

DOCKET FILE
DMB-MJ-016

JUN 30 1981

Docket No. 50-336



Mr. W. G. Council, Vice President
Nuclear Engineering & Operations
Northeast Nuclear Energy Company
P. O. Box 270
Hartford, Connecticut 16101

Dear Mr. Council:

By letters dated April 25, 1978 and August 29, 1979, Florida Power and Light Company and Northeast Nuclear Energy Company provided technical reports on two different Loop Current Step Response (LCSR) methods for determining the resistance temperature detector (RTD) response time at St. Lucie, Unit No. 1 and Millstone, Unit No. 2, respectively. These methods are similar in most respects, but have a few differences which are discussed in the enclosed Safety Evaluation (SE). Based on our review of both reference reports, we find the LCSR methods to determine RTD time response as described in each report and documented in the SE to be acceptable. We plan to issue the SE as a NUREG in the near future.

Extensive testing has shown the LCSR method to be extremely reliable and provide results with an accuracy of 10% (maximum error). This compares very favorably with the older plunge test method, which often has inaccuracies as high as a factor of 3. Since the LCSR method offers a significant improvement in RTD response time testing, we recommend you consider its use at your facility. It appears to us that use of the LCSR method would also result in a reduction in personnel radiation exposure.

The extensive RTD time response testing which has been done in conjunction with the development of the LCSR method has revealed that the RTDs in operating reactors suffer time response degradation as they age. Current Standard Technical Specifications (STS) require that one quarter of the safety system RTDs be tested each 18 months. This corresponds to testing each RTD once every six years. In view of the RTD time response degradation observed in our study, it is clear that the present RTD surveillance testing schedule is not adequate. We request that you make application for TS changes to require the time response testing of all safety system RTDs within one month of operation for newly installed RTD and once every 18 months thereafter. This application should be made before or as a part of your application for the next core reload. If you plan to use the provisions of 10 CFR 50.59 for the next core reload, please submit the application for such a change at least 90 days ahead of the next planned reactor shutdown. This request is independent of whether you plan to use the LCSR or some other method (plunge test for example) of determining the RTD response time.

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SURNAME ▶	PDR ADDCK 05000336						
DATE ▶	P PDR						

If you have any questions on this subject, please contact your assigned NRC project manager.

Sincerely,

Original signed by
Robert A. Clark

Robert A. Clark, Chief
Operating Reactors Branch #3
Division of Licensing

Enclosure: As stated

cc: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

JUN 30 1981

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Nuclear Engineering & Operations
Northeast Nuclear Energy Company
P. O. Box 270
Hartford, Connecticut 16101

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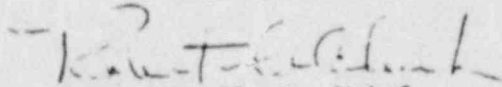
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If you have any questions on this subject, please contact your assigned NRC project manager.

Sincerely,

A handwritten signature in dark ink, appearing to read "Robert A. Clark". The signature is written in a cursive style with a large initial "R".

Robert A. Clark, Chief
Operating Reactors Branch #3
Division of Licensing

Enclosure: As stated

cc: See next page

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