

January 23, 2007

Mr. David A. Christian
Sr. Vice President and Chief Nuclear Officer
Dominion Nuclear Connecticut, Inc.
Innsbrook Technical Center
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SUBJECT: MILLSTONE POWER STATION, UNIT NO. 2 - ISSUANCE OF AMENDMENT
RE: UPDATED LIST OF DOCUMENTS DESCRIBING THE APPROVED
ANALYTICAL METHODS USED TO DETERMINE CORE OPERATING LIMITS
(TAC NO. MC0706)

Dear Mr. Christian:

The Commission has issued the enclosed Amendment No. 295 to Facility Operating License No. DPR-65 for the Millstone Power Station, Unit No. 2, in response to your application dated January 26, 2006, as supplemented by letter dated December 20, 2006.

The amendment updates the list of Nuclear Regulatory Commission (NRC) - approved documents specified in the Technical Specifications that describe the analytical methods used to determine the core operating limits. The proposed change also corrects a typographical error in TS 5.3.1, "Reactor Core, Fuel Assembly," which was introduced in the retyped pages provided to the NRC for issuance of Amendment No. 280, dated September, 25, 2003.

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

/RA/

Victor Nerses, Senior Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-336

Enclosures:

1. Amendment No. 295 to DPR-65
2. Safety Evaluation

cc w/encls: See next page

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Millstone Power Station, Unit No. 2

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DOMINION NUCLEAR CONNECTICUT, INC.

DOCKET NO. 50-336

MILLSTONE POWER STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.295
License No. DPR-65

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Dominion Nuclear Connecticut, Inc., the licensee, dated January 26, 2006, as supplemented by letter dated December 20, 2006, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-65 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 295 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of issuance, and shall be implemented within 60 days of issuance.

COMMISSION

FOR THE NUCLEAR REGULATORY

/RA/

Harold K. Chernoff, Chief
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: January 23, 2007

ATTACHMENT TO LICENSE AMENDMENT NO. 295

FACILITY OPERATING LICENSE NO. DPR-65

DOCKET NO. 50-336

Replace the following page of Facility Operating License No. DPR-65 with the attached revised page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

Remove

3

Insert

3

Replace the following pages of the Appendix A, Technical Specifications, with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

XVII

5-4

6-19

6-20

6-20a

Insert

XVII

5-4

6-19

6-20

6-20a

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 295

TO FACILITY OPERATING LICENSE NO. DPR-65

DOMINION NUCLEAR CONNECTICUT, INC.

MILLSTONE POWER STATION, UNIT NO. 2

DOCKET NO. 50-336

1.0 INTRODUCTION

By application dated January 26, 2006, as supplemented by letter dated December 20, 2006, Dominion Nuclear Connecticut, Inc. (DNC or the licensee) requested Nuclear Regulatory Commission (NRC or the Commission) approval of changes to the Millstone Power Station, Unit No. 2 (MPS2) Technical Specifications (TSs). The amendment updates the list of NRC-approved documents specified in the TSs that describe the analytical methods used to determine the core operating limits. The proposed change also corrects a typographical error in TS 5.3.1, "Reactor Core, Fuel Assembly," which was introduced in the retyped pages provided to the NRC for issuance of Amendment No. 280, dated September, 25, 2003.

The supplement dated December 20, 2006, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the NRC staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on May 9, 2006 (71 FR 26997).

2.0 REGULATORY EVALUATION

In an effort to avoid TS changes for every fuel reload cycle that results in changes to the cycle-specific parameter limits, licensees have relocated the cycle-specific core operating parameters from the TSs to the Core Operating Limits Report (COLR), which is a licensee-controlled document. Generic Letter (GL) 88-16, "Removal of Cycle-Specific Parameter Limits From Technical Specifications," dated October 3, 1988 (Reference 1), provides guidance for the preparation of license amendment requests to relocate cycle-specific TS information to the COLR. The guidance in GL 88-16 states that licensees shall identify (in the Administrative Controls, Reporting Requirements section of the TSs), the previously-approved analytical methods used to determine the core operating limits by identifying the topical report number, title, and date (or identify the NRC staff's safety evaluation (SE) report for a plant-specific methodology by NRC letter and date).

