U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-225/88-03

Docket No. 50-225

License No. CX-22

Licensee: Rensselear Polytechnic Institute
Troy, New York 12180

Facility: Rensselaer Polytechnic Institute
Reactor Critical Critical Facility

Inspection Conducted: August 26, 1988

Inspector: _____ 9/28/88
C. G. Amato, Emergency Preparedness Specialist, EPS, FRSSB, DRSS — date

Approved by: _____ 9/28/88
W. T. Lazarus, Chief, Emergency Preparedness Section, FRSSB, DRSS — date

Inspection Summary: Inspection on August 12, 1988 (Report No. 50-225/88-03)

Areas Inspected: Routine, announced, safety inspection in the area of emergency preparedness.

Results: No violations were identified.

DETAILS

1.0 Persons Contacted

The following personnel attended the entrance and exit meeting.

D. Harris, Ph.D, Director Reactor Critical Facility
P. Angelo, Supervisor, Reactor Critical Facility
F. Rodriguezy Vera, Ph.D, Consultant

2.0 Facility Discription

The Rensselaer Polytechnic Institute's Reactor Critical Facility (RPI RCF) is located within the City and County of Schenectady, New York about 15 miles west of the RPI campus in Troy, New York, along the south bank of the Mohawk River. The facility is housed within a single structure the interior of which is divided into five areas: Reactor Room; Vault; Counting Room; Control Room; and an office. The RCF supports an academic program but no research programs. The staff is not located at the facility except when the RCF is in use. The NRC classification for this reactor is RCF 2. The Emergency Plan and Procedures were revised in 1987. The reactor is an open tank type fueled with High Enrichment Uranium (HEU) clad with stainless steel. There are seven control rods with fuel followers and six interlocks which will scram the reactor Maximum power level is 100W. There are wall mounted area radiation monitors, an airborne particulate monitor and portable survey equipment including a "frisker".

3.0 The Emergency Preparedness Organization

3.1 The Emergency Preparedness Organization is comprised of the Facility Director, the Reactor Supervisor, the former reactor supervisor who would serve as a consultant, RPI Security Officers(s) and the RPI Radiation Safety Officer. This area is acceptable.

3.2 Emergency Classification

Emergency classifications are based on the established Emergency Planning Zone which is outside the reactor room but inside the Reactor Building, therefore, only two emergency classifications have been established: 1) Personnel Emergency; 2) and Emergency Alert. The former lists the only condition as human injury. The latter classification consists of six events and symptoms. These classifications serve as the Emergency Action Levels (EALs) per Section 5.0 of the RCF Emergency Plan. This area is acceptable.

4.0 Emergency Response

4.1 A review of thie Emergency Plan indicates that a staff member in the RCF will sound the emergency alarm following identification of an EAL. The reactor may be shut-down and personnel assembled in the shielded counting room. A secondary assembly area is at the front gate on Maxom Road. The senior staff member present assesses the situation and will take appropriate actions. An undated list of 12 emergency phones is included in the Plan which includes three New York State phone numbers, and the NRC RI number but not the number for NRC's Headquarter's Operation Officer (HOO). Figure 1 of the Plan is the ERO Table of Organization (TO). Addendum 1 of the Plan which lists emergency numbers does not list numbers for all of the individuals identified in the TO. This telephone list should be updated and then reviewed on a periodic basis to ensure that it remains current. Procedures should clearly indicate that NRC contact in an emergency is through the HOO. This item is unresolved and will be subject to a future inspection. (50-225/88-03-01)

4.2 Emergency equipment consists of portable survey meters, a "frisker", three sets of anti-contamination clothing, two sets of Self Contained Breathing Apparatus (SCBAs), continuous air monitor, portable survey meters and a digital ratemeter. Much of this equipment serves a dual purpose: normal operation and emergency use. Calibration of instruments and the inspection of the SCBAs by RPIs Safety Department was current. The licensee does not maintain a list of emergency equipment detailing its location within a single enclosure nor surveillance records. Additionally a first aid kit could not be found (first aid supplies were available). following discussion with the inspector, the Licensee agreed to procure and wall mount a first aid kit, assemble emergency equipment in an identified location, and post an emergency equipment list. This matter will be reviewed in a future inspection.

4.3 Fire extinguishers Class A, B, C, and special materials were available and had been inspected by the RPI Safety Department during July 1988.

5.0 Off-Site Activities

5.1 Off-site activities are associated with local Police and Fire Services and the Ellis Hospital. Documentation was available in the form of sign-in sheets showing Police officers had entered the facility. The Licensee stated Fire Officers had visited the RCF under the auspices of the RPI Security Office. Documentation could not be located attesting to these visits by fire officials. Such annual visits should be scheduled and documented. The licensee is evaluating possible improvements in this area. This matter will be subject to a future inspection.

5.2 There is no current Letter of Agreement with Ellis Hospital to accept injured and contaminated individuals. The Licensee agreed to develop such a signed agreement as rapidly as possible. The Licensee did point out that Ellis had "played" in recent medical drills and had entered into an agreement with the Knolls Atomic Power Laboratory to accept any of their staff who may be injured and contaminated; the Licensee also indicated Ellis provides the ambulance service. This item is unresolved. (50-225/88-03-02)

6.0 Training

6.1 There was no training documentation in either the Plan or Procedures. Section 10 of the Plan states the RCF staff will review the Plan. The RSO stated relevant material is presented to students during annual indoctrination. Absence of formalized training is contrary to the guidance given in NRC Regulatory Guide 2.6 and ANSI 15.16. This matter is unresolved and will be subject to a future inspection. (50-225/88-03-03)

7.0 Review of this Plan

7.1 Section 10 of the Plan states the RCF Facility Supervisor shall review the Plan annually and submit changes to the Nuclear Safety Review Board (NSRB) which meets semiannually per Technical Specification 6.1.5. No documentation of any review was available. This item will be subject to a future inspection. (50-225/88-03-04)

8.0 Communications

9.1 The only communication capability is a single phone line with two drops. Apparently, RPI Security has voiced concern as to the adequacy of this system in the event of an emergency. Possible charges are being evaluated. This matter will be subject to a future inspection.

Based on the the information given in Sections 2.0 to 8.0 above, emergency planning guidance elements are followed to an acceptable degree and the Licensee has developed a capability to cope with incidents.

9.0 Unresolved Items

An unresolved item requires additional information to determine whether it is acceptable or a violation or deviation. Paragraphs 4.1, 5.2, 6.1 and 7.1 contain unresolved items.

10.0 Exit Meeting

10.1 The inspector met with the individuals noted in Section 1.0 of this report and advised them no violations had been identified. A number of improvement areas had been noted. The Licensee agreed to review these and take appropriate action. At no time during the inspection, did the inspector give the licensee written material.