

NORTHEAST UTILITIES



THE CONNECTICUT LIGHT AND POWER COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
HOLYOKE WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

General Offices • Selden Street, Berlin, Connecticut

P.O. BOX 270
HARTFORD, CONNECTICUT 06141-0270
(203) 665-5000

March 30, 1993

Docket No. 50-423
B14409

Re: 10CFR50.90

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Gentlemen:

Millstone Nuclear Power Station, Unit No. 3
Proposed Revisions to Technical Specifications
One-Time Extension to Various 18-Month Surveillance Requirements

Pursuant to 10CFR50.90, Northeast Nuclear Energy Company (NNECO) hereby proposes to amend its Operating License NPF-49 by incorporating the attached proposed changes into the Technical Specifications of Millstone Unit No. 3.

Description of the Proposed Changes

As a result of an unusually long maintenance outage (service water system work and erosion/corrosion work) during 1991 and two limited outages in 1992, NNECO has rescheduled the start of the Millstone Unit No. 3 refueling outage from November 1992 to July 31, 1993. Note that subsequent unanticipated events may further change the actual start date.

The due date for completion of various surveillance requirements, including a 25 percent allowance per Specification 4.0.2, will occur prior to the 1993 refueling outage. Successful completion of these surveillance requirements is necessary to satisfy technical specification requirements and avoid a plant shutdown.

In a letter dated February 26, 1993,⁽¹⁾ NNECO informed the Staff that after a thorough review of the 18-month technical specification surveillances, four groups of surveillances have been identified which would require an extension from the existing technical specification requirements in order to avoid an unnecessary plant shutdown prior to the start of the fourth refueling outage. The first group of surveillances are due

⁽¹⁾ J. F. Opeka letter to the U.S. Nuclear Regulatory Commission, "18-Month Technical Specification Surveillance (TAC No. M85470)," dated February 26, 1993.

ADD

(including the 25 percent allowance) ranging from June 13, 1993, to September 23, 1993. Table 1 provides a list of the 18-month surveillances that are the subject of this one-time extension. The earliest surveillances that will expire prior to the start of the fourth refueling outage are related to Specifications 4.2.3.1.4 and 4.2.3.2.4 (Channel Calibration - Reactor Coolant System Total Flow Rate). These surveillances are currently required to be performed no later than June 13, 1993 (this includes the 25 percent allowance allowed by Specification 4.0.2). To capture all the surveillances with a common note, the June 13, 1993, date was selected as the expiration date for all surveillances (even though surveillances will expire at various dates beginning June 13, 1993, to September 23, 1993). The following footnote is proposed to be added to the affected surveillances (see Table 1):

"Except that the surveillance requirement due no later than June 13, 1993, may be deferred until the next refueling outage, but no later than September 30, 1993, whichever is earlier."

The proposed change does not alter or change any acceptance criteria of the surveillance requirement. The changes proposed herein (one-time extension to the 18-month interval for certain surveillances) are similar in nature to those approved by the NRC on the Crystal River Docket (Docket No. 50-302, Amendment No. 135, dated August 27, 1991). Attachment 1 provides marked-up pages of the proposed changes to the Millstone Unit No. 3 Technical Specifications, and Attachment 2 provides the retyped pages of the Millstone Unit No. 3 Technical Specifications. The retype of the proposed changes to technical specifications in Attachment 2 reflects the currently issued version of technical specifications. The technical specification changes submitted in the letter dated March 19, 1993,⁽²⁾ are not reflected in the enclosed retype. NNECO suggests that the NRC Staff check with NNECO for continuity with technical specifications prior to issuance. License amendments for the three remaining groups' surveillances identified in our letter dated February 26, 1993,⁽³⁾ may not be needed if the refueling outage begins as planned (the next refueling outage is currently scheduled to

⁽²⁾ J. F. Opeka letter to the U.S. Nuclear Regulatory Commission, "Proposed Revision to Technical Specifications, Generic Letter 90-06," dated March 19, 1993.

⁽³⁾ J. F. Opeka letter to the U.S. Nuclear Regulatory Commission, "18-Month Technical Specification Surveillances (TAC No. M85470)," dated February 26, 1993.

start on July 31, 1993). NNECO will keep the NRC Staff informed as to the possible need for these additional license amendments.

Safety Assessment

The proposed one-time extension for the surveillances listed in Table 1 was evaluated to determine that the proposed extension for each surveillance will not involve a significant increase in the probability or consequences of an accident previously evaluated. The methodology used for the evaluation of each surveillance extension is presented in Attachment 3. In addition, NNECO examined the risk impact of a one-time extension of all surveillances listed in Table 1. For the surveillances of functional tests that are not susceptible to instrument drift, the following approach was used in examining the proposed change from a probabilistic risk perspective:

1. Examine risk significance of the function associated with the functional unit whose surveillance test interval (STI) is extended.
2. If the function is risk significant, look for diverse paths (relay, circuits, logic, etc.). Draw conclusions based on the level of redundancy and diversity and the test frequency of those redundant and diverse paths.
3. If steps (1) and (2) above do not conclude that the STI extension has negligible risk impact, then perform approximate calculations on increases in core-melt frequency or public risk.

The risk significance of increasing the STI beyond the technical specification allowable limit was evaluated based on the results of 1, 2, and 3 above. Table 2 to this submittal summarizes the results of our examination on each of the affected reactor trip system (RTS) and engineered safety features actuation system (ESFAS) instrumentation. It is concluded that the increase in the public risk due to the one-time increase of the STIs beyond the 18 months plus 25 percent allowance currently allowed by technical specifications is negligible.

