



January 2, 2007

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
One White Flint North  
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Rockville, MD 20852-2738

Serial No. 05-699C  
NLOS/PRW R0  
Docket No. 50-423  
License No. NPF-49

**DOMINION NUCLEAR CONNECTICUT, INC.**  
**MILLSTONE POWER STATION UNIT 3**  
**SUPPLEMENT TO PROPOSED TECHNICAL SPECIFICATION CHANGE**  
**(LBDCR 04-MP3-011)**  
**AUXILIARY FEEDWATER SYSTEM ALLOWED OUTAGE TIME**

This letter provides supplemental information for request LBDCR 04-MP3-011, submitted by Dominion Nuclear Connecticut, Inc. (DNC) in a letter dated February 7, 2006, for Millstone Power Station Unit 3. The submittal was originally supplemented in a letter dated August 14, 2006. Attachment 1 of this letter provides clarifications requested by the NRC in a conference call with DNC on November 9, 2006. Attachments 2 and 3 provide the replacement marked up page and retyped pages. The revised marked up bases page is provided in Attachment 4 for information only.

The additional information provided in this letter does not affect the conclusions of the safety summary and significant hazards consideration discussion in DNC's submittal of February 7, 2006.

In accordance with 10 CFR 50.91(b), a copy of this letter is being provided to the State of Connecticut.

If you should have any questions regarding this submittal, please contact Mr. Paul R. Willoughby at (804) 273-3572.

Very truly yours,

A handwritten signature in black ink, appearing to read "Gerald T. Bischof".

Gerald T. Bischof  
Vice President – Nuclear Engineering

Commitments made in this letter: None

Attachments: (4)

1. Supplement to Proposed Technical Specification Change
2. Replacement Marked Up Page
3. Replacement Retyped Pages
4. Revised Marked Up Bases Page (Information Only)

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**ATTACHMENT 1**

**AUXILIARY FEEDWATER SYSTEM ALLOWED OUTAGE TIME**  
**SUPPLEMENT TO PROPOSED TECHNICAL SPECIFICATION CHANGE**

**DOMINION NUCLEAR CONNECTICUT, INC.  
MILLSTONE POWER STATION UNIT 3**

**SUPPLEMENT TO PROPOSED TECHNICAL SPECIFICATION CHANGE**  
**AUXILIARY FEEDWATER SYSTEM ALLOWED OUTAGE TIME**

This letter provides supplemental information for request LBDCR 04-MP3-011, submitted by Dominion Nuclear Connecticut, Inc. (DNC) in a letter dated February 7, 2006, for Millstone Power Station Unit 3. The submittal was originally supplemented in a letter dated August 14, 2006. This attachment provides clarifications requested by the NRC in a conference call with DNC on November 9, 2006.

**Question 1**

The proposed change to Millstone Power Station Unit 3 (MPS 3) TS 3.7.1.2 ACTIONS includes an asterisked footnote that discusses separate condition entry for selected specified ACTIONS. Please explain the necessity and basis for the footnote.

**Response 1**

Based on the perspective provided by the NRC during the conference call between DNC and the NRC on November 9, 2006, the referenced footnote and its basis were reviewed. It was concluded that the footnote was not required. Also as a result of the discussions during the conference call, the description of the inoperable equipment for ACTION a. is being clarified. The emphasis in the description of the inoperable equipment is changed from the proposed "two inoperable steam supplies to turbine-driven auxiliary feedwater pump" to the proposed "inoperable turbine-driven auxiliary feedwater pump due to one of the two required steam supplies being inoperable." At MPS 3, only two of the three available steam supplies are required to establish an OPERABLE steam supply system. With one of the two required steam supplies inoperable, normally the third steam supply will be used to satisfy the requirement for two OPERABLE steam supplies. If the third steam supply is also inoperable (i.e., only one steam supply to the turbine-driven auxiliary feedwater pump is OPERABLE), then ACTION a. is entered.

