

SEP 02 1987

Docket No. 50-170

Defense Nuclear Agency
Armed Forces Radiobiology Research Institute
ATTN: Colonel George Irving, III, MC, USAF
Director
Bethesda, Maryland 20814-5145

Subject: Inspection 50-170/87-02

Gentlemen:

We have received your letter dated August 7, 1987, in response to our letter dated July 9, 1987.

Thank you for informing us of the corrective and preventive actions documented in your letter. These actions will be examined during a future inspection of your licensed program.

Your cooperation with us is appreciated.

Sincerely,

Original Signed By:

Thomas T. Martin

Thomas T. Martin, Director
Division of Radiation Safety and
Safeguards

cc:
M. L. Moore, Reactor Facility Director
Public Document Room (PDR)
Local Public Document Room (LPDR)
Nuclear Safety Information Center (NSIC)
State of Maryland (2)

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bcc:
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 J. Linville, Chief, RPS 2A, DRP
 E. Kelly, SRI (Limerick), DRP
 L. Scholl, Project Engineer, DRP

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DEFENSE NUCLEAR AGENCY

ARMED FORCES RADIOBIOLOGY RESEARCH INSTITUTE

BETHESDA, MARYLAND 20814-5145

7 August 1987

RSDS-Reactor

SUBJECT: Notice of Violation from Inspection Report # 50-170/87-02

Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

Gentlemen:

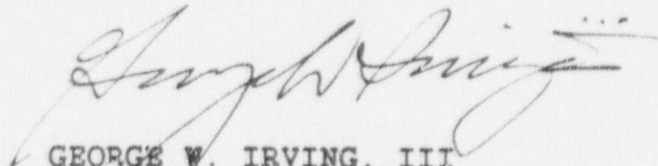
In response to the Notice of Violation dated 9 July 1987, the following statements of fact are submitted for your consideration. The violation did occur as stated. However, we believe that this violation was minor and would not have resulted in an increased threat to the public health and safety for two reasons. First, the unlabeled drums were being stored in an area to which unescorted access is strictly controlled and limited to members of the Reactor and Radiation Safety staffs. Second, that storage area was appropriately marked as an area that contained radioactive materials.

At the time this violation was identified to the radiation safety staff by the NRC inspectors, immediate corrective action was taken. All the specified waste drums were properly labeled, resulting in full compliance with 10 CFR 20.203(f).

To avoid the future potential for non-compliance with 10 CFR 20.203(f), Health Physics Procedure 6-2, paragraph 7c, (at the enclosure) has been revised to indicate that any container in which radioactive material is accumulated and could exceed Appendix C quantities will initially be posted with a clearly visible label bearing the radiation symbol and the words "CAUTION, RADIOACTIVE MATERIAL." The radioactive contents will also be identified by a tag or otherwise clearly visible label.

5708-170134 GPP

Full compliance was achieved immediately after the violation was identified as noted in paragraph two, above. Changes to the Health Physics Procedure 6-2 were made on 7 July 1987. This completes all action concerning this Class V violation.

A handwritten signature in cursive script, appearing to read "George W. Irving, III". The signature is written in dark ink and is positioned above the typed name and title.

GEORGE W. IRVING, III
Colonel, USAF, BSC
Director

1 Encl
as

1. General

- a. Purpose and Scope: This HPP describes the procedures to be followed in collecting laboratory radioactive wastes and transporting them to SAF areas used for their storage and/or treatment.
- b. Responsibility:
 - (1) SAF personnel are responsible for pickup, storage and preparation of radioactive waste, and laundering and surveying of radioactive laundry.
 - (2) Radioactive source users are responsible for documenting radioactive inventories for waste containers, and assuring that documentation is correct within the limits prescribed in this procedure.

2. References

- a. Regulatory:
 - (1) 10 CFR 20, "Standards for Protection Against Radiation"
 - (2) RSI 610, "Laboratory Radioactive Waste Disposal"
 - (3) 49 CFR, "General Requirements for Shipments and Packaging"
- b. Technical: US ARMY AMCCOM
 - (1) HPP 0-5, "Transportation of Radioactive Materials"
 - (2) HPP 6-3, "Solid Radioactive Waste"
 - (3) HPP 6-7, "Radioactive Laundry"
 - (4) RSI 510, "Unsealed Radioactive Source Use"
 - (5) HPP 6-5, "Radioactive Animal Handling"

3. Laboratory Waste Pickup Frequency

- a. Radioactive waste will be picked up by SAF, whenever a pickup is requested by any AFRRRI laboratory personnel. Pickups are normally made within 24 hours of the request.

