LONG ISLAND LIGHTING COMPANY
175 EAST OLD COUNTRY ROAD · HICKSVILLE, NEW YORK 11801

MILLARD S. POLLOCK
VICE PRESIDENT-NUCLEAR

July 10, 1981

SNRC-593



Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Fire Protection
Shoreham Nuclear Power Station - Unit 1
Docket No. 50-322

Dear Sir:

In response to the staff concerns presented in the Shoreham safety evaluation report, we have forwarded our evaluation of the Shoreham fire protection measures as they relate to the technical requirements of Appendix R to 10CFR Part 50 (SNRC-572, dated 5/21/81). That assessment, as well as previous submittals dealing with the Shoreham Fire Hazards Analysis Report and the Cable Separation Analysis, provided a basis for the resolution of the staff's concerns. Subsequent meetings with members of your staff, June 9, 1981 in Bethesda and July 1, 1981 at the Shoreham site have led to resolution of this issue. This letter documents our understanding of the resolution reached with your staff regarding the following:

1) The present fire detection system wiring to to the Control Room is acceptable. Additional descriptive information to support this conclusion is provided in Attachment 1.

2) The installed station fire dampers are adequate and their operability will be verified and any required modification to assure operability will be implemented prior to fuel load.

3) The existing manually actuated deluge system for the HPCI/RCIC equipment area will be modified to an automatic/pre-action actuation system.

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4) The Cable Separation Analysis provided for Shoreham is an acceptable method for demonstrating that adequate separation exists between redundant trains of safety related equipment in the Reactor Building. This conclusion is based on our commitment to review the Separation Analysis results, in conjunction with our "as built" effort, in order to insure that a minimum separation of 20 feet exists between redundant safety related components.

5) The separation for redundant safety related cabling outside the Reactor Building is adequate. This conclusion reflects the summary of station design presented in Attachment 2 of this letter.

Based on the information which we have submitted, and the understandings identified in this letter, we believe that the issue of fire protection has been resolved and that the staff has concluded that adequate fire protection has been provided for Shoreham.

Very truly yours,

M. S. Pollock

M. S. Pollock
Vice President -
Nuclear

RAH:mp

Attachments

cc: J. Higgins

# FIRE DETECTORS

## FIRE ALARM SYSTEM WIRING

## SHOREHAM NUCLEAR POWER STATION

The fire detection system consists of various types of detectors (ionization, rate compensated thermostatic and photoelectric) which are either area or panel mounted throughout the plant. These detectors are wired to a switching panel located within the relay room. This wiring is Class "A" as defined by NFPA. The detectors are hard wired utilizing one pair of a two pair cable. The switching panel allows manual switching to the second pair.

The alarm output cables from the switching panel are wired first to the zone module panels and then to the interface panel, also located in the relay room. Cable for these connections are not redundant.

The function of the interface panel is to multiplex the signals on a four conductor cable for input to the computer for the fire detection and station security system console, located in the control room. A parallel four conductor cable is also provided for this interface wiring to provide a second path should a conductor break. The alarms appear on the CRT in this console and the printer associated with it. Simultaneously they also appear on the CRT and printer located in the Security Building. The entire wiring for the detection system is supervised and any broken or shorted wire will alarm at both locations.

# FIRE PROTECTION

## SHUTDOWN CIRCUITS IN AREAS OTHER THAN SECONDARY CONTAINMENT

The cable for redundant shutdown components not in the reactor building secondary containment run through the relay room in the control building, the diesel-generator rooms, the emergency switchgear rooms, the fuel oil pumphouse, the screenwell, and the HVAC rooms.

The redundant circuits in the relay room are separated in accordance with Regulatory Guide 1.75 as indicated in the FSAR; those in the D/G rooms, the emergency switchgear rooms, the fuel oil pumphouse rooms and screenwell rooms* are run in underground ducts and the rooms that contain redundant raceways and equipment are separated with 3 hour fire rated walls; those in the HVAC rooms are separated in accordance with Regulatory Guide 1.75 as indicated in the FSAR, however, in the unlikely event that both ac units for the control room are disabled, shutdown can be achieved from the remote shutdown panel in the reactor building.

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*Screenwell rooms also contain circuits designated as "orange" which are separated in accordance with Regulatory Guide 1.75 as indicated in the FSAR.