Attachment 2 provides the revised marked up pages including a revision to Insert C provided in the original proposal (DNC Serial No. 05-699, dated February 7, 2006) that removes the footnote and the asterisks and clarifies the ACTION a. inoperable equipment description. Replacement retyped pages are provided in Attachment 3 of this letter.

Additionally, the changes to the Technical Specification Bases that were previously provided for information only will be further modified to address the above changes. Revised marked up pages of the Technical Specification Bases are provided in Attachment 4 of this letter for information only.

**Question 2**

Please explain the purpose of the word “required” in proposed MPS 3 TS 3.7.1.2 Required Action c.

**Response 2**

Upon review, the word “required” was determined to be unnecessary. Although present in the current Technical Specification, it has no explicit value and will be removed.

Attachment 2 provides the revised marked up pages including a revision to Insert C provided in the original proposal (DNC Serial No. 05-699, dated February 7, 2006) that removes the word “required” in proposed Required Action c. Replacement retyped pages are provided in Attachment 3 of this letter.

**ATTACHMENT 2**

**AUXILIARY FEEDWATER SYSTEM ALLOWED OUTAGE TIME**

**REPLACEMENT MARKED UP PAGE**

**DOMINION NUCLEAR CONNECTICUT, INC.  
MILLSTONE POWER STATION UNIT 3**

PLANT SYSTEMS

AUXILIARY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.1.2 At least three independent steam generator auxiliary feedwater pumps and associated flow paths shall be OPERABLE with:

- a. Two motor-driven auxiliary feedwater pumps, each capable of being powered from separate emergency busses, and
- b. One steam turbine-driven auxiliary feedwater pump capable of being powered from an OPERABLE steam supply system.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

Insert C

- a. With one auxiliary feedwater pump inoperable, restore the required auxiliary feedwater pumps to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. With two auxiliary feedwater pumps inoperable, be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.
- c. With three auxiliary feedwater pumps inoperable, immediately initiate corrective action to restore at least one auxiliary feedwater pump to OPERABLE status as soon as possible. Entry into an OPERATIONAL MODE pursuant to Specification 3.0.4 is not permitted with three auxiliary feedwater pumps inoperable.

SURVEILLANCE REQUIREMENTS

4.7.1.2.1 Each auxiliary feedwater pump shall be demonstrated OPERABLE:

Insert D

- a. At least once per 31 days by:
  - 1) Verifying that each non-automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in its correct position; and
  - 2) Verifying that each auxiliary feedwater control and isolation valve in the flow path is in the fully open position when above 10% RATED THERMAL POWER.

Revised Insert C

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Inoperable Equipment	Required ACTION
<p>a. Turbine-driven auxiliary feedwater pump due to one of the two required steam supplies being inoperable.</p>	<p>a. Restore affected equipment to OPERABLE status within 7 days. If these ACTIONS are not met, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 12 hours.</p>
<p>b.</p> <p>-----NOTE-----  Only applicable if MODE 2 has not been entered following REFUELING.  -----</p> <p>One turbine-driven auxiliary feedwater pump in MODE 3 following REFUELING.</p>	<p>b. Restore affected equipment to OPERABLE status within 7 days. If these ACTIONS are not met, be in at least HOT SHUTDOWN within the following 12 hours.</p>
<p>c. One auxiliary feedwater pump in MODE 1, 2, or 3 for reasons other than a. or b. above.</p>	<p>c. Restore the auxiliary feedwater pump to OPERABLE status within 72 hours. If these ACTIONS are not met, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 12 hours.</p>
<p>d. Two auxiliary feedwater pumps in MODE 1, 2, or 3.</p>	<p>d. Be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 12 hours.</p>

Inoperable Equipment	Required ACTION
e. Three auxiliary feedwater pumps in MODE 1, 2, or 3.	e. -----NOTE----- LCO 3.0.3 and all other LCO required ACTIONS requiring MODE changes are suspended until one AFW pump is restored to OPERABLE status. -----  Immediately initiate ACTION to restore one auxiliary feedwater pump to OPERABLE status.

