Dominion Nuclear Connecticut, Inc.
5000 Dominion Boulevard, Glen Allen, Virginia 23060
Web Address: www.dom.com

Dominion®

February 7, 2006

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

Serial No. 05-699
NSS&L/WDB R3
Docket Nos. 50-336
50-423
License Nos. DPR-65
NPF-49

DOMINION NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION UNITS 2 AND 3
LICENSE AMENDMENT REQUEST
(LBDCR 04-MP2-013 AND LBDCR 04-MP3-011)
AUXILIARY FEEDWATER SYSTEM ALLOWED OUTAGE TIME

Pursuant to 10 CFR 50.90, Dominion Nuclear Connecticut, Inc. (DNC) hereby requests to amend Operating Licenses DPR-65 and NPF-49 for Millstone Power Station Units 2 and 3 (MPS 2 and 3) to modify the allowed outage time associated with the auxiliary feedwater (AFW) system. The proposed changes will increase the allowed outage time from 72 hours to 7 days for the inoperability of the steam supply to the turbine-driven AFW pump or the inoperability of the turbine-driven AFW pump under certain operating mode restrictions. Additional changes are necessary to support the proposed allowed outage time increase, and to improve the format of the action requirements. The associated bases changes are provided in Attachment 6 for information only and will be implemented in accordance with the Technical Specification Bases Control Program and 10 CFR 50.59. This request is based on the NRC approved Technical Specification Task Force Traveler Number 340, Revision 3.

The proposed amendments do not involve a significant impact on public health and safety and do not involve a Significant Hazards Consideration pursuant to the provisions of 10 CFR 50.92 (see Significant Hazards Consideration in Attachment 1).

The Site Operations Review Committee has reviewed and concurred with the determinations.

An MPS 2 refueling outage is currently scheduled for the fall of 2006. DNC is requesting NRC staff review and approval of the proposed changes by August 1, 2006, to be implemented within 60 days of issuance.

In accordance with 10CFR50.91(b), a copy of this license amendment request is being provided to the State of Connecticut.

A001

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

Very truly yours,

Leslie N. Hartz
Vice President – Nuclear Engineering

Attachments:

1. Evaluation of Proposed License Amendments
2. Millstone Power Station Unit 2 Marked-up Pages
3. Millstone Power Station Unit 2 Retyped Pages
4. Millstone Power Station Unit 3 Marked-up Pages
5. Millstone Power Station Unit 3 Retyped Pages
6. Marked-up Pages of Technical Specification Bases (For Information Only)

Commitments made in this letter: None

cc: U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406-1415

Mr. V. Nerses
Senior Project Manager
U.S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Mail Stop 8C2
Rockville, MD 20852-2738

Mr. S. M. Schneider
NRC Senior Resident Inspector
Millstone Power Station

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

COMMONWEALTH OF VIRGINIA)
)
COUNTY OF HENRICO)

The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by Leslie N. Hartz, who is Vice President – Nuclear Engineering, of Dominion Nuclear Connecticut, Inc. She has affirmed before me that she is duly authorized to execute and file the foregoing document in behalf of that Company, and that the statements in the document are true to the best of her knowledge and belief.

Acknowledged before me this 7th day of February, 2006.

My Commission Expires: August 31, 2008

Margaret B. Bennett
Notary Public

(SEAL)

ATTACHMENT 1

LICENSE AMENDMENT REQUEST (LBDCR 04-MP2-013 AND LBDCR 04-MP3-011) AUXILIARY FEEDWATER ALLOWED OUTAGE TIME

EVALUATION OF PROPOSED LICENSE AMENDMENTS

MILLSTONE POWER STATION UNITS 2 AND 3
DOMINION NUCLEAR CONNECTICUT, INC

EVALUATION OF PROPOSED LICENSE AMENDMENTS

1.0 DESCRIPTION

2.0 PROPOSED CHANGE

3.0 BACKGROUND
- 3.1 MPS 2 Auxiliary Feedwater (AFW) System Description
- 3.2 MPS 3 AFW System Description
- 3.3 Reason for Proposed Amendment

4.0 TECHNICAL ANALYSIS
- 4.1 Details of the Proposed Amendment
- 4.2 Summary

5.0 REGULATORY ANALYSIS
- 5.1 No Significant Hazards Consideration
- 5.2 Applicable Regulatory Requirements/Criteria

6.0 ENVIRONMENTAL CONSIDERATION

1.0 DESCRIPTION

Pursuant to 10 CFR 50.90, Dominion Nuclear Connecticut, Inc. (DNC) hereby requests to amend Operating Licenses DPR-65 and NPF-49 for Millstone Power Station Units 2 and 3 (MPS 2 and 3) to modify the allowed outage time associated with the auxiliary feedwater (AFW) system. The proposed changes will add an allowed outage time of 7 days for the inoperability of the steam supply to the turbine-driven AFW pump and will increase the allowed outage time from 72 hours to 7 days for the inoperability of the turbine-driven AFW pump under certain operating mode restrictions. Additional changes are necessary to support the proposed allowed outage time increase, to improve the format of the action requirements, and to clarify requirements associated with the performance of surveillance testing of the turbine-driven AFW pump. This request is based on NUREG 1432, "Standard Technical Specifications Combustion Engineering Plants" and NUREG 1431, "Standard Technical Specifications Westinghouse Plants," as well as the NRC approved Technical Specification Task Force (TSTF) Traveler Number 340, Revision 3. This request also includes a revision to the required actions and the associated note for the condition where three AFW pumps are inoperable in Modes 1, 2, or 3 to match the phrasing of the corresponding action in NUREG 1432 and NUREG 1431. However, the request does not include provisions for addition of a second allowed outage time (i.e., "AND 10 days") as contained in NUREG 1431 and 1432. This approach is consistent with TSTF Traveler Number 439, Revision 2, that is pending approval as a Consolidated Line Item Improvement Program item. TSTF 439, Revision 2, proposes to eliminate the second completion time associated with several Improved Standard Technical Specifications, including Technical Specification 3.7.5, Required Actions A.1 and B.1. The remainder of the MPS 2 and 3 technical specifications do not contain second allowed outage times, and for internal consistency within the MPS 2 and 3 TS, second allowed outage times are not being added as part of this change.

