

September 23, 2005

Mr. David A. Christian  
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5000 Dominion Boulevard  
Glen Allen, VA 23060-6711

SUBJECT: MILLSTONE POWER STATION, UNIT NO. 2 - ISSUANCE OF AMENDMENT  
RE: CONTROL ROOM ISOLATION RADIATION MONITORING  
INSTRUMENTATION (TAC NO. MC4172)

Dear Mr. Christian:

The Commission has issued the enclosed Amendment No. 289 to Facility Operating License No. DPR-65 for the Millstone Power Station, Unit No. 2, in response to your application dated July 15, 2004, as supplemented by letter dated August 23, 2004.

The amendment revises the Technical Specifications to require two operable channels of control room isolation radiation monitoring instrumentation.

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, Section 2  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-336

Enclosures: 1. Amendment No. 289 to DPR-65  
2. Safety Evaluation

cc w/encls: See next page

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DATE	8/16/05	8/15/05	07/27/05	9/13/05	9/20/05	9/22/05

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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. 289  
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 July 15, 2004, as supplemented by letter dated August 23, 2004, 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. 289, 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 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

Darrell J. Roberts, Chief, Section 2  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: September 23, 2005

ATTACHMENT TO LICENSE AMENDMENT NO. 289

FACILITY OPERATING LICENSE NO. DPR-65

DOCKET NO. 50-336

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

3/4 3-25

3/4 3-26

Insert

3/4 3-25

3/4 3-26

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 289

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 July 15, 2004, and supplemented by letter August 23, 2004, 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). Specifically, the changes would revise the TSs to require two operable channels of control room isolation radiation monitoring instrumentation. The supplement dated August 23, 2004, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on January 18, 2005 (70 FR 2887).

2.0 BACKGROUND

The control room inlet duct radiation monitors, in conjunction with the control room air conditioning system, maintain the control room atmosphere within conditions suitable for prolonged occupancy throughout the duration of accidents. A high radiation or instrument failure alarm from either of the two radiation monitors isolates normal control room ventilation by closing dampers in the control room ventilation ducting and aligns the control room air conditioning system to the recirculation mode of operation.

The design of the radiation monitoring system for actuation of control room isolation consists of redundant channels, both designed to the same specifications and qualification, and each supplied from independent vital alternating current power supplies. This system is designed such that a single failure of one instrumentation channel does not prevent isolation of the control room. Either instrumentation channel by itself is adequate to perform the isolation function.

To meet the single failure criterion of the current design, both channels of radiation monitoring instrumentation for the control room isolation function are required to be operable. Although the actual design consists of two radiation monitoring instrumentation channels, currently MPS2 TSs contain provisions for only one radiation monitoring instrumentation channel, and the

requirement to test and maintain operability of both channels is included in the Technical Requirements Manual. The proposed amendment would add the second channel of radiation monitoring instrumentation to the TSs consistent with the design.

### 3.0 REGULATORY EVALUATION

The NRC staff used General Design Criteria (GDC) 19 and 21 of Appendix A, Section 50 of Title 10 of the *Code of Federal Regulations* (10 CFR) to evaluate the acceptability of the proposed change to add a second channel of radiation monitoring instrumentation. GDC 19 requires that the control room be adequately protected from radiation to permit access and occupancy while limiting radiation exposure to the control room personnel during accident conditions. GDC 21 requires redundancy and independence designed into the protection system to assure that no single failure results in loss of the protection function.

The staff also used the criteria in 10 CFR 50.36, "Technical Specifications," for including limiting conditions for operation (LCOs) for a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

### 4.0 TECHNICAL EVALUATION

#### 4.1 Proposed TSs Changes

The proposed changes relate to control room isolation radiation monitoring instrumentation in TS 3.3.3.1, "Monitoring Instrumentation." This Safety Evaluation reviews the proposed TS changes to LCO Action Statement 16 and the minimum channels operable requirement for Function 1b, "Area Monitors Control Room Isolation," in TS Table 3.3-6.

The licensee is requesting to modify TS Table 3.3-6 to require two operable channels of control room isolation radiation monitoring instrumentation and TS Table 3.3-6 Action Statement 16 to reflect new actions for inoperable channels. These changes are being requested to update the MPS2 TSs to agree with the original design of the redundant radiation monitoring instrumentation channels.

The licensee proposed the following TS changes for the control room isolation radiation monitoring instrumentation:

(1) TS Table 3.3-6, Function 1b, "Area Monitors Control Room Isolation": Change the minimum channels operable from "1" to "2".

(2) TS Table 3.3-6, Action Statement 16: Change from:

"ACTION 16 - With the number of OPERABLE channels less than required by the MINIMUM CHANNELS OPERABLE requirement, within one hour initiate and maintain operation of the control room emergency ventilation system in the recirculation mode of operation."

to:

“ACTION 16 - 1. With the number of OPERABLE channels one less than required by the MINIMUM CHANNELS OPERABLE requirement, restore the inoperable channel to OPERABLE status within 7 days or initiate and maintain operation of the control room emergency ventilation system in the recirculation mode of operation.

16 - 2. With the number of OPERABLE channels two less than required by the MINIMUM CHANNELS OPERABLE requirement, within 1 hour initiate and maintain operation of the control room emergency ventilation system in the recirculation mode of operation.”

The NRC staff’s evaluations of the proposed changes are addressed in the following section.

#### 4.2 Evaluation of Proposed TS Changes

The staff concurs with the licensee’s assessment with respect to changing the minimum channels operable from “1” to “2.” The staff finds that the changes are more restrictive than the current TSs and are in conformance with GDC 21, Appendix A of Section 50 of 10 CFR. This additional restriction enhances safety by ensuring that a single failure in one radiation monitoring instrumentation channel will not prevent the control room isolation function from actuating on high radiation at the control room air supply intake. The staff also concurs with the licensee’s assessment with respect to the addition of a new action to address the condition in which one channel is operable. For the condition with one of the two channels inoperable, Action 16-1 requires the inoperable channel to be restored to operable status within 7 days or initiate and maintain operation of the control room emergency ventilation system in recirculation mode. The allowed outage time (AOT) of 7 days is consistent with the current AOT when only one train of the control room emergency ventilation system is operable.

Seven days AOT is based on the low probability of a design basis accident occurring during this interval and the ability of the remaining channel to provide the required function of isolating the normal control room ventilation. The staff finds that the changes are consistent with the current TSs and are in conformance with GDC 21, Appendix A, Section 50 of 10 CFR. Additionally, the staff has concluded that the proposed changes to TS 3.3.3.1 are consistent with the Improved Standard Technical Specification and are in accordance with GDC 19 and 10 CFR 50.36. Therefore, the proposed changes to TS 3.3.3.1 are acceptable to the staff.

#### 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 Safety Evaluation.

#### 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 (70 FR 2887). Accordingly, the amendment meets the eligibility criteria for categorical exclusion 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

Based on the review of submittals dated July 15 and August 23, 2004, the staff finds that the proposed TS changes to add a second channel of control room isolation radiation monitoring instrumentation is in conformance with GDC 19, 21, and 10 CFR 50.36. The 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 amendment will not be inimical to the common defense and security or health and safety of the public.

Principal Contributors: Barry S. Marcus  
Manan Patel

Date: September 23, 2005