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

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November 2, 1989

Docket No. 50-423
B13391

Re: 10CFR50.90

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

Gentlemen:

Millstone Nuclear Power Station, Unit No. 3
Proposed Revision to Technical Specifications
Containment Hydrogen Monitors

Pursuant to 10CFR50.90, Northeast Nuclear Energy Company (NNECO) hereby proposes to amend its operating license, NPF-49, by incorporating the changes identified in Attachment 1 into the Technical Specifications of Millstone Unit No. 3.

Description of the Proposed Changes

Technical Specification Section 3.6.4.1 (Hydrogen Monitors) is based on and consistent with the NRC guidance included in Generic Letter 83-37, NUREG-0737 Technical Specifications. The accident monitoring instrumentation included in Technical Specification Section 3.3.3.6 (Table 3.3-10) are those instruments provided to monitor key variables, designated as Category 1 instruments following the guidance for classification contained in Regulatory Guide 1.97, Revision 2. The hydrogen monitor is one of the parameters listed in Table 3.3-10. These two different NRC guidance documents have resulted in an inconsistency in required actions if either one or both hydrogen monitors become inoperable. This inconsistency in ACTION Statements was discovered recently when Millstone Unit No. 3 entered the ACTION statements of Technical Specifications 3.6.4.1 and 3.3.3.6 for one inoperable hydrogen monitor.

The proposed changes to Sections 3.3.3.6, and 3.6.4.1 are being made to eliminate the inconsistency between the sections and avoid any unnecessary shutdown should one hydrogen monitor become inoperable. In order to eliminate this inconsistency in required actions, exception is being taken for the containment hydrogen monitor in Technical Specification 3.3.3.6.a and b and an additional action statement 3.3.3.6.d is added, which addresses operability requirements for containment hydrogen monitors. This additional action statement is consistent with the requirements of Technical Specification Section 3.6.4.1.

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Currently, Section 3.6.4.1 provides a 30-day restoration time for an inoperable hydrogen monitor, whereas Section 3.3.3.6 provides a 7 day restoration period. The 30-day restoration interval in Section 3.6.4.1 is consistent with the guidance provided in Generic Letter 83-37 for Technical Specifications as a result of NUREG-0737. Plant shutdown is more clearly warranted if the inoperable monitor cannot be restored after 30 days rather than the 7 day limit as provided in Section 3.3.3.6. In addition, the limiting condition for operation (LCO) for two inoperable monitors is being extended from 48 hours to 72 hours to ensure consistency in the Technical Specifications. Surveillance requirements of both Sections 4.3.3.6 and 4.6.4.1 are currently being performed.

Since the provisions of Specification 3.0.4 are not applicable to the containment hydrogen monitor as indicated in Section 3.3.3.6, those provisions should not apply to Section 3.6.4.1, therefore, specific exception to Specification 3.0.4 is being added to Section 3.6.4.1. In addition, the applicability to Mode 3 is being added to Section 3.6.4.1 as well as the requirement to be in hot shutdown should the inoperable monitor not be restored to an operable condition within 30 days. These requirements are being incorporated to ensure consistency between Sections 3.3.3.6 and 3.6.4.1.

Discussion

The operability of the combustible gas control equipment and systems required for the detection and control of hydrogen gas ensures that this equipment will be available to maintain the hydrogen concentration within containment below its flammable limit during post-loss-of-coolant-accident (LOCA) conditions. Since the hydrogen monitors provide information used to determine the need to start the hydrogen recombiners or initiate containment purge, extending the LCOs for an inoperable monitor from 7 days to 30 days and for two inoperable monitors from 48 hours to 72 hours was evaluated to determine the effects on the consequences of a LOCA. In accordance with the Millstone Unit No. 3 safety analysis, the starting of one hydrogen recombiner as late as 24 hours following a design basis accident[1] is sufficient to maintain the containment hydrogen concentration below 4 volume percent. If indication is not available, the emergency response organization has adequate time to assess the situation and start a hydrogen recombiner. In addition, other air sampling systems are available such as the QA Category 1 containment atmosphere radiation monitor which is used to obtain a weekly gaseous sample and the nonsafety-related post accident sampling system (PASS). The 24-hour period provides adequate time to ensure that the hydrogen recombiner will be started. Consequences of the LOCA will not be increased by extending these LCOs.

