

Nuclear Reactor Facility
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July 25, 1991

U.S. Nuclear Regulatory Commission
ATTN C. Thor Oberg
Region I
475 Allendale Road
King of Prussia, PA 19406

Re: License No. 20-03680-02
Docket No. 030-00775
Inspection No. 030-00775/91-001

Dear Sirs:

This is response to the Notice of Violation during the last radiation safety inspection on May 7 and 8. The following is a list of the responses to each of the three severity level V violations noted in the notice of violation.

Violation A: Written records of the formal training and the WPI RHSC authorization were not available to verify compliance with item 16 of the application.

Training was held in the fall of 1990, however, the records were not able to be found after a search of the facility paper work.

Training will be conducted in the fall of 1991, when all users return from summer recess. The approximate date will be the week of September 9, 1991. This about one week after personal have returned to school.

To verify that all requirements are being satisfied, the list of all radioactive material users who attended training will be presented to the RHSC at the next available meeting after training. This will allow for better control, and permanent records of training in the RHSC records.

Violation B: Records physical inventories were not maintained.

For the July meeting of the RHSC a complete inventory will be completed. The July meeting of the RHSC is scheduled for July 30, 1991.

950503

9110080339 VA

14 pr

Inventories were completed when the leak tests were performed and a one line signature on RHSC report form 8 indicating a completion of inventory. This was believed to be adequate since, to perform leak test, physical handling of the sources are required. As discussed with Mr. Oberg the form for recording leak test swipe results has been modified to include a section to indicate verification (inventory) of each source.

For this violation the new form has been completed, the new inventory will be completed by July 30, 1991.

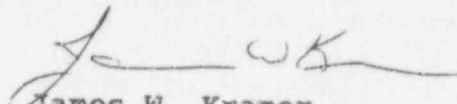
Violation C: Records of surveys conducted in the laboratories by user, records of the receipt and survey of packages received containing licensed material, and records of disposal to the sanitary sewerage were not always maintained as required.

Individual users are required to maintain their own records in accordance with 10 CFR 20. The procedures for record keeping was not uniform between different users. To correct this problem, each user has been advised of the record keeping requirements. In addition, each user has been supplied with a set of standardized forms to be used in all record keeping. This includes receipts, usage, and disposals of isotopes. A brief set of instructions have also been supplied with the set of forms.

As a second attempt to prevent this reoccurrence, the RSO will be conducting an inspection of the standardized forms to insure compliance with requirements on the average of once a month, not to exceed two months.

This violation has been completed as of this time.

Sincerely,



James W. Kramer
Radiation Safety Officer
Worcester Polytechnic Institute

cc:
Public Document Room (PDR)
Leo Bobek (Facility Director)

e. Any previous violations not corrected

() Y N

Explain.

3. SCOPE OF PROGRAM

a. License has multiple authorized locations of use () Y N

b. If so, list location(s) inspected N/A

c. List those individuals contacted during inspection
* William Hobe, RSO * Leo Bohak, Reactor fac.
* Dr. Goloshie, Chairman RSC * Dr. Mayer, Reactor fac.
* Kim Beagle, Asst RSO authorized users
*Indicates presence at exit meeting students

d. Briefly describe scope, including types of use involving byproduct material, frequency of use, staff size, etc.

~ 2 users in Chem dept. C14, Ca45 < 1 mCi
~ 4 users in Bio. dept. P32 < 1 mCi

only 3 labs found to have recent use (past year)

Use is very small compared to licensed authorization.

4. INTERNAL AUDITS OR INSPECTIONS

a. Audits are required by license condition Y N

b. Audits or inspections are conducted Y N

(1) Audits conducted by monthly
(2) Frequency ARSO

c. Records maintained. Y N

Remarks.

N

5. TRAINING, RETRAINING, AND INSTRUCTIONS TO WORKERS

a. Instructions to workers per [10 CFR 19.12] () Y () N

Remarks. Labs are maintained as restricted areas. Ancillary Staff have not been trained.

b. Training program required [L/C] () Y () N

(1) If so, briefly describe training program:

training done before handling of RAM.

(2) Training program implemented () Y () N
(3) Retraining program required () Y () N
(4) Retraining program implemented - yearly () Y () N
(5) Records maintained () Y () N

Remarks.

