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Docket No. 50-336 A01184

Director of Nuclear Reactor Regulation Attn: Mr. Robert A. Clark, Chief Operating Reactors Branch #3 U. S. Nuclear Regulatory Commission Washington, D.C. 20555

- References: (1) R. A. Clark letter to W. G. Counsil, dated October 6, 1080.
 - (2) W. G. Counsil letter to R. A. Clark, dated September 30, 1980.

Gentlemen:

Millstone Nuclear Power Station, Unit No. 2 Resolution of Cycle 4 Startup Commitments

In Reference (1), the NRC Staff issued License Amendment No. 61 and the supporting Safety Evaluation to Facility Operating License No. DPR-65, for Millstone Unit No. 2. Included in Reference (1) was a commitment by Northeast Nuclear Energy Company (NNECO) to provide an evaluation program to determine the amount of guide tube wear experienced in each type of fuel (sleeved Combustion Engineering (CE), eleeved Westinghouse, low flow CE and inset Westinghouse).

Accordingly, NNECO hereby provides the following information in support of continued operation with modified guide tubes in Cycle 5.

Following Cycle 3 operation, NNECO performed eddy current examinations on the guide tube sleeves in six (6) fuel assemblies that were located under control element assemblies (CEA) during Cycle 3. Eddy current examinations were also performed on the guide tubes of two (2) of the CE demonstration "small-flow-hole" assemblies which were located under CEA's during Cycle 3. The results of these examinations revealed no indication of guide tube wear.



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Eddy cur ent examinations of two CEA's indicated no significant wear after thr e (3) cycles of operation.

During Cycle 4 operation, all fuel assemblies located under CEA's were sleeved except eight (8) test assemblies. The eight (8) test assemblies consist of four (4) CE-reduced flow guide tubes and four (4) Westinghouse assemblies utilizing guide tube insets.

The planned inspection program following Cycle 4 operation has been designed to address the pertinent operational aspects of guide tube wear prevention methods consisting of CE and Westinghouse guide tube sleeves, reduced flow guide tubes and insets. In addition, the program will confirm satisfactory performance of the guide tube wear prevention hardwear as well as the acceptability of continued use of the modified guide tubes during Cycle 5.

The guide tube inspection program utilizes a combination of eddy current tests, profilometry and visual exacinations to confirm the acceptability of sleeves, reduced flow guide tubes or insets as methods of mitigating guide tube wear.

(1) Fuel Assembly Guide Tube Inspections

Eddy current tests will be performed on 6 to 16 fuel assemblies that were located under CEA's during Cycle 4. These examinations will include both CE and Westinghouse assemblies, several of which are scheduled to be returned to locations under CEAs during Cycle 5. The assemblies to be examined include sleeved and reduced flow CE assemblies residing under CEAs for a second cycle and sleeved Westinghouse assemblies residing under CEAs for one cycle. Visual examinations of several assemblies will be performed, including the four Westinghouse inset design assemblies.

NNECO does not intend to examine any sleeved assemblies not located under CEAs during Cycle 4 since the examinations or assemblies located in non-CEA locations after Cycle 1 revealed no indication of wear.

(2) Control Element Assembly Inspections

Eddy current tests will be performed on 2 to 6 CEAs. The CEAs to be inspected include several located over fuel assemblies scheduled for the eddy current tests described above. Limited profilometry is also planned for at least one CEA. The examinations are intended to provide benchmark performance data in an effort to determine life limiting effects such as wear and irradiation growth. Based on the results of the guide tube sleeve inspection programs conducted following Cycle 2 and 3 operation, NNECO anticipates that negligible guide tube sleeve wear will be measured. NNECO does not anticipate any wear of the guide tubes themselves in sleeved assemblies of either CE or Westinghouse design. These considerations are reflected in the determination of the number of bundles planned for inspection.

Should NNECO identify any non-conformances or significant deviations during the inspections, a more extensive examination program involving additional assemblies will be undertaken.

The above inspection program has been designed to address all aspects of sleeved, reduced flow guide tube and inset operation. The successful completion of this program will confirm satisfactory performance of operation with modified guide tubes during Cycle 4 and demonstrate the acceptability of continued use of the guide tubes during Cycle 5.

NNECO trusts you find this information responsive to the Reference (1) commitment.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

W.'G. Counsil Senior Vice President