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(1) See the Millstone Unit No. 3 Final Safety Analysis Report Section 6.2.5.3, Page 6.2-74.

Adding the provision that Specification 3.0.4 is not applicable does not impact the consequences of any accidents previously evaluated. This provision allows the plant to change operational modes, however the 30 day LCO remains valid and ensures that the added risk is sufficiently small. Specification 3.3.3.6 contains this provision and it is being added to Specification 3.6.4.1 for consistency. Also, the applicability to mode 3 and a requirement to be in Hot Shutdown are being added to Specification 3.6.4.1 for consistency. These additions do not impact the consequences of any accidents previously evaluated.

Significant Hazards Consideration

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

1. Involve a significant increase in the probability or consequences of an accident previously analyzed. The proposed changes to extend the LCOs for an inoperable hydrogen monitor from 7 days to 30 days and for two inoperable monitors from 48 hours to 72 hours do not increase the consequences of a design basis accident (DBA) LOCA for the following reason. Initiation of one hydrogen recombiner as late as 24 hours following a DBA is sufficient to maintain the containment hydrogen concentration below 4 volume percent. In addition, other air sampling systems would be available to determine the concentration. Since adequate time exists for the operator to assess the situation, obtain alternative samples and initiate the hydrogen recombiners, the consequences of LOCAs will not be increased.

   Adding the provision that Specification 3.0.4 is not applicable allows the plant to change operational modes without the hydrogen monitors operable. However, since the LCOs remain valid, the added risk is negligibly small and therefore does not significantly increase the consequences of an accident. Also, mode 3 applicability and a requirement to be in hot shutdown have been added for consistency and do not impact the consequences of an accident.

2. Create the possibility of a new or different kind of accident from any previously analyzed accident. There are no failure modes associated with these changes. Since there are no changes in the way the plant is operated or in the operation of the equipment credited in the DBA, the potential for an unanalyzed accident is not created.

3. Involve a significant reduction in the margin of safety. The intent of the Technical Specification is to ensure that the operator will be able to determine the hydrogen concentration and start the recombiner or containment purge before reaching 4 volume percent. Since the operator

has at least 24 hours before a recombiner must be initiated and other sampling systems will be available, the intent of the Technical Specification is met. For this reason, the changes will not impact any protective boundary. The changes do not affect the consequences of any accident previously analyzed. Therefore, there is no significant reduction in the margin of safety.

In summary, for the reasons identified above, NNECO has concluded that continued operation of the facility in accordance with the proposed amendment would not involve a significant hazards consideration.

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 significant hazards consideration. Although the proposed changes are not enveloped by a specific example, the proposed changes would not involve a significant increase in the probability or consequences of an accident previously analyzed. Since adequate time exists for the operator to assess the situation, obtain alternative samples, and start a hydrogen recombiner and/or containment purge, the consequence of LOCAs will not be increased. It should also be noted that the subject amendment request conforms to the guidance provided by the Staff via Generic Letter 83-37.

Conclusion

Based upon the information contained in this submittal and the environmental assessment for Millstone Unit No. 3, there are no significant radiological or nonradiological impacts associated with the proposed action and the proposed license amendment will not have a significant effect on the quality of the human environment.

The Millstone Unit No. 3. Nuclear Review Board has reviewed and approved this proposed amendment and concurs with the above determination.

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

Regarding our proposed schedule for this amendment, we request issuance at your earliest convenience with the amendment effective within 30 days upon issuance.

Should the Staff have any additional questions, please contact my Staff directly.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

E. J. Mroczka
Senior Vice President

By: R. P. Werner
Vice President

cc: W. T. Russell, Region 1 Administrator
D. H. Jaffe, NRC Project Manager, Millstone Unit No. 3
W. J. Raymond, Senior Resident Inspector, Millstone Unit Nos. 1, 2, and 3

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

STATE OF CONNECTICUT)
) ss. Berlin
COUNTY OF HARTFORD)

Then personally appeared before me, R. P. Werner, who being duly sworn, did state that he is Vice President of Northeast Nuclear Energy Company, a Licensee herein, that he is authorized to execute and file the foregoing information in the name and on behalf of the Licensees herein, and that the statements contained in said information are true and correct to the best of his knowledge and belief.

Lynn M. Sheridan
Notary Public