

ENVIRONMENTAL IMPACT APPRAISAL

L. DAVID WALTHOUSEN LABORATORY

by Peter Nelson  
Facility Supervisor  
8/79

343290

7909140 404 P

## ENVIRONMENTAL IMPACT APPRAISAL

The Rensselaer Polytechnic Institute's Critical Experiments Facility is operated for the instruction of students of Nuclear Reactor Physics. A graduate level course has been developed using the Facility for the study of reactor behavior by performance of critical experiments. The Facility is located on the south bank of the Mohawk River adjacent to a General Electric Company complex near Maxon Road in Schenectady, N.Y. The site and facility were formerly owned by ALCO and were donated to RPI in 1963. At the time of construction the surrounding area was highly industrially zoned as it is to date. The impact on the immediate flora and fauna due to the facility's existence is considered negligible. The impact on the Mohawk River is also negligible since there are no longer any direct or indirect contacts between facility services and the river.

Radioactive waste is not generated in any form at the Critical Experiments Facility. The reactor system, apart from the moderator water, (see License Technical Specifications) is a closed system consisting of corrosion resistant materials the integrity of which is designed so as not to be compromised in any way over the lifetime of the Facility. Precautionary measures are taken however to verify the absence of radioactive contamination of surroundings (water, air or surface). No radioactive contamination has been detected to date.

Radiation levels in and around the Facility are monitored continuously by distributed thermoluminescence dosimeter (TLD) which are checked annually. The outside perimeter TLDs indicate the expected general background exposures for this geographical location. General area radiation detectors are located in four locations within the Facility and must be operational during reactor operation. The monitors are alarmed and will warn personnel of high radiation levels. A continuous air monitor samples Reactor Room air and indicates amounts of airborne radioactivity. No radiation problems have been experienced or are expected for the reasons given in the preceeding paragraph.

Using a benefit-cost comparison, the benefits of the Facility are seen in the quality education it affords for students of Reactor Physics, the costs in environmental terms are negligible.

949291