



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

August 14, 1985

Docket No. 50-245
LS05-85-08-018

Mr. John F. Opeka, Senior Vice President
Nuclear Engineering and Operations
Northeast Nuclear Energy Company
Post Office Box 270
Hartford, Connecticut 06141-0270

Dear Mr. Opeka:

SUBJECT: PIPING INSPECTION PLAN

Re: Millstone Nuclear Power Station, Unit No. 1

The staff has reviewed the submittal dated July 1, 1985 from Northeast Nuclear Energy Company (NNECO) regarding the inspection plan of reactor coolant stainless steel piping during the 1985 refueling outage at Millstone Unit 1 plant. The licensee, NNECO, indicated that a total of 111 piping welds, including one unrepaired weld and seven overlay repaired welds in the recirculation system, core spray system, low pressure coolant injection system, shutdown cooling system, reactor water clean-up system, isolation condenser system, and jet pump instrumentation nozzle assemblies will be ultrasonically inspected. Those welds were selected to meet the guidelines in NUREG-1061 and to fulfill the licensee's other commitments. Based on our review, we conclude that the subject inspection plan proposed by the licensee is satisfactory. Nevertheless, we provide the following comments, based on our judgement, considering the results of recent inspections conducted under Generic Letter 84-11.

- (1) The recently reported ultrasonic inspection results by the utilities have shown that the performance by the qualified UT personnel lacks uniformity and consistency. To resolve this concern, the NRC has determined that all UT personnel performing detection and evaluation should be requalified at the EPRI NDE Center. EPRI is expeditiously setting up the testing facilities for the requalification at the NDE Center and expects the requalification to begin no later than September 15, 1985. We suggest that the licensee contact the EPRI NDE Center to arrange for a requalification of the UT personnel to be used in the 1985 outage at the earliest possible date.
- (2) The UT personnel performing the inspection of the overlay repaired welds should be trained and qualified at the NDE Center, using the demonstrated procedures and techniques.

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- (3) The prepared inspection plan, although stated to be based on the recommendations in NUREG-1061, Vol. 1, may not provide the degree of assurance intended for some categories of welds, considering results of recent plant inspections. This may mean that future inspections will need to be somewhat more extensive after firm guidelines have been developed.
- (4) The allowable flaw sizes in Code IWB-3640 are currently revised to take account of the low toughness associated with the flux welds. The revised Code IWB-3640 is expected to be published soon. Prior to the publication of the revised IWB-3640, the staff has developed interim guidelines in the use of IWB-3640 to derive the allowable flaw sizes for the flux welds. The key points of the staff interim guidelines are summarized below:
- (i) The secondary stresses (mainly thermal stresses) should be included in the calculation of the stress ratio.
 - (ii) The flaw size limits for the flux welds are 2/3 of the Code IWB-3640 allowables at a stress ratio as modified by (i).

Therefore, some unrepaired welds previously justified for continued service now require overlay repair.

I trust the above information will be factored into your efforts as appropriate. If you have any questions, please contact Jim Shea, your NRC project manager.

Sincerely,

Original signed by:

John A. Zwolinski, Chief
Operating Reactors Branch #5
Division of Licensing

cc: See next page

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Mr. John F. Opeka
Northeast Nuclear Energy Company

Millstone Nuclear Power Station
Unit No. 1

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