



LONG ISLAND LIGHTING COMPANY

SHOREHAM NUCLEAR POWER STATION

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

January 21, 1983

SNRC-821

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

GE Series 200 Electrical Penetrations
Shoreham Nuclear Power Station - Unit 1
Docket No. 50-322

Reference: (1) Certificate of Service, from Counsel for
NRC Staff (David A. Repka) to Parties, 12/30/82
(2) Qualification Report, General Electric 200
Series Electric Penetrations, forwarded to the
NRC via letter, SNRC-809, dated 12/14/82
(3) Letter, SNRC-801, dated 11/26/82

Dear Mr. Denton:

In a supplement to the Safety Evaluation Report for Environmental Qualification, transmitted via Ref. 1, the NRC Staff noted three outstanding items, relative to the qualification of General Electric 200 Series penetrations, and requested further information. These items involve the following:

- (1) Surveillance testing for monitoring insulation degradation
- (2) Discrepancy regarding I^2R heating and its effect on LOCA qualification for penetration modules
- (3) Clarification of calculated dose rates for the penetrations

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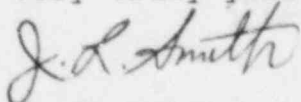
Although telephone discussions have been held clarifying these items, it is acknowledged that a formal submittal must be made prior to their closure on the Shoreham docket. To this end, the following information is provided on these three items:

- 1) Surveillance Testing - clarifying the Ref. 2 report, Section 5.0, Surveillance Program, LILCO commits to perform electrical surveillance testing on a sample of electrical penetration conductors which are energized during normal plant operation (in lieu of spare modules). Furthermore, LILCO intends to utilize 1.6 megohms as the minimum acceptable value for insulation resistance, with lower values requiring corrective action and further investigation. This value is in accordance with generally accepted industry practice (IEEE Std. 43) and is utilized for field acceptance of newly installed power cables. Plant procedure SP32.009.01, "Insulation Resistance of Auxiliary Electrical Equipment", will be modified to include this surveillance testing.
- 2) I²R Heating - clarifying section 4.5 of Ref. 2, the actual I²R heating loss in the penetrations with the continuously energized power cables (2.5 watts/foot) was below the maximum permissible design loss (15 watts/foot). In addition, it was also below the I²R heating loss (7.56 watts/foot) associated with the #14AWG Alumel thermocouple wires for the qualification test current. Stone & Webster calculation E-56 (Attachment 5 of Ref. 2) has been revised to correct this discrepancy (E-56, Rev. 1).
- 3) Dose Rates - Stone & Webster calculation - SNPS-1-URB-25-A Rev. 1, forwarded in Ref. 3, contained a labeling error and depicted units of R/HR for the dose rates tabulated on pages 12 through 15. The correct units for the tabulation are MRAD/HR. This calculation has been revised to depict the proper units (Rev. 2). The actual results of the calculation were not affected by this mislabeling.

The above clarifications should be sufficient to close all remaining outstanding items on the subject electrical penetrations.

Should you have any questions or require further information, please contact this office.

Very truly yours,



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

RWG:jm

cc: J. Higgins
All Parties