Insert D

(Unchanged from February 7, 2006 submittal)

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-----NOTE-----

Auxiliary feedwater pumps may be considered OPERABLE during alignment and operation for steam generator level control, if they are capable of being manually realigned to the auxiliary feedwater mode of operation.

Verifying each auxiliary feedwater manual, power operated, and automatic valve in each water flow path and in each required supply flow path to the steam turbine driven auxiliary feedwater pump, that is not locked, sealed, or otherwise secured in position, is in the correct position.

**ATTACHMENT 3**

**AUXILIARY FEEDWATER SYSTEM ALLOWED OUTAGE TIME**

**REPLACEMENT RETYPED PAGES**

**DOMINION NUCLEAR CONNECTICUT, INC.  
MILLSTONE POWER STATION UNIT 3**

PLANT SYSTEMS

AUXILIARY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.1.2 At least three independent steam generator auxiliary feedwater pumps and associated flow paths shall be OPERABLE with:

- a. Two motor-driven auxiliary feedwater pumps, each capable of being powered from separate emergency busses, and
- b. One steam turbine-driven auxiliary feedwater pump capable of being powered from an OPERABLE steam supply system.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

Inoperable Equipment	Required ACTION
a. Turbine-driven auxiliary feedwater pump due to one of the two required steam supplies being inoperable.	a. Restore affected equipment to OPERABLE status within 7 days. If these ACTIONS are not met, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 12 hours.
<p>b.</p> <p>----- NOTE -----</p> <p>Only applicable if MODE 2 has not been entered following REFUELING.</p> <p>-----</p> <p>One turbine-driven auxiliary feedwater pump in MODE 3 following REFUELING.</p>	b. Restore affected equipment to OPERABLE status within 7 days. If these ACTIONS are not met, be in at least HOT SHUTDOWN within the following 12 hours.
c. One auxiliary feedwater pump in MODE 1, 2, or 3 for reasons other than a. or b. above.	c. Restore the auxiliary feedwater pump to OPERABLE status within 72 hours. If these ACTIONS are not met, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 12 hours.
d. Two auxiliary feedwater pumps in MODE 1, 2, or 3.	d. Be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 12 hours.

PLANT SYSTEMS

AUXILIARY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

ACTION: (Continued)

Inoperable Equipment	Required ACTION
e. Three auxiliary feedwater pumps in MODE 1, 2, or 3.	<p>e.</p> <p style="text-align: center;">----- NOTE -----</p> <p style="text-align: center;">LCO 3.0.3 and all other LCO required ACTIONS requiring MODE changes are suspended until one AFW pump is restored to OPERABLE status.</p> <p style="text-align: center;">-----</p> <p>Immediately initiate ACTION to restore one auxiliary feedwater pump to OPERABLE status.</p>

SURVEILLANCE REQUIREMENTS

4.7.1.2.1 Each auxiliary feedwater pump shall be demonstrated OPERABLE:

- a. At least once per 31 days by:

----- NOTE -----

Auxiliary feedwater pumps may be considered OPERABLE during alignment and operation for steam generator level control, if they are capable of being manually realigned to the auxiliary feedwater mode of operation.

-----

Verifying each auxiliary feedwater manual, power operated, and automatic valve in each water flow path and in each required steam supply flow path to the steam turbine driven auxiliary feedwater pump, that is not locked, scaled, or otherwise secured in position, is in the correct position.

- b. At least once per 92 days on a STAGGERED TEST BASIS, tested pursuant to Specification 4.0.5, by:
  - 1) Verifying that on recirculation flow each motor-driven pump develops a total head of greater than or equal to 3385 feet;
  - 2) Verifying that on recirculation flow the steam turbine-driven pump develops a total head of greater than or equal to 3780 feet when the secondary steam supply pressure is greater than 800 psig. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3.

