

Dominion Nuclear Connecticut, Inc.
Millstone Power Station
Rope Ferry Road
Waterford, CT 06385



Dominion™

OCT 23 2002

Docket No. 50-336
B18787

Re: 10 CFR 50.90

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

Millstone Power Station, Unit No. 2
Changes to Technical Specifications
Updating List of Documents Describing the Analytical Methods Specified in
Technical Specification 6.9.1.8b (LBDCR 2-11-02)

By a letter dated August 7, 2002,⁽¹⁾ Dominion Nuclear Connecticut, Inc. (DNC) proposed to amend Operating License DPR-65 by incorporating changes into the Millstone Unit No. 2 Technical Specifications. The proposed changes update the list of documents, describing the analytical methods used to determine the core operating limits specified in Technical Specification 6.9.1.8b, by incorporating the most recent methodology description. These changes update the document describing Steam Line Break methodology and add a reference to Departure from Nucleate Boiling correlation for High Performance Fuel.

By a letter dated October 2, 2002,⁽²⁾ a Request For Additional Information (RAI) was received from the Nuclear Regulatory Commission staff which contains two questions related to the aforementioned license amendment request.

Attachment 1 provides the DNC response to the October 2, 2002, RAI. The additional information provided in this letter will not affect the conclusions of the Safety Summary and Significant Hazards Consideration discussion in the DNC August 7, 2002, letter.

⁽¹⁾ J. A. Price letter to the U.S. NRC, "Millstone Power Station, Unit No. 2, Changes to Technical Specifications, Updating List of Documents Describing the Analytical Methods Specified in Technical Specification 6.9.1.8b (LBDCR 2-11-02)," dated August 7, 2002.

⁽²⁾ R. Ennis (NRC) letter to J. A. Price, "Request For Additional Information, Analytical Methods Used For Core Operating Limits Report, Millstone Power Station, Unit No. 2 (TAC No. MB6105)," dated October 2, 2002.

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There are no regulatory commitments contained in this letter.

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

Very truly yours,

DOMINION NUCLEAR CONNECTICUT, INC.



J. Alan Price
Site Vice President - Millstone

Lorrie A. Arzamarski
Notary Public
Commission Expires
February 28, 2006

Sworn to and subscribed before me
this 23rd day of October, 2002

Lorrie A. Arzamarski
Notary Public

My Commission expires 2/28/06



Attachment (1)

cc: H. J. Miller, Region I Administrator
R. B. Ennis, NRC Senior Project Manager, Unit No. 2
Millstone Senior Resident Inspector

Director
Bureau of Air Management
Monitoring and Radiation Division
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

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Attachment 1

Millstone Power Station, Unit No. 2
Change to Technical Specifications
Updating List of Documents Describing the Analytical Methods Specified in
Technical Specification 6.9.1.8b (LBDCR 2-11-02)

Response to Request For Additional Information

**Change to Technical Specifications
Updating List of Documents Describing the Analytical Methods Specified in
Technical Specification 6.9.1.8b (LBDCR 2-11-02)
Response to Request For Additional Information**

Question 1:

The submittal dated August 7, 2002 stated that the proposed amendment would update the list of documents in TS 6.9.1.8 to delete the reference to topical report EMF-84-093(P)(A), "Steamline Break Methodology for PWRs," since topical report EMF-2310(P)(A), "SRP Chapter 15 Non-LOCA Methodology for Pressurized Water Reactors" is the current topical report that is applicable to the Steam Line Break (SLB) methodology.

As discussed in the NRC staff's letter dated May 11, 2001, that transmitted the Safety Evaluation for topical report EMF-2310(P) to Framatome ANP, the topical report is acceptable for referencing in license applications to the extent specified, and under the limitations delineated in the report, and in the Safety Evaluation. The conclusions in the Safety Evaluation state that "...a generic topical report describing a code such as S-RELAP5 cannot provide full justification for each specific individual plant application. The individual applicant must still provide justification for the specific application of the code which is expected to include as a minimum, the nodalization, defense of the chosen parameters, any needed sensitivity studies, justification of the conservative nature of the input parameters, and calculated results." In addition, the Safety Evaluation conclusions state that "[s]pecific plant applications may still require additional supporting assessment calculations should plant specific features or conditions be outside the range of the generic assessments."

Please provide the information needed to justify your plant specific application of this methodology for the SLB analysis. Identify if any MP2 features or conditions are outside the range of the generic assessment.

Response:

Framatome ANP has considered plant-specific items when performing analyses for Millstone Unit No. 2 using the methodology in EMF-2310(P)(A). The discussion of these items, such as the nodalization used, discussion of chosen parameters and the conservative nature of input parameters, are included in the documentation of these analyses. No extra sensitivity studies were deemed to be necessary. This information is available for audit by the Nuclear Regulatory Commission (NRC) at Framatome ANP's Richland, Washington site.

Question 2:

The submittal dated August 7, 2002 stated that the proposed amendment would update the list of documents in TS 6.9.1.8 to add a reference to topical report EMF-92-153(P)(A) and Supplement 1, "HTP: Departure from Nucleate Boiling Correlation for High Thermal Performance Fuel."

As discussed in the NRC staff's Safety Evaluation dated December 28, 1993, topical report EMF-92-153(P), is acceptable for referencing in license applications subject to the following restrictions:

- (1) The HTP [high thermal performance] CHF [critical heat flux] correlation is applicable to fuels whose design characteristics fall within the correlation database in Table 2.
- (2) The application of the HTP correlation for DNB [departure from nucleate boiling] analysis is restricted to the operating conditions given in Table 1.

Table 1
Range of Coolant Conditions Spanned by the HTP Correlation

Variable	Minimum Value	Maximum Value
Pressure (psia)	1775	2425
Local Mass Flux (Mlb/hr/ft ²)	0.936	3.573
Inlet Enthalpy (Btu/lb)	382.3	649.9
Local Quality	-0.125	0.358

Table 2
Nominal Range of Fuel Design Parameters in HTP Correlation Database

Parameter	Value
Fuel Rod Diameter, in.	0.360 – 0.440
Fuel Rod Pitch, in.	0.496 – 0.580
Axial Spacer Span, in.	10.5 – 26.2
Hydraulic Diameter, in.	0.4571 – 0.5334
Heated Length, ft.	8.0 – 14.0

Please Specify how each of the restrictions is met for MP2.

Response:

- (1) In Table 2a below, the fuel design parameters for the Millstone Unit No. 2 fuel design are compared to the range of parameters given in Table 2. As can be seen, all fuel design parameters for Millstone Unit No. 2 are within the allowed ranges for the HTP correlation.

Table 2a
Applicability of HTP Correlation Database to Millstone Unit No. 2

Parameter	Allowed Value	Millstone Unit No. 2 Value
Fuel Rod Diameter, in.	0.360 – 0.440	0.440
Fuel Rod Pitch, in.	0.496 – 0.580	0.580
Axial Spacer Span, in.	10.5 – 26.2	12.963 – 18.859
Hydraulic Diameter, in.	0.4571 – 0.5334	0.5334
Heated Length, ft.	8.0 – 14.0	11.39

- (2) All evaluations of DNBR for Millstone Unit No. 2 are performed with the XCOBRA-IIIC code. The ranges of coolant conditions input are checked by the code. If a parameter is input which is outside of the allowed range, a prominent warning message identifying the violation is placed in the output file. Calculation analysts and reviewers inspect the output and certify that the HTP correlation has been properly applied.