

Appendix A

NOTICE OF VIOLATION

University of Notre Dame

License No. 13-01983-15
License No. 13-01983-08
License No. SUD-197

Based on the inspection conducted on April 14, 15 and 16, 1980, it appears that certain of your activities were in noncompliance with NRC requirements, as noted below. Items 1 through 5 are infractions, and item 6 is a deficiency and pertain to License No. 13-01983-15. Items 4, 7 and 8 are infractions, and 9 a deficiency and pertain to License No. 13-01983-08. Items 4, 10, 11 and 12 are infractions and 13 a deficiency and pertain to License No. SUD-197.

1. License Condition No. 19 requires that licensed material be possessed and used in accordance with the statements, representations, and procedures contained in various dated applications and letters.

Application dated August 8, 1975, Item No. 14 references the "University of Notre Dame Radiation Safety Manual." Page 4 of the above referenced manual requires in part for the Radiation Control Committee to establish possession limits on each responsible investigator.

Contrary to the above requirement, it was determined through review of records, that the requirement for established radionuclide possession limits were exceeded. Specifically, the investigator in the Biology Department exceeded his 10mCi limit possession of H-3 on March 9, 1978.

2. License Condition No. 19 requires that licensed material be possessed and used in accordance with the statements, representations, and procedures contained in various dated applications and letters.

Application dated August 8, 1975, Item No. 14 references the "University of Notre Dame Radiation Safety Manual." Page 9 of the above referenced manual requires in part, each time a radioisotope source is acquired from an outside source through the University Purchasing Department, the requisition must first be sent to the Radiation Safety Officer for validation and recording before being processed by the purchasing agent.

Contrary to the above referenced requirement, it was determined through statements of licensee representatives and review of records, that the radioisotope ordering procedures were not met. Specifically, an order was placed for 25mCi of H-3 in March 1978 and the requisition was not sent to the Radiation Safety Officer for validation and recording prior to being processed by the purchasing agent.

3. License Condition No. 19 requires that licensed material be possessed and used in accordance with the statements, representations, and pro-

cedures contained in various dated applications and letters.

Application dated August 8, 1975, Item No. 14 references the "University of Notre Dame Radiation Safety Manual." Page 20, items A1 and 2 of the above referenced manual states, "smoking, eating, storing or preparation of food in a radioisotope laboratory is forbidden."

Contrary to the above requirement, it was determined through direct observations by the NRC inspector that this requirement is not being met. Specific examples of noncompliance are:

1. The NRC inspector noted a coffee pot, coffee cups, milk cartons, and fruit punch on laboratory counter tops in the Nieuwland Science Hall, Room 346A.
2. A refrigerator located in Laboratory Room 353 contained mayonnaise, champagne, orange juice and cans of fruit.
3. In Chemistry Hall, Room 364 in a laboratory refrigerator a can of beer was stored with containers of radioactive carbon-14 and tritium.

The NRC inspector also noted an ash tray with a cigarette butt on a laboratory work bench.

This is a repeat item of noncompliance.

4. License Condition No. 19 requires that licensed material be possessed and used in accordance with the statements, representations, and procedures contained in various dated applications and letters.

Application dated August 8, 1975, Item No. 14 references the "University of Notre Dame Radiation Safety Manual." Representations presented on pages 4, 8 and 28 of the above referenced manual requires the Radiation Control Committee to define the approved investigators, authorized isotopes, maximum quantities, conditions of use and user responsibility. Page 8 states an approval form, entitled "Approval for Radioisotope Usage," will be returned to the investigator by the Committee.

Contrary to the above requirement, it was determined through statements of licensee representatives and review of current records that the Radiation Control Committee did not issue an "Approval for Radioisotope Usage" form for all approved investigators for 1979-1980, as represented on page 28 of the University of Notre Dame Radiation Safety Manual.

5. 10 CFR 20.201(b), "Surveys," requires you to make surveys such as may be necessary for you to comply with all sections of Part 20.