For all other surveillances that are not included in Table 2, the risk impact of the STI extension was assessed qualitatively, examining and crediting the following attributes:

1. Risk significance of function
2. Diversities and redundancies

3. Existence of other quarterly, monthly, daily, or shiftly tests or channel checks
4. Plant-specific drift data which are indicative of failure rates
5. Rosemount program related instrument drift data⁽⁴⁾

The insights derived from the above approach were utilized to determine that each of these surveillance extensions has negligible risk associated with them. Further, the probabilistic risk assessment concluded that the cumulative risk impact of all STI extensions is also relatively low.

Significant Hazards Consideration

NNECO has reviewed the proposed changes in accordance with 10CFR50.92 and concluded that the changes do not involve a significant hazards consideration (SHC). The basis for this conclusion is that the three criteria of 10CFR50.92(c) are not compromised. The proposed changes do not involve a SHC because the changes would not:

1. Involve a significant increase in the probability or consequences of an accident previously analyzed.

The STI increases, in theory, do cause a small increase in the unavailability of the ESFAS, RTS, or other systems associated with the instruments and thereby a resultant small increase in the core damage frequency (CDF). Where quantifications were made, the maximum increase in CDF was found to be of the order of 10^{-7} /yr or less, which is below the level of concern. Furthermore, the small increase is a one-time change and not a permanent increase. Where qualitative assessments were made, a combination of one or more factors, such as: a) diverse signals; b) redundant paths; c) proven low failure rates based on plant-specific data; d) relatively low risk significance of the function in core damage prevention/mitigation; and e) other more frequent tests, were used to justify de minimus low risk increases. In addition, daily channel checks and analog channel operational tests will continue to be performed at the

⁽⁴⁾ J. F. Opeka letter to the U.S. Nuclear Regulatory Commission, "NRC Bulletin No. 90-01, Supplement 1, Loss of Fill-Oil Transmitters Manufactured by Rosemount," dated March 4, 1993.

frequencies required by technical specifications. These surveillances will continue to assume that the instrument reliability assumed in the basis of technical specifications is maintained.

2. Create the possibility of a new or different kind of accident from any previously analyzed.

There are no physical design changes or changes in plant operating procedures. Therefore, there can be no impact on plant response to the point where a different accident is created.

3. Involve a significant reduction in a margin of safety.

The proposed changes do not involve a change in the safety limits, setpoints, or design margins. Also, the proposed changes do not significantly affect the consequences of an accident or any of the protective boundaries. Therefore, the proposed changes will not involve a significant reduction in a margin of safety.

Moreover, the Commission has provided guidance concerning the application of standards in 10CFR50.92 by providing certain examples (March 6, 1986, 51FR7751) of amendments that are considered not likely to involve a SHC. Although the proposed changes are not enveloped by a specific example, the changes would not involve a significant increase in the probability or consequences of an accident previously analyzed and, therefore, the proposed changes do not involve a SHC. The conclusion is supported: a) by assessing functional diversities and redundancies; b) by crediting, in part, other tests performed at power (continuous, shiftly, daily, monthly, or quarterly); and c) by review of past plant-specific equipment failure or test data. These conclusions are further supported by the quantitative and qualitative risk analysis performed using the Millstone Unit No. 3 Individual Plant Examination study (NUSCO 171).⁽⁵⁾

NNECO has reviewed the proposed license amendment against the criteria in 10CFR51.22 for environmental consideration. The proposed changes do not involve a SHC, nor increase the types and amounts of effluents that may be released offsite, nor significantly increase individually or cumulative occupational radiation

⁽⁵⁾ E. J. Mroczka letter to the U.S. Nuclear Regulatory Commission, "Individual Plant Examination for Severe Accident Vulnerabilities Summary Report Submittal," dated August 31, 1990.

U.S. Nuclear Regulatory Commission
B14409/Page 6
March 30, 1993

exposures. Based on the foregoing, NNECO concludes that the proposed changes meet the criteria delineated in 10CFR51.22(c)(9) for categorical exclusion from the requirements for an environmental impact statement.


The Millstone Unit No. 3 Nuclear Review Board has reviewed and approved the proposed changes and has concurred with the above determination.

In accordance with 10CFR50.91(b), we are providing the State of Connecticut with a copy of this proposed amendment.

The proposed amendment will allow the 18-month surveillance requirement for the surveillances listed in Table 1 to be performed during the fourth refueling outage presently scheduled to begin on July 31, 1993. The earliest surveillance requirements in Technical Specification Sections 4.2.3.1.4 and 4.2.3.2.4 (due not later than June 13, 1993), for the reactor coolant flow rate channel, would force the unit to shut down for this purpose. Therefore, NNECO hereby requests the NRC Staff to process and issue this proposed amendment prior to June 13, 1993, to be effective upon issuance. We acknowledge that this schedule provides slightly less than the nominal 90-day period appropriate for Staff review and issuance of routine amendment requests. The schedule for this amendment is more compressed than we plan to provide in the future as discussed during our meeting of March 23, 1993, but is necessitated in this instance by the relatively recent completion of our work to identify technical specification surveillance requirements that will come due prior to the scheduled start of the 1993 refueling outage. We will, of course, promptly provide any additional information the Staff may need to respond to this request.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY



J. F. O'Keefe
Executive Vice President

cc: T. T. Martin, Region I Administrator
V. L. Rooney, NRC Project Manager, Millstone Unit No. 3
P. D. Swetland, Senior Resident Inspector, Millstone Unit
Nos. 1, 2, and 3

Mr. Kevin McCarthy, Director, Radiation Control Unit
Department of Environmental Protection
Hartford, CT 06116

U.S. Nuclear Regulatory Commission
B14409/Page 7
March 30, 1993

Subscribed and sworn to before me

this 30th day of March, 1993

Richard T. Sales

Notary Public

Date Commission Expires: 12/31/97