In a letter dated December 15, 1999 (Reference 2), the NRC staff accepted a method proposed by Siemens Power Corporation for referencing approved topical reports. The proposed method would allow licensees to use current topical reports to support limits in the COLR without having to submit an amendment request for the facility operating license each time a revision to the

topical report is approved by the NRC. This method would allow the references to approved topical reports in the TSs to be cited using the report number and title. The citation in the COLR would include specific information for each of the TS references to topical reports used to prepare the COLR (i.e., report number, title, revision, date, and any supplements). This method of referencing was subsequently approved for incorporation into the Standard Technical Specifications by the NRC in Technical Specification Task Force (TSTF)-363 (Reference 3).

For this review, the NRC staff considers that the licensee properly implemented the limitations and conditions of the proposed topical report. This staff practice assures that the licensee uses the report within the bounds for which the staff reviewed and approved the report.

3.0 TECHNICAL EVALUATION

The NRC staff evaluated the proposed TS changes by reviewing: (1) the licensee's application dated January 26, 2006; (2) GL 88-16; (3) TSTF-363 Revision 0, "Revise Topical Report References in ITS [Improved Technical Specification] 5.6.5, COLR;" and (4) NRC Letter to DNC dated September 25, 2003, "Millstone Power Station, Unit No. 2 - Issuance of Amendment Re: Reactivity Control Systems, Power Distribution Limits, and Special Test Exceptions (TAC No. MB6108)."

3.1 Addition of EMF-92-116(P)(A)

The proposed amendment would add EMF-92-116(P)(A) as TS 6.9.1.8 b.16. The NRC staff's SE dated February 2, 1999 (as an attachment to the letter from James F. Mallay - Reference 4), concluded that EMF-92-116(P) is acceptable for referencing in license applications provided that the average rod burnup does not exceed 62 GWd/MTU. DNC stated that this was one of the two NRC staff's conditions placed on the approval of EMF-92-116(P). DNC stated how the condition was met by noting the cycle-specific design report is ANP-2515(P), Revision 0, "PWR Fuel Design Criteria Review for Millstone Unit 2 Reload MIB-9 and Cycle 18 Assemblies." This report states on Page 2-1 that the fuel mechanical design criteria are satisfied for the MIB-9 (Cycle 18) fuel design up to a peak rod average exposure of 62 GWd/MTU.

The second condition, which states: "For each application of the mechanical design criteria, SPC [Siemens Power Corporation] must document the design evaluation process demonstrating conformance to these criteria and submit a summary of the evaluation to the NRC staff for possible use in an audit to confirm that SPC is in compliance with these criteria." DNC stated that it was not applicable to MPS2. The justification provided by DNC was that AREVA NP (previously Framatome) considers this requirement to apply only to generic evaluations of new fuel designs that are independent of a specific plant and/or cycle, and not to design evaluations for specific plant cycles. This interpretation was accepted by the NRC in a letter to James F. Mallay (previously of SPC - now AREVA NP) from Stuart A. Richards (NRC) dated December 15, 1999 (Reference 2).

DNC further noted that EMF-92-116(P)(A) is used by AREVA to support the fuel design for each MPS2 reload. This report specifies the criteria that are used to demonstrate adequate performance of the fuel in the neutronic, mechanical, thermal-hydraulic and safety analysis areas. The criteria specified in this topical report are addressed in AREVA's reload analysis. Also, fuel mechanical design reports prepared by AREVA are structured around EMF-92-116(P)(A).

EMF-92-116(P)(A) defines the mechanical design acceptance criteria used in evaluating changed or new fuel designs. The mechanical design acceptance criteria are consistent with Section 4.2 of the Standard Review Plan, which defines the specified acceptable fuel design limits. The mechanical design analyses results are compared to the acceptance criteria defined in this topical report to demonstrate acceptable performance of the fuel design. The mechanical design analyses results are compared to the acceptance criteria defined in EMF-92-116(P)(A) to demonstrate acceptable performance of the fuel design. The limits defined in the COLR are supported, in part, by these analyses.

DNC stated that EMF-92-116(P)(A) is applicable to pressurized water reactors (PWRs) in general and to MPS2 specifically. DNC notes that Page 1-1 of EMF-92-116(P)(A) states: "The purpose of this report is to present for NRC review and acceptance the generic mechanical design criteria for Siemens Power Corporation (SPC) PWR fuel designs." DNC notes that the fuel currently provided to MPS2 by AREVA is of the SPC High Thermal Performance (HTP) design that had been provided starting with Cycle 15. In its SE Report approving the EMF-92-116(P) the NRC stated: "The staff has reviewed the SPC's PWR fuel mechanical design criteria described in EMF-92-116(P), and finds that the design criteria are acceptable for PWR licensing applications..."