6. FACILITIES AND EQUIPMENT

a. Facilities as described in license application [L/C] () Y () N

Remarks.

b. Areas for storage and use of RAM

(1) Adequate method used to prevent an unauthorized individual from entering restricted area () Y () N

(2) RAM is secured to prevent unauthorized removal from an unrestricted area [20.207] () Y () N

Remarks. Labs are locked when personnel not present.

c. Survey instruments () N/A

(1) Appropriate operable survey instruments possessed () Y () N

(2) Calibration performed as required () Y () N

(3) Records maintained

(4) Y () N

Remarks. *calibrated by RSI
(previously Health
Physics Associates)*

12-20424-01

7. RADIOLOGICAL PROTECTION PROCEDURES

- a. Radioactive materials used in accordance with current procedures [L/C] (4) Y () N
- b. Individuals understanding of current procedures is adequate [L/C]
 - (1) in general rules for safe use of RAM (4) Y () N
 - (2) in emergency procedures (3) Y () N NI

Remarks. *minor
S/W user about spill that
occurred. She was knowledgeable
and followed the appropriate
procedures. No personnel
contamination occurred.*

8. MATERIALS

- a. Isotope, chemical form, quantity and use as authorized [L/C] (4) Y () N

Remarks.

b. Leak tests and Inventory

- (1) Leak tests of sealed sources performed as required [L/C] (4) Y () N
- (2) Inventory of RAM performed as required [L/C] (4) Y () N
- (3) Records maintained (3) Y () N

Remarks.

9. RECEIPT AND TRANSFER OF RADIOACTIVE MATERIAL

- a. Describe how packages are received and by whom: () N/A
packages are received by dept of Bio. or Chem, then user picks up
- b. Opening procedures established and followed [20.205(d)] (Y () N
- c. Incoming packages wiped per [20.205(b)] (Y () N
- d. Incoming packages surveyed per [20.205(c)] (Y () N
- e. Transfer(s) performed per [30.41] (Y () N *None*
- f. Records of surveys and receipt/transfer maintained per [20.401(b) and 30.51] (Y () N

Remarks.

10. AREA SURVEYS

() N/A

Briefly describe area survey requirements and licensee's implementation [L/C]:

users do daily surveys and document. ARSO does monthly wipes of all labs. Results indicate no contamination problems. Areas above 2x3 background are decontaminated

11. PERSONNEL RADIATION PROTECTION - EXTERNAL

- a. Film or TLD supplier Lanbuser Frequency monthly
- b. Supplier is NVLAP - approved (Y () N
- c. Reports reviewed by ARSO Frequency monthly
- d. NRC inspector reviewed personnel monitoring records for period 1991 to 1993
- e. NRC forms or equivalent
- | | | | |
|-------------|-------------|-----------|---------------------|
| (1) NRC-4: | () Y () N | Complete: | () Y () N () N/A |
| (2) NRC-5: | () Y () N | Complete: | () Y () N () N/A |
| [20.401(a)] | | | |
- f. List maximum exposures (millirem):
M's

Remarks.

12. PERSONNEL RADIATION PROTECTION - INTERNAL

N/A

- a. Potential for exposure of individuals to airborne RAM exists () Y () N
- b. Monitoring for airborne radioactivity conducted [20.201(b) to meet 20.103] { } Y { } N
- c. Records maintained [20.401 and L/C] { } Y { } N
- d. Briefly describe licensee's monitoring system for airborne radioactivity [L/C]
- e. Bioassay program implemented as described in correspondence with NRC () Y () N

Remarks.

13. RADIOACTIVE EFFLUENT AND WASTE DISPOSAL

- a. RAM in effluents to unrestricted areas () Y () N
- b. Release in accordance with regulatory limits [20.106(a)] () Y () N

Remarks.

*only d-in-s
liquids released
to sewer*

- c. Describe waste disposal method(s) - solid and liquid:
*all waste has been P-32
d-in-s.*

- d. If LLW is stored because access to a burial site has been denied, answer (1), (2), and (3) below:
- (1) Adequate control of waste in storage is maintained Y N
 - (2) Package is labeled and package integrity is adequately maintained Y N
 - (3) Adequate records of surveys and material accountability are maintained Y N
- e. Disposal of waste in accordance with regulatory requirements [20.301] Y N
- f. Records maintained [20.401(b)] Y N

Remarks.

