20059

July 26, 1979

OFFICE OF THE VICE PRESIDENT
FOR HEALTH AFFAIRS

MEMORANDUM

TO : ALL RADIOISOTOPE USERS

FROM : Carlton P. Alexis, M. D. *Carlton P. Alexis*
Vice President for Health Affairs

SUBJECT : Radioactive Waste Disposal

During the past few months there have been significant changes in the rules and methods applicable to the disposal of radioactive waste materials. The guidelines listed below shall be followed by all persons who discard radioactive waste:

1. Users of short-lived photon emitting radioactive materials will develop procedures whereby these wastes can be stored and allowed to decay. Such procedures must be approved by the Howard University Radiation Safety Committee. Upon request, the Office of Radiation Safety will assist in the development of such procedures.
2. All users of radioactive materials will ensure that wastes that are not contaminated are not placed in the waste containers designated for radioactive wastes.
3. Current methods used to dispose of radioactive wastes are not acceptable for the disposal of chemical or biologically hazardous wastes, therefore all radioactive waste materials must be separated into three categories before being delivered to the waste collection area designated by the Office of Radiation Safety.
 - a. Liquid scintillation vials
 - b. Dry and solid waste
 - c. Biological materials (e. g., carcasses)

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4. Dry and solid waste MAY NOT contain ANY liquids. Liquids must be solidified or enclosed in liquid scintillation vials. Dry waste should be compacted as much as possible.
5. Animal carcasses must be preserved in formaldehyde or formalin, drained of all liquids, packed with rock salt and sealed in plastic containers.
6. Liquid scintillation vials must be tightly closed and delivered in sealed plastic bags containing not more than 100 vials per bag.
7. All glass items, as well as needles, pipettes and other sharp items, must be sealed in boxes or puncture-proof containers that are not breakable.
8. All wastes must be sealed in air tight plastic bags or plastic containers.
9. Saturated vermiculite, or animal bedding, must be sealed in rigid plastic containers.
10. All wastes must be labeled with the name of the primary investigator who is responsible for the generation and packaging of the waste.
11. The staff of the radioactive waste collection area will return to the primary investigator all wastes that are not properly separated, packed or labeled.

All containers (drums) of radioactive waste that are shipped from the University for disposal are opened and inspected at the burial site. Any drum that is improperly packed will be returned to the University. Charges for such returns may exceed \$800.00 per drum. Your total cooperation and assistance in this matter is required. Please contact the Office of Radiation Safety if you have questions or require assistance.