



LONG ISLAND LIGHTING COMPANY

SHOREHAM NUCLEAR POWER STATION

P.O. BOX 618, NORTH COUNTRY ROAD • WADING RIVER, N.Y. 11792

November 8, 1982

SNRC-789

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

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

Dear Mr. Denton:

As requested by letter dated September 20, 1982 from Mr. A. Schwencer, Division of Licensing, NRC to Mr. M. S. Pollock, Vice President-Nuclear, Long Island Lighting Company, enclosed herewith are forty (40) copies of LILCO's response to NRC Question 223.100.

Please be advised that this response will be incorporated into a future amendment to the FSAR.

If you require additional information or clarification, please do not hesitate to contact this office.

Very truly yours,

J. L. Smith
Manager, Special Projects
Shoreham Nuclear Power Station

CC:mp

Enclosure

cc: J. Higgins
All parties

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Request 223.100: In the Applicant's response to question 223.99, it was indicated that valves in the Control Room Air Conditioning (CRAC) System would revert to a normal position if switch 1A2 was reset. It was also indicated that this reset would occur only if the CRAC System were manually initiated and not automatically initiated. This indicates to the staff that the Applicant apparently has not included a review of Engineered Safety Features (ESF) resets when the ESF Systems are manually initiated even though the review for IE Bulletin 80-06 (ESF Resets) is intended to cover both automatic and manual initiations. Therefore, the Staff has concluded that the Applicant should include a review of manual initiation for the ESF Systems and provide an updated submittal concerning IE Bulletin 80-06.

Response:

In response to NRC Requests 223.88 and 223.99 reviews were done on the resets of Engineered Safety Features (ESF) system actuation signals which included automatic as well as manual initiation. As indicated in our responses there are no systems, other than those identified in the above responses, where a system reset will return safety equipment to their normal (non-safety) positions.

It should be noted that the Control Room Air Conditioning (CRAC) system is unique in that, as noted in LILCO's response to NRC Request 223.99, a reset of the manually initiated CRAC system will return certain CRAC components to the normal position.

This is acceptable as explained below:

IEEE Standard 279-1971 defines a protective function as follows: "A protective function is the sensing of one or more variables associated with a particular generating station condition, signal processing, and the initiation and completion of the protective action at values of the variables established in the design bases." Additionally, paragraph 4.16 of the above standard states that, "The protection system shall be so designed that, once initiated, a protective action at the system level shall go to completion. Return to operation shall require subsequent deliberate operator action." In our design, once an ESF system is automatically initiated at the system level to perform its protective function, it cannot be returned to its normal mode of operation unless distinct and deliberate operator actions are taken.

When required to perform its protective function, the control room air conditioning (CRAC) system is initiated automatically through CRAC initiation logic using the same automatic signals which initiate the reactor building standby ventilation system (RBSVS). Once the CRAC system is automatically initiated, both the initiating signal and the initiation logic must be reset before any component of the CRAC system would return to its normal mode.

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A manual initiation capability is provided at the CRAC system level for those cases where it is desired to initiate the CRAC system without waiting for the automatic signals which would initiate both the RBSVS and CRAC systems. The manual initiation capability at the CRAC system level is not intended nor required for the performance of a protective function. If the CRAC system is manually initiated and subsequently an automatic initiation signal is received, both the initiating signal and the initiating logic must be reset before any system components return to their normal mode.

In conclusion, when required to perform its intended protective function the CRAC system is automatically initiated and distinct and deliberate operator actions are required before any component can return to its normal mode. If the CRAC system is manually initiated and an automatic initiation signal is subsequently received, the automatic signal takes precedence.