**ATTACHMENT 4**

**AUXILIARY FEEDWATER SYSTEM ALLOWED OUTAGE TIME**

**REVISED MARKED UP BASES PAGE**  
**(INFORMATION ONLY)**

**DOMINION NUCLEAR CONNECTICUT, INC.  
MILLSTONE POWER STATION UNIT 3**

PLANT SYSTEMSBASESAUXILIARY FEEDWATER SYSTEM (Continued)

In addition, given the worst case failure, the AFW is designed to supply sufficient makeup water to replace SG inventory loss as the RCS is cooled to less than 350°F at which point the Residual Heat Removal System may be placed into operation.

Surveillance Requirement 4.7.1.2.1 verifies that each AFW pump's total head at a recirculation flow test point is greater than or equal to the required total head. This surveillance ensures that the AFW pump performance has not degraded during the operating cycle. Because it is undesirable to introduce cold AFW into the steam generators while they are operating, this testing is performed with recirculation flow. This test confirms one point on the pump curve and is indicative of overall performance. This test confirms component OPERABILITY is used to trend performance and to detect incipient failures by indicating abnormal performance. The total head specified in Surveillance Requirement 4.7.1.2.1 does not include a margin for test measurement uncertainty. This consideration shall be addressed at the implementing procedure level.

Motor driven auxiliary feedwater pumps and associated flow paths are OPERABLE in the following alignment during normal operation below 10% RATED THERMAL POWER.

- Motor operated isolation valves (3FWA\*MOV35A/B/C/D) are open in MODE 1, 2 and 3,
- Control valves (3FWA\*HV31A/B/C/D) may be throttled or closed during alignment, operation and restoration of the associated motor driven AFW pump for steam generator inventory control.

The motor operated isolation valves must remain fully open due to single failure criteria (the valves and associated pump are powered from the opposite electrical trains).

The Turbine Driven Auxiliary Feedwater (TDAFW) pump and associated flow paths are OPERABLE with all control and isolation valves fully open in MODE 1, 2 and 3. Due to High Energy Line Break analysis, the TDAFW pump cannot be used for steam generator inventory control during normal operation below 10% RATED THERMAL POWER.

Insert  
F

3/4.7.1.3 DEMINERALIZED WATER STORAGE TANK

The OPERABILITY of the demineralized water storage tank (DWST) with a 334,000 gallon minimum measured water volume ensures that sufficient water is available to maintain the reactor coolant system at HOT STANDBY conditions for 10 hours with steam discharge to the atmosphere, concurrent with a total loss-of-offsite power, and with an additional 6-hour cooldown period to reduce reactor coolant temperature to 350°F. The 334,000 gallon required water volume contains an allowance for tank inventory not usable because of tank discharge line location, other tank physical characteristics, and surveillance measurement uncertainty considerations. The inventory requirement is conservatively based on 120°F water temperature which maximizes inventory required to remove RCS decay heat. In the event of a feedline break, this inventory requirement includes an allowance for 30 minutes of spillage before operator action is credited to isolate flow to the line break.

Revised Insert F

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At MPS 3, only two of the three available steam supplies are required to establish an OPERABLE steam supply system. With one of the two required steam supplies inoperable, normally the third steam supply will be used to satisfy the requirement for two OPERABLE steam supplies. If the third steam supply is also inoperable (i.e., only one steam supply to the turbine-driven auxiliary feedwater pump is OPERABLE), then ACTION a. is entered.

If the turbine-driven auxiliary feedwater pump is inoperable due to one required steam supply being inoperable in MODES 1, 2, and 3, or if a turbine-driven auxiliary feedwater pump is inoperable while in MODE 3 immediately following REFUELING, action must be taken to restore the inoperable equipment to an OPERABLE status within 7 days. The 7 day allowed outage time is reasonable, based on the following reasons:

- a. For the inoperability of the turbine-driven auxiliary feedwater pump due to one required steam supply to the turbine-driven auxiliary feedwater pump being inoperable (i.e., only one steam supply to the turbine-driven auxiliary feedwater pump is operable), the 7 day allowed outage time is reasonable since the auxiliary feedwater system design affords adequate redundancy for the steam supply line for the turbine-driven pump.
- b. For the inoperability of a turbine-driven auxiliary feedwater pump while in MODE 3 immediately subsequent to a refueling, the 7 day allowed outage time is reasonable due to the minimal decay heat levels in this situation.
- c. For both the inoperability of the turbine-driven auxiliary feedwater pump due to one required steam supply to the turbine-driven auxiliary feedwater pump being inoperable (i.e., only one steam supply to the turbine-driven auxiliary feedwater pump is operable), and an inoperable turbine-driven auxiliary feedwater pump while in MODE 3 immediately following a refueling outage, the 7 day allowed outage time is reasonable due to the availability of redundant OPERABLE motor driven auxiliary feedwater pumps, and due to the low probability of an event requiring the use of the turbine-driven auxiliary feedwater pump.

The required ACTION dictates that if either the 7 day allowed outage time is reached the unit must be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 12 hours.

The allowed time is reasonable, based on operating experience, to reach the required conditions from full power conditions in an orderly manner and without challenging plant systems.

A Note limits the applicability of the inoperable equipment condition b. to when the unit has not entered MODE 2 following a REFUELING. Required ACTION b. allows one auxiliary feedwater pump to be inoperable for 7 days vice the 72 hour allowed outage time in required ACTION c. This longer allowed outage time is based on the reduced decay heat following REFUELING and prior to the reactor being critical.

With one of the auxiliary feedwater pumps inoperable in MODE 1, 2, or 3 for reasons other than ACTION a. or b., ACTION must be taken to restore OPERABLE status within 72 hours. This includes the loss of three steam supply lines to the turbine-driven auxiliary feedwater pump. The 72 hour allowed outage time is reasonable, based on redundant capabilities afforded by the auxiliary feedwater system, time needed for repairs, and the low probability of a DBA occurring during this time period. Two auxiliary feedwater pumps and flow paths remain to supply feedwater to the steam generators.

If all three AFW pumps are inoperable in MODE 1, 2, or 3, the unit is in a seriously degraded condition with no safety related means for conducting a cooldown, and only limited means for conducting a cooldown with non safety related equipment. In such a condition, the unit should not be perturbed by any action, including a power change, that might result in a trip. The seriousness of this condition requires that action be started immediately to restore one AFW pump to OPERABLE status. Required ACTION e. is modified by a Note indicating that all required MODE changes or power reductions are suspended until one AFW pump is restored to OPERABLE status. In this case, LCO 3.0.3 is not applicable because it could force the unit into a less safe condition.

SR 4.7.1.2.1a. verifies the correct alignment for manual, power operated, and automatic valves in the auxiliary feedwater water and steam supply flow paths to provide assurance that the proper flow paths exist for auxiliary feedwater operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position, since these valves are verified to be in the correct position prior to locking, sealing, or securing. This SR also does not apply to valves that cannot be inadvertently misaligned, such as check valves. This Surveillance does not require any testing or valve manipulations; rather, it involves verification that those valves capable of potentially being mispositioned are in the correct position. The 31 day frequency is

based on engineering judgment, is consistent with the procedural controls governing valve operation, and ensures correct valve positions.

The SR is modified by a Note that states one or more auxiliary feedwater pumps may be considered OPERABLE during alignment and operation for steam generator level control, if it is capable of being manually (i.e., remotely or locally, as appropriate) realigned to the auxiliary feedwater mode of operation, provided it is not otherwise inoperable. This exception to pump OPERABILITY allows the pump(s) and associated valves to be out of their normal standby alignment and temporarily incapable of automatic initiation without declaring the pump(s) inoperable. Since auxiliary feedwater may be used during STARTUP, SHUTDOWN, HOT STANDBY operations, and HOT SHUTDOWN operations for steam generator level control, and these manual operations are an accepted function of the auxiliary feedwater system, OPERABILITY (i.e., the intended safety function) continues to be maintained.