14. NOTIFICATION AND REPORTS

- a. Licensee in compliance with [19.13] (reports to individuals) Y N N/A
- b. Licensee in compliance with [20.402] (theft or loss) Y N None
- c. Licensee in compliance with [20.403] (incidents) Y N None
- d. Licensee in compliance with [20.405] (overexposures) Y N None

Remarks.

15. POSTING AND LABELING

- a. NRC-3 "Notice to Workers" is posted [19.11] Y N
- b. Parts 19 and 20 and license are posted or a notice indicating where documents can be examined is posted [19.11] Y N
- c. Other posting and labeling per [20.203] Y N

Remarks.

16. ENVIRONMENTAL MONITORING PROGRAM

N/A

- a. Licensee has implemented an environmental monitoring program [L/C]
- b. Records maintained

{ } Y { } N
{ } Y { } N

Remarks.

- c. Briefly describe the licensee's environmental monitoring program:

17. TRANSPORTATION (10 CFR 71.5(a) and 49 CFR 171-189)

- a. Licensee makes shipments of RAM

() Y (X) N

- b. Shipments are:

- { } delivered to common carriers
- { } transported in licensee's own private vehicle
- { } both
- { } no shipments since last inspection

Remarks.

Complete only if shipments made since last inspection:

- c. Shipments

- (1) Authorized packages used [173.415,416]

() Y () N () N/A

- (2) Package type used _____

- (3) For DOT-7A packages, performance test record on file [173.415(a)]

() Y () N () N/A

- | | |
|--|----------------------|
| (4) For DOT-55 packages, use is approved by NRC [173.416(a)] | () Y () N () N/A |
| (5) Other Type B packages used are approved [173.416(a)] | () Y () N () N/A |
| (6) Licensee has COCs on file with NRC [71.12(c)(1)] | () Y () N () N/A |
| (7) Licensee has a QA program approved by NRC [71.12(b)] | () Y () N () N/A |
| (8) For special form sources, performance test record on file [173.476(a)] | () Y () N () N/A |
| (9) Packages properly labeled [172.403, 173.441] | () Y () N () N/A |
| (10) Packages properly marked [173.200] | () Y () N () N/A |
| (11) Proper shipping papers prepared and used [172.200-204] | () Y () N () N/A |
| (12) Shipping papers readily accessible during transport [177.817(e)] | () Y () N () N/A |
| (13) Vehicles placarded as necessary [172.500, 504] | () Y () N () N/A |
| (14) Cargo blocked and braced [177.842(d)] | () Y () N () N/A |
| (15) Any incidents reported to DOT [171.15-16] | () Y () N () None |

Remarks.

18. RECORDKEEPING FOR DECOMMISSIONING

~~()~~ N/A

- | | |
|---|-------------|
| a. Records of information important to the safe and effective decommissioning of the facility maintained in an independent and identifiable location until license termination [30.35(g)] | () Y () N |
| b. Records include all information outlined in [30.35(g)] | () Y () N |

Remarks. *maintains inventory quarterly to prove NO Sin. ass. req'd.*

19. INDEPENDENT MEASUREMENTS

- a. Survey instrument used Eberline E120
- b. NRC Serial No. 000906
- c. Last date of calibration 4/93
- d. Inspector's measurements were compared to licensee's Y N
- e. Describe the type and results of measurements:
no contamination found.

20. BULLETINS AND INFORMATION NOTICES

- a. Bulletins, Information Notices, etc., received by the licensee Y N
- b. Licensee took appropriate action in response to Bulletins, INs, etc. Y N N/A

Remarks.

21. CONTINUATION OF REPORT ITEMS - USE BACK OF PAGE IF NECESSARY

22. LIST OF VIOLATIONS

See p. E-4

23. PERFORMANCE EVALUATION FACTORS

Licensee (name & location) JVPI
Norcesta, Mass

Inspector Arredond
Inspection Date 6/10/93

- a. Lack of senior management involvement with the radiation safety program and/or Radiation Safety Officer (RSO) oversight () Y () N
- b. RSO too busy with other assignments () Y () N
- c. Insufficient staffing () Y () N
- d. Radiation Safety Committee fails to meet or functions inadequately () Y () N () N/A
- e. Inadequate consulting services or inadequate audits () Y () N () N/A

Remarks (consider above assessment and/or other pertinent PEFs):

Regional follow-up on above PEFs citations: