

HOWARD UNIVERSITY

Office of the General Counsel

December 14, 2018

SENT VIA FIRST CLASS MAIL
Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Subject: *Response to Apparent Violation in NRC inspection Report Number 03011063-2018001; QA-18-076*

To Whom It May Concern:

My Office serves as legal counsel to Dr. Wayne A.I. Frederick as President of Howard University ("Howard").

Pursuant to the Nuclear Regulatory Commission's ("NRC") reactive inspection report dated November 21, 2018, Howard submits the foregoing plan of corrective action. Additionally, as instructed by Mr. Randolph C. Ragland, Jr. at the NRC in correspondence dated December 6, 2018 to Howard's Radiation Safety Officer this letter explicitly addresses: (1) the specific actions Howard has taken to prevent further similar violations in the future; (2) a list of rooms that have been (or will be) checked for unlicensed radioactive materials; (3) the schedule for completion of such checks; and (4) the results of the checks, if any, that have been completed [by the date you submit your letter]?

In response to the above inquires, Howard provides the following response. Howard will supplement this letter with any additional information requested by the NRC.

1. What specific actions have been taken or are planned to prevent further similar violations in the future?

The Provost of Howard University Dr. Anthony Wutoh, Howard's Chief Academic Officer, sent a memorandum to all department chairs requesting an affirmative response whether or not there is any identified unauthorized radioactive materials in departmental laboratories (attached). If any unauthorized radioactive materials are found, the Provost requested the responsible Chair contact the radiation safety office immediately (Dr. Satya Bose, satya.bose@howard.edu, 202-806-7216) to take necessary actions for compliance. The memorandum requested the chairs to provide: a) list of all laboratories in your department; b) confirmation that the laboratory has been checked for any unauthorized radioactive materials; c) statement from the chair, or signature on the attached form confirming compliance.

Additionally, Howard's Radiation Safety Office, Dr. Satya Bose, has a comprehensive radiation safety survey policy in place to prevent this issue in the future. A copy of that policy is attached to this correspondence.



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2. Please include a list of rooms that have been (or will be) checked for unlicensed radioactive materials?

A list of all laboratories/rooms at Howard research facilities will be obtained as indicated in the Provost's memorandum (attached).

3. What is the schedule for completion of such checks?

The schedule for the completion of survey is January 31, 2019.

4. What are the results of the checks, if any, that have been completed [by the date you submit your letter]?

The result of the comprehensive survey will be forwarded to NRC by February 15, 2019.

If you need additional information, please do not hesitate to contact this office.

HOWARD UNIVERSITY
Respectfully submitted,



Florence W. Prioleau
Vice President, General Counsel and Secretary
Zachary I. Shapiro
Associate General Counsel

Cc: Dr. Satya Bose (via email)
Dr. Anthony Wutoh, Provost, Howard University (via email)

Regional Administrator
NRC Region 1
2100 Renaissance Blvd, Suite 100
King of Prussia, PA 19406
(via first class mail)

Randolph C. Ragland, Jr., CHP
Senior Health Physicist
(via email)



MEMORANDUM

TO: HU Department Chairs

FROM: Anthony K. Wutoh, Ph.D., R. Ph.
Provost & Chief Academic Officer

SUBJECT: SURVEY OF ANY RADIOACTIVE MATERIAL AT HU FACILITIES TO SUBMIT
TO THE NUCLEAR REGULATORY COMMISSION (AFFIRMATIVE RESPONSE REQUIRED)

This memo follows a previous memo to all HU department chairs, which was issued on April 19, 2018 (attached), relating to the identification of radioactive material in a laboratory on campus. Following my request for inspection of laboratories on campus, and reporting of any unusual findings, only the Department of Physics and Astronomy and the Department of Engineering responded definitively. As a result, the US Nuclear Regulatory Commission (NRC) issued an apparent violation due to the identification of an unlicensed radioisotope (Ac- 227) in a Department of Physics laboratory. The NRC considered this apparent violation for escalated enforcement action, including potential civil penalties. Although the NRC agreed that the Howard University Radiation Safety Officer (RSO) took immediate corrective actions to control and secure the Actinium isotope, including its proper disposal, the NRC is not convinced that there may not be another recurrence.

In the light of this current event and the previous identification of unauthorized radioisotopes in the Department of Physics (2008), the NRC is requesting that we conduct a comprehensive radiation survey in all research labs at HU.

Particularly, the NRC wants to include a list of the laboratories that have been, or will be checked, including the result that need to be forwarded in writing, within 30 days of their notice. As the NRC would like to ensure that there are no additional isotopes present in any of the HU labs, it is critical that each Department Chair communicates with their faculty members to ensure that their labs are free from any unauthorized radioactive materials. Any additional findings may jeopardize the HU research license.

I am requesting that all department chairs inform this office in writing, within 7 business days from the date of this memo, whether or not, there is any identified unauthorized radioactive materials in departmental laboratories, so that the inspection could be completed prior to the winter break. If you do find any unauthorized radioactive materials, please contact the radiation safety office immediately (Dr. Satya Bose, satya.bose@howard.edu, 202-806-7216) to take necessary actions for compliance. In summary, we will need the following; a) list of all laboratories in you department, b) confirmation that the laboratory has been checked for any unauthorized radioactive materials, c) statement from the Chair, or signature on the attached form confirming compliance.

Thank you in advance for your assistance and prompt attention to this matter.

HOWARD UNIVERSITY LAB INVENTORY

Name of Department: _____

List of all Labs (used/unused) for Conducting Research

Radiation Survey Checklist

Date of Survey: _____

Name of Department Chair: _____

Signature: _____

No	Room Number	Survey Performed		Radioactive Material Present	
		Yes	No	Yes	No
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
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30					

HOWARD UNIVERSITY

RADIATION SAFETY OFFICE

COMPREHENSIVE RADIATION SAFETY SURVEY POLICY FOR NON-RADIOISOTOPE LABORATORIES Date of implementation: December 2018

The purpose of this comprehensive radiation survey policy is to identify the presence of unlicensed radioactive materials at different research Labs at Howard University. All laboratory personnel should be aware of this policy and about the risk associated with radiation exposure if unauthorized radioactive materials are present in the research Labs. Corrective action should be taken immediately by contacting the Radiation Safety Office to insure a safe work environment. Documentation of radiation surveys must be retained, and results will be discussed in the Radiation Safety Committee (RSC) meetings for necessary actions for compliance. This policy does not exclude the need for regular Quality Assurance (QA) checks of the workplace and routine surveys per existing protocols of the research Labs.

The Radiation Safety Office will make independent surveys of all research Labs whether or not these Labs are authorized to conduct research using radioisotopes. According to our current protocols, the radioisotopes Labs are inspected at least quarterly (see attached). Due to the recent discovery of unlicensed radioactive materials in the department of Physics, this new policy has been implemented to extend radiation survey to other non-radioisotope research Labs to prevent future occurrences. The survey of these Labs is to be conducted AT LEAST semiannually or as deem necessary by the research investigator or his/her designee in conjunction with the Radiation Safety Officer. Survey results will be documented in the attached log-sheet.





**Radiation Safety Office
Radioisotope Laboratory Quarterly Inspection Report**

Authorized User: _____
Report Period: _____

Date of Inspection _____ Program _____

Lab Location _____ Tele. No. _____ Auth. No. _____

List of authorized isotopes and amounts _____

INSPECTION RESULTS

- No items of non-compliance or unsafe conditions were found
- The following deficiencies from the last inspection were not corrected:

The following items of noncompliance were found during this inspection:

- Inventory verification acceptable ____ (yes) ____ (no)
- The following isotopes were present which are not authorized for use in this laboratory or authorized Limit was exceeded: _____; _____; _____; _____.
- Security check failed
- Quarterly report(s) was not submitted for the following period(s): _____; _____;
- Quarterly wipe tests were not conducted and/or records not available for the following periods: _____; _____;
- NRC-3 Form "Notice to Employees" was not present
- Emergency (spill) procedures were not posted near the work area
- CAUTION – RADIOACTIVE MATERIALS signs were not properly posted on doors, storage areas, waste containers and/or work areas
- Containers of radioactive materials were not clearly labeled with CAUTION-RADIOACTIVE MATERIALS not the activity or radionuclide
- A floor plan demarcating restricted areas where radioactive materials are used, stored or disposed and where surveys are done was not present
- A copy of the authorization, issued by the Howard University Radiation Safety Committee, to document the current possession limits were not present
- Procedures for properly performing surveys were not present
- No trays or plastic backed absorbent pads were available for use or present
- Radioactive material work areas were not clean and free of dust accumulation

TRAINING RECORDS (Yes or No)

Do training certificates exist for all personnel working with radioactive materials? _____

Have all personnel completed the annual refresher course for this calendar year? _____

Have all badged personnel been properly trained? _____

Documentation of training in laboratory procedures exists for all badged personnel? _____



Radiation Safety Office
Radioisotope Laboratory Quarterly Inspection Report

Authorized User: _____
Report Period: _____

LABORATORY SAFETY AND RADIOLOGICAL WORK PRACTICES (Check)

- Personnel wearing dosimeters, if required? _____
- Dosimeters not in use stored in central location away from RAM? _____
- Any eating, drinking or application of cosmetics noted in lab? _____
- Proper lab attire (lab coats, gloves, etc.)? _____
- All contaminated equipment (pipettes, centrifuges, etc.) labeled? _____
- Radioactive materials secured (doors or freezers locked) if appropriate? _____
- Shielding available and in use (I-125 and other appropriate nuclides)? _____
- Any areas with contamination more than 200 dpm/100 cm²? _____
- Are the exposure levels in the lab appropriate? _____
- Have thyroid bioassays been performed as required? _____
- Are animals used in research? _____ If so, the Vivarium area was inspected and the following deficiencies were found: _____

Was survey meter present? _____ If so, latest calibration date _____
Was survey meter operable? _____ (yes/no)

RADIOACTIVE WASTE

- Number of waste containers present liquid _____ solid _____ vials _____
- Number of waste containers overfull liquid _____ solid _____ vials _____
- Each waste container has inventory sheet showing nuclide(s), activity present, etc. _____
- Liquid waste segregated and labeled? _____
- Waste properly shielded and stored away from high-occupancy locations? _____
- Inappropriate materials in waste containers (lead pigs, sharps, etc.)? _____
- Radioactive labels moved or defaced from waste containers? _____
- Exposure levels (as appropriate): storage area _____; counter top _____; general area _____
- Were these measurements found to be appropriate? Yes No

Surveyor's Name: _____	Signature: _____
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COMMENTS:

REVIEWER'S COMMENTS:

Reviewed by: _____ Date _____
 Dr. Satya R. Bose, Radiation Safety Officer