

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report No. 50-150/80-03

Docket No. 50-150

License No. R-75

Licensee: Ohio State University
2070 Neal Avenue
Columbus, OH 43210

Facility Name: Nuclear Reactor Laboratory

Inspection At: Nuclear Reactor Laboratory, Columbus, OH

Inspection Conducted: September 30, 1980

Inspector: *C. J. Paperiello*
R. J. Greer

Approved By: *C. J. Paperiello*
C. J. Paperiello, Acting Chief
Environmental and Special
Projects Section

Inspection Summary:

Inspection on September 30, 1980 (Report No. 50-150/80-03)

Areas Inspected: Routine, unannounced inspection of emergency planning, including an examination of coordination with support agencies; emergency equipment; training and drills; evacuation and reassembly; and discussion of a postulated incident. The inspection involved eight inspector-hours on site by one NRC inspector.

Results: No items of noncompliance or deviations were identified.

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DETAILS

1. Persons Contacted

- P. Hajek, Associate Director, Nuclear Reactor Laboratory (NRL)
- *R. Myser, Manager, Reactor Operations
- G. Hodge, Research Associate, Nuclear Services and Training
- J. Dare, Director, Office of Radiological Health and Safety
- T. Rausch, RN, University Hospital
- J. Kleverg, Deputy Chief, OSU Police
- P. STONKS, Clinton Township Fire Department.

*Denotes those present at the exit interview.

2. General

The licensee has a 10 KW swimming pool reactor. It is used for research, primarily neutron activation analysis. The licensee has no formal emergency plan, but has short emergency procedures dated 1977 entitled, "Fire," "Nuclear Emergency," and "Non-Nuclear, Non-Fire Emergency." These procedures are very general in nature. The licensee is aware of the rule change to 10 CFR 50, which will require him to submit an emergency plan by November 1982.

3. Coordination with Support Groups

The inspector discussed emergency support and coordination with representatives of the Radiological Health and Safety Office, University Hospital, Campus Police, and Clinton Township Fire Department.

a. Radiological Health and Safety Office

Discussion with the Director of the Office revealed that Office personnel perform routine health physics surveys for the Nuclear Reactor Laboratory (NRL) on a monthly basis. They are also on call for emergency support. The Director stated that coordination between NRL personnel and his office is adequate.

b. University Hospital

The inspector discussed the hospital's response for handling radiation accident victims with an Emergency Room employee and toured the area designated for use. The hospital has recently moved into a new area for this purpose. This area has a private entrance; the atmosphere is under negative pressure and the air is filtered through HEPA filters. Provisions have been made for containing radioactive liquids and for controlling the spread of contamination. The hospital maintains certain supplies to

be used in the event of an accident, such as paper coveralls, a survey instrument, and other assorted supplies. The hospital has a plan for the treatment of contaminated injuries. They also have assignment cards which specify various functions to be performed as assigned. The hospital representative stated that she feels comfortable with the hospital's ability to treat a radiation accident victim.

c. Campus Police

The Deputy Chief stated that most of his personnel have been to the NRL to tour the facility. Response during an emergency would generally be limited to access control. The Campus Police can call upon other local law enforcement agencies for support as needed. The representative stated that coordination between his department and the NRL is adequate.

d. Clinton Township Fire Department

The inspector met with representatives of the Fire Department to discuss their coordination with the NRL. Personnel from this fire department, and from other departments in the area have toured the NRL facility. Discussions with fire department personnel indicated that they are familiar with their responsibilities during an emergency.

No items of noncompliance or deviations were identified.

4. Emergency Equipment

The inspector examined emergency supplies maintained by the licensee. These items are located by the door to the Reactor Laboratory and include survey instrumentation, paper coveralls, and respiratory equipment. The survey instruments were operable and calibrated as required. Additional survey instrumentation is available at the Van de Graaf Laboratory and the Radiation Safety Office.

The evacuation alarm is manually tripped as necessary and is located in the control room. The alarm was tested during the inspector's visit and was found to be functional.

No automatic fire alarms are located at the facility. The person discovering a fire is instructed to call an emergency telephone number. This number is conspicuously posted in various locations.

No items of noncompliance or deviations were identified.

5. Training and Drills

Training in the emergency procedures is accomplished as part of the reactor operator requalification training. It is accomplished either by formal instruction or by self study.

There are no formal provisions for drills; however, an evacuation drill was held as part of requalification training in November 1979.

No items of noncompliance or deviations were identified.

6. Evacuation and Reassembly

If a building evacuation should be necessary, building personnel would evacuate and reassemble at the Van de Graaf Laboratory. There is presently no method of personnel accountability, should an evacuation occur. Because of the addition of several people in the Nuclear Services and Training section, personnel accountability has become much more difficult. The inspector stated that this is an item of concern and should be addressed in the near future. A licensee representative stated that this will be addressed.

This item will be examined in a future inspection.

7. Discussion of a Postulated Incident

A licensee representative stated that the most likely accident which might occur would be the spilling of a powder sample after activation. The inspector and licensee representative discussed the methods of detection and the location of area radiation monitors and portable survey instrumentation, and the steps to be taken to control the spread of contamination. The licensee's proposed actions were deemed adequate by the inspector.

No items of noncompliance or deviations were identified.

8. Exit Interview

The inspector met with the licensee representative denoted in Paragraph 1 at the conclusion of this inspection on September 30, 1980, and summarized the purpose and scope of the inspection and its findings.

The licensee representative agreed to address the problem of personnel accountability.