Contrary to this requirement, you failed to make such surveys as were necessary to determine that individuals who handled significant quan-

tities of tritium were not exposed to airborne concentrations exceeding the limits specified in 10 CFR 20.103, "Exposure of individuals to concentrations of radioactive materials in restricted areas." Specifically, no surveys (evaluations, including air monitoring and/or bioassays) were made during the preparation and use of tritium.

6. 10 CFR 20.203(e) requires that a room in which licensed material is used or stored shall be posted with a sign bearing the radiation caution symbol and the words, "Caution Radioactive Material."

Contrary to this requirement, it was observed at the time of the inspection that the licensee failed to post a "Caution Radioactive Material" sign on the door of the chemistry waste storage room and room 142, a room where licensed material is used and stored.

7. License Condition No. 14 requires that licensed material be possessed and used in accordance with statements, representations and procedures contained in various dated applications and letters. Operating procedures submitted in support of application dated April 11, 1966, Items 13 and 14 requires a leak test each time the cesium-137 irradiator facility is used.

Contrary to the above requirement, it was determined through statements of licensee representatives and review of records, that the requirement for post use leak testing has not been met from the date of license issuance, March 23, 1961.

8. License Condition No. 14 requires that licensed material be possessed and used in accordance with statements, representations, and procedures contained in various dated applications and letters.

Item No. 14 of application dated April 11, 1966 requires that all personnel having access to the irradiator laboratory will wear film badges and/or pocket dosimeters.

Contrary to the above requirement, it was determined through statements of licensee representatives and review of records, that the requirement for personnel monitoring is not being met. Specifically, two individuals used the cesium-137 irradiator on February 13, 1980 and were not issued the required personnel monitors.

9. License Condition No. 11 and 10 CFR 19.11 (a) and (d) requires each licensee to post current copies of operating procedures applicable to the licensed activities.

Contrary to the above requirement, a copy of operating procedures applicable to the irradiator facility was not posted on the day of the inspection.

10. License Condition No. 8 requires licensed material to be possessed and used in accordance with statements, representations, and procedures contained in application dated February 6, 1975; and Radiation Safety Manual revised August 1975.

License Application dated February 6, 1975, Item No. 12 a refers to procedures submitted in support of application dated April 25, 1958. Page 9, paragraph 10 of the application dated April 25, 1958 states leak tests will be performed at intervals not to exceed six months.

Contrary to the above requirement, it was determined through review of records and statements of licensee representatives, that the six month leak test requirement of the source material (subcritical assembly) has not been met for a period of at least five years.

11. License Condition No. 8 requires licensed material to be possessed and used in accordance with statements, representations, and procedures contained in application dated February 6, 1975, and Radiation Safety Manual revised August 1975.

License application dated February 6, 1975, Item No. 12 c refers to procedures submitted in support of application dated March 15, 1967. Items 6 and 7 of the application dated March 15, 1967 requires pocket dosimeters and film badges be worn by all personnel entering the graphite-moderated subcritical facility.

Contrary to the above requirement, it was determined through statements of licensee representatives and review of current records that the personnel monitoring requirement is not being met. Specifically, on March 13, 1980 two individuals using the subcritical facility were not wearing film badges and on March 13, 18, 20, 25, 27 and April 8 and 10, 1980, one individual performed experiments in the same facility and did not use a dosimeter.

12. License Condition No. 8 requires licensed material to be possessed and used in accordance with statements, representations, and procedures contained in application dated February 6, 1975, and Radiation Safety Manual revised August 1975.

License application dated February 6, 1975, Item No. 12 c refers to procedures submitted in support of application dated March 15, 1967. Item No. 12 c of the application dated March 15, 1967 requires routine radiation surveys be made at the beginning of each semester and at the closing of the laboratory in June; also the authorized instructor is required to report the results of these surveys to the department head.

Contrary to the above requirement, it was determined through statements of licensee representatives, that the semi-annual survey and reporting requirements has not been met for several years.

13. License Condition No. 9 and 10 CFR 19.11 (a) and (d) requires each licensee to post current copies of operating procedures applicable to the licensed activities.

Contrary to the above requirement, a copy of operating procedures applicable to the graphite-moderated subcritical assembly was not posted on the day of the inspection.