4. Lab Waste Categories

- a. Summary of Categories (refer to RSI 610):
 - (1) Low-level liquid, limits in 10 CFR 20, appendix C and 10 CFR 20.B.1.2., and containing a one-liter or more volume

- (2) High-level liquid, above low-level limits
 - (3) Solid waste; e.g., glassware, papers, dry vials, including concentrated waste, but not reading more than 2.5 mR/h at contact
 - (4) Solid waste producing radiation area; i.e., >2.5 mR/h at contact
 - (5) Scintillation vials
 - (6) Partially expended radioactive sources
 - (7) Animal carcasses, injected or activated
- b. Treatment and disposal of radioactive waste shall be according to the specific requirements of that type of waste.

5. Storage and Disposal

- a. Solid waste: All waste categorized in paragraph 4.a., numbers (4), (5) and (7) shall be stored in radioactive barrels, or in boxes in the freezer.
- b. Animal Materials: Carcasses and organs of animals which have been injected with radioactivity, or made radioactive by exposure to a reactor or similar source, shall be stored in a cold storage area, in barrels marked "ANIM". Such barrels, if not stored in a posted, locked room, shall be labeled as "RADIOACTIVE MATERIAL".
- c. Vials: Vials containing up to 20 ml of radioactive liquid may be stored in waste barrels marked "Liquid Scintillation VIAL/LSV", in the radioactive storage area. No treatment of these vials is required, at AFRRI. These vials should be kept closed during storage.

6. Lab Waste Container Documentation

- a. Documentation Limits: Source users shall document all radioactive materials placed in waste containers.
- b. Rad Waste Tag: Documentation shall be made on the "Solid/Liquid Radioactive Waste" tags (enclosure 2) which shall be provided by SAF with each waste container. Additional tags may be obtained from SAFH.
- c. SAF personnel shall complete the tag and review documentation at the time of pickup. All disposal entries shall include:
 - (1) Disposal date
 - (2) Specific radionuclides
 - (3) Amount of each, in millicuries
 - (4) Physical and chemical designation of the material

(5) Enumeration of all non-radiological hazards

(6) Person disposing, signature-initials, and

(7) Person picking up, initials.

d. If documentation is incomplete or questionable, collection shall not be made until the senior member of SAFH has been contacted. Non-radiological hazards labeling shall be deemed fully as important as radiological labeling. Liquid lab waste should be sampled right after pickup.

7. * Waste Barrel Documentation

a. General Contents: Each amount of radioactive material deposited in any waste barrel shall have with it information as to its general contents. This should include the types and quantities of radioactive material.

b. All waste barrels shall have Radioactive Waste Cards (AFRRI Form 117) reflecting the current radioactive material contents firmly attached and visible.

c. All waste barrels will be clearly labelled with a "CAUTION RADIOACTIVE MATERIALS" sign including the radiation symbol.

d. If the types and quantities of radioactive material are not directly obtainable, they shall be estimated as follows:

(1) Source users shall be interviewed to determine what significant (microcurie) amounts of activity have been placed in laboratory containers.

(2) RAL records shall be reviewed to determine the content of vials removed from AFRRI Room 1426. Analogous records shall be reviewed in any other laboratory using counting vials.

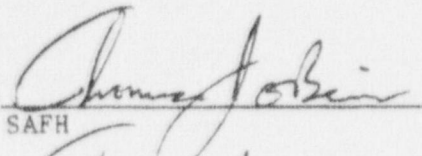
(3) Random sampling of solid and LSV waste shall be used if necessary.

(4) For labeling barrel see 49-173.421, 173.444, and 10 CFR 20.203(F).

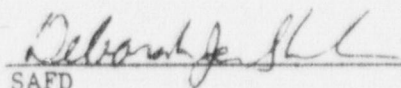
c. If a range of activity estimates is obtained, the upper extreme of the range shall be recorded for use on waste disposal documents.

CONCURRED BY:

SAFH

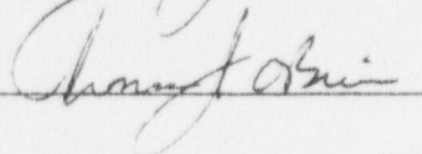


SAFD



APPROVED BY:

SAFH



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