



LONG ISLAND LIGHTING COMPANY

SHOREHAM NUCLEAR POWER STATION

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

January 14, 1983

SNRC-779

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

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

Reference: 1) Letter NRC (R. L. Tedesco) to LILCO
(M. S. Pollock), dated 8/31/81

2) Letter, SNRC-712, LILCO (J. L. Smith)
to NRC (H. R. Denton), dated 6/18/82

Dear Mr. Denton:

This letter further clarifies our position concerning electrical separation as defined by IEEE 384-1974 and the Regulatory Guide 1.75 Rev. 1 in regard to:

- 1) What constitutes an acceptable electrical separation barrier.
- 2) What constitutes an acceptable distance between the separation barrier and a redundant Class 1E circuit.

A series of tests conducted for LILCO, at Wyle Laboratories, (Test No. 46287), has conclusively demonstrated that a single conduit, tray cover, or wrapping of Siltemp woven-ceramic fiber covered with 3M No. 69 glass tape constitutes an acceptable separation barrier for protection against electrically-generated faults as outlined in IEEE 384-1974. This test was performed to conservative criteria with configurations exceeding the cable installation at the Shoreham Nuclear Power Station.

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Wyle Test No. 46287 further demonstrated that a single separation barrier, where the barrier is one of the aforementioned three, provides adequate protection when there is no physical separation (distance) between the barrier and the redundant circuit.

In the Reference 1 letter, the NRC outlined four (4) options available to LILCO for dispositioning electrical separation deficiencies. In those cases where LILCO intends to comply by utilizing Option 3, i.e. "correct the deficiency by installing an acceptable barrier", an acceptable barrier is a single conduit, tray cover, or wrapping of Siltemp woven-ceramic tape with 3M Scotch Brand No. 69 glass tape, as proven in Wyle Labs Test No. 46287.

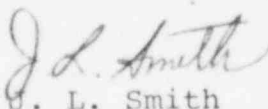
With regard to the Reference 2 letter, LILCO intends to provide a one (1) inch minimum separation between an acceptable barrier and a redundant circuit wherever practical. However, in those cases where a minimum separation of one (1) inch cannot be practically maintained, and where supported by the test results, LILCO intends to use the data based on the results of Wyle Labs Test No. 46287 in accepting the configuration. This method is allowable in accordance with the Forward and Sections 5.1.1.2 and 5.1.1.3 of IEEE 384-1974.

A copy of the Wyle Laboratories test report, which is proprietary to LILCO, is available for inspection at the Shoreham plant site.

An FSAR change will be prepared to reflect the information contained in this letter.

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

Very truly yours,



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

TJS/jm

cc: J. Higgins
All Parties