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Docket No. 50-423
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U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Millstone Nuclear Power Station, Unit No. 3
Clarification of Full-Core Offload Safety Evaluation (TAC NO. MA4586)

The purpose of this letter is to provide mutual understanding of the Safety Evaluation related to issuance of Amendment No. 182 which was provided to Northeast Nuclear Energy Company (NNECO) on September 12, 2000.[1]

A NNECO review of the Safety Evaluation has determined that the second paragraph on page 4 does not accurately represent the thermal hydraulic analysis for full-core offload as normal. The paragraph appears to discuss two separate issues as if they are dependent on each other when in fact they are not. These issues are:

1. Single active failure during refueling outages.

2. Maximum spent fuel pool (SFP) temperature resulting from a hypothetical loss of cooling event.

The discussion on single active failures during refueling outages and the contingency actions discussed on page 5 of the Safety Evaluation are valid, but are unrelated to the maximum SFP temperature predicted for a hypothetical loss of cooling event.

The maximum SFP temperature of 155.7°F was analytically derived based on the following assumptions:

1. SFP decay heat load at maximum permissible value.

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[1] NRC letter to Mr. S. E. Scace from Victor Nerses, "Millstone Nuclear Power Station, Unit No. 3 - Issuance of Amendment Re: Full-Core Offload (TAC No. MA4586)," dated September 12, 2000.

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2. SFP initial temperature at 150°F.

3. One train of spent fuel pool cooling in operation, second train in standby.

4. Upon failure of operating train of spent fuel pool cooling, 30 minutes is required to align the standby train.

This hypothetical event was used to establish the maximum design conditions against which SFP cooling system and SFP structural capability would be evaluated in support of NNECO's amendment request. The 155.7°F maximum temperature was not represented to be the predicted maximum pool temperature that would be achieved for the refueling outage loss of cooling due to single active failure. The contingency measures described in the amendment request are intended to provide reasonable assurance that cooling can be restored in a timely manner.

The following suggestion is offered as a replacement for the second paragraph on page 4 of the Safety Evaluation. This suggested wording includes a discussion of the 30-minute time period, thereby allowing footnote number 6 from the Safety Evaluation to be deleted.

> "Also, the licensee evaluated the consequences of a single active failure of the operating SFPCS train during planned refueling outages. The licensee assumed failure of the operating SFPCS train at a pool temperature of 150°F with the maximum decay heat load in the SFP. A time of 30 minutes was assumed to align the standby SFPCS train and restore cooling to the SFP. Results of the evaluation indicate that the SFP water temperature would rise to 155.7°F for a short duration. The licensee performed an evaluation and verified that the SFP systems, structures and components are all designed for normal operation at the environmental and service conditions that would result from a steady-state SFP temperature of 155.7°F."

In addition, NNECO suggests that the information removed from the second paragraph on page 4 should be relocated to the beginning of the second paragraph on page 5 as follows:

> "The licensee stated that the action having the greatest impact on the availability of SFP cooling trains is the maintenance outage of an electrical bus. In this case, the loss of the SFP cooling pump of the operating train is the only active failure that does not have a backup. Subsequently, the licensee..."

NNECO requests these suggestions be reviewed by the staff and that the Safety Evaluation be revised accordingly to better represent the position of Millstone Unit No. 3.

There are no regulatory commitments contained within this letter.

Should you have any questions regarding this submittal, please contact Mr. Ravi Joshi at (860) 440-2080.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

Robert G. Lizotte
Master Process Owner - Assessment

cc: H. J. Miller, Region I Administrator
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