The amendment is consistent with GL88-16 and TSTF-363 and the staff considers that the licensee has implemented the limitations and conditions of the proposed topical report. The NRC staff considers that the addition of EMF-92-116(P)(A) to the list of documents in TS 6.9.1.8b is acceptable.

3.2 Error Correction to TS 5.3.1

The licensee stated in their submittal that Amendment No. 274 to the MPS2 operating license, dated April 1, 2003 (Reference 6), was the last amendment introducing changes to TS 5.3.1, "Reactor Core, Fuel Assembly." The issued TS page correctly states:

5.3.1. The reactor core shall contain 217 fuel assemblies with each fuel assembly containing 176 rods. Reload fuel shall be similar in physical design to the initial core loading and shall have a **maximum** nominal average enrichment of 4.85 weight percent of U-235. A fuel rod shall have a maximum enrichment of 5.0 weight percent of U-235.

Amendment No. 280, dated September 25, 2003 (Reference 7), introduced only changes to TS 5.3.2, "Control Element Assemblies," which is on the same TS page (page 5-4) as TS 5.3.1. However, in the process of producing the retyped pages used to issue Amendment No. 280, the word "minimum" was incorrectly used instead of the word "maximum" in TS 5.3.1. This was a typographical error. The proposed change would restore the TS 5.3.1 wording to the wording previously approved by the NRC in Amendment No. 274.

Based on verification of the chain of events described above, and the administrative nature of the change, the NRC staff finds the proposed revision to TS 5.3.1 acceptable.

4.0 SUMMARY

The proposed change updates the list of NRC-approved documents, specified in TS 6.9.1.8 b, which describes the analytical methods used to determine the core operating limits, to include NRC-approved technical report EMF-92-116(P)(A). The proposed change also corrects a typographical error in TS 5.3.1, which was introduced in the retyped pages provided to the NRC for issuance of MPS2 Amendment No. 280. Based on the considerations previously discussed in Sections 3.1 and 3.2, the NRC staff finds these changes acceptable.

5.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Connecticut State official was notified of the proposed issuance of the amendment. The Connecticut State official agreed with the NRC staff's conclusion as stated in Section 7.0 of this SE.

6.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant change in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (71 FR 26997). Accordingly, the amendment meets the eligibility criteria for categorical exclusion as set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

7.0 CONCLUSION

The NRC staff concludes that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activity will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or health and safety of the public.

8.0 REFERENCES

1. NRC GL 1988-016, dated October 4, 1988, "Removal of Cycle-Specific Parameter Limits From Technical Specifications" (ML031200485).
2. Letter from Stuart A. Richards (NRC) to James F. Mallay (Siemens Power Corporation), dated December 15, 1999, "ACCEPTANCE FOR SIEMENS REFERENCES TO APPROVED TOPICAL REPORTS IN TECHNICAL SPECIFICATIONS (TAC NO. MA6492)" (ML993540351).
3. TSTF-363, Revision 0, dated March 3, 2000, "Revise Topical Report References in ITS [Improved Technical Specification] 5.6.5, COLR" (ML040630088).

4. Letter from James F. Mallay (Siemens Power Corporation) to the NRC, dated January 14, 2000, "Publication of EMF-92-116(P)(A) Revision 0, 'Generic Mechanical Design Criteria for PWR Fuel Designs'" (ML003681173).
5. ANF-88-133(P)(A), "Qualification of Advanced Nuclear Fuels PWR Design Methodology for Rod Burnups of 62 GWd/MTU," which is in use at MPS2.
6. Amendment No. 274 to Facility Operating License No. DPR-65, dated April 1, 2003, "MILLSTONE POWER STATION, UNIT NO. 2 - ISSUANCE OF AMENDMENT RE: SPENT FUEL POOL REQUIREMENTS (TAC NO. MB3386)" (ML030910485).
7. Amendment No. 280 to Facility Operating License No. DPR-65, dated September 25, 2003, "MILLSTONE POWER STATION, UNIT NO. 2 - ISSUANCE OF AMENDMENT RE: REACTIVITY CONTROL SYSTEMS, POWER DISTRIBUTION LIMITS, AND SPECIAL TEST EXCEPTIONS (TAC NO. MB6108)" (ML032691384)

Principal Contributor: M. Vaaler
V. Nerses

Dated: January 23, 2007