This change is being requested based on industry operating experience and plant specific experience. This experience indicates that an extended allowed outage time is acceptable for the inoperability of the necessary steam supply to the turbine-driven AFW pump in Modes 1, 2 and 3 or for the inoperability of the turbine-driven AFW pump if the inoperability occurs in Mode 3 following a refueling outage and if Mode 2 had not been entered. By preventing unnecessary mode changes associated with an inoperable steam supply to the turbine-driven AFW pump during operation in Modes 1, 2, and 3 or an inoperable turbine-driven AFW pump during startup following refueling, the proposed changes are expected to result in a reduction in personnel exposure and a reduction in plant refueling outage duration. The proposed amendment achieves this by allowing additional time to repair and retest an inoperable steam supply in Modes 1, 2, and 3 or additional time in Mode 3, prior to entering Mode 2, to repair and retest the turbine-driven AFW pump, if the steam supply or pump is declared inoperable because the surveillance requirements could not be met. Additionally, this change will revise the

existing exception to MPS 2 Technical Specification 4.0.4 for entry into Mode 3 to permit performance of the turbine driven AFW pump flow / differential pressure test in Mode 3 after secondary steam supply pressure exceeds the specified 800 psig, but before entering Mode 2. The existing surveillance requirement will be modified to delete the words "24 hours."

An MPS 2 refueling outage is currently scheduled for the fall of 2006. DNC is requesting Nuclear Regulatory Commission (NRC) staff review and approval of the proposed changes by August 1, 2006, with implementation within 60 days of issuance.

2.0 PROPOSED CHANGE

The following discussion is presented first for MPS 2 then for MPS 3.

Change 1

MPS 2

Current TS 3.7.1.2 Actions

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 or other specified condition under the provisions of Specification 3.0.4 shall not be made with three auxiliary feedwater pumps inoperable.

Proposed TS 3.7.1.2 Actions

Inoperable Equipment	Required Action
a.* One steam supply to turbine-driven auxiliary feedwater pump.	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.
b.* ----------NOTE---------- Only applicable if MODE 2 has not been entered following REFUELING. ---------- One turbine-driven auxiliary feedwater pump in MODE 3 following REFUELING.	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 required 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.

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.

* Separate condition entry is allowed for (1) an inoperable steam supply to the turbine-driven auxiliary feedwater pump, (2) if MODE 2 has not been entered following REFUELING, an inoperable turbine-driven auxiliary feedwater pump in MODE 3 following REFUELING, and (3) one inoperable AFW pump in MODES 1, 2, or 3 for reasons other than a. or b. above. Should a combination of the above conditions result in the loss of two auxiliary feedwater pumps, then ACTION d. must be entered.

Change 2

MPS 3

Current TS 3.7.1.2 Actions

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.

Proposed TS 3.7.1.2 Actions

Inoperable Equipment	Required Action
a.* Two steam supplies to turbine-driven auxiliary feedwater pump.	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.
b.* ----------NOTE---------- Only applicable if MODE 2 has not been entered following REFUELING. ---------- One turbine-driven auxiliary feedwater pump in MODE 3 following REFUELING.	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 required 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.

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.

* Separate condition entry is allowed for (1) two inoperable steam supplies to the turbine-driven auxiliary feedwater pump, (2) if MODE 2 has not been entered following REFUELING, an inoperable turbine-driven auxiliary feedwater pump in MODE 3 following REFUELING, and (3) one inoperable AFW pump in MODES 1, 2, or 3 for reasons other than a. or b. above. Should a combination of the above conditions result in the loss of two auxiliary feedwater pumps, then ACTION d. must be entered.

Change 3

MPS 3

Current TS 4.7.1.2 Surveillance Requirements (partial)

4.7.1.2.1 Each auxiliary feedwater pump shall be demonstrated OPERABLE:

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.

Proposed TS 4.7.1.2 Surveillance Requirement

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 two of the three steam supply flow paths to the steam turbine driven auxiliary feedwater pump, that is not locked, sealed, or otherwise secured in position, is in the correct position.

Change 4

MPS 2

Current TS 4.7.1.2 Surveillance Requirements (partial)

4.7.1.2 Each auxiliary feedwater pump shall be demonstrated OPERABLE:

b. By verifying the developed head of each auxiliary feedwater pump at the flow test point is greater than or equal to the required developed head when tested pursuant to Specification 4.0.5. (Not required to be performed for the steam turbine driven auxiliary feedwater pump until 24 hours after reaching 800 psig in the steam generators. The provisions of Specification 4.0.4 are not applicable to the steam turbine driven auxiliary feedwater pump for entry into MODE 3.)

Proposed TS 4.7.1.2 Surveillance Requirement

4.7.1.2 Each auxiliary feedwater pump shall be demonstrated OPERABLE:

b. By verifying the developed head of each auxiliary feedwater pump at the flow test point is greater than or equal to the required developed head when tested pursuant to Specification 4.0.5. (Not required to be performed for the steam turbine driven auxiliary feedwater pump until after reaching 800 psig in the steam generators. The provisions of Specification 4.0.4 are not applicable to the steam turbine driven auxiliary feedwater pump for entry into MODE 3.)

Change 5

MPS 2 and 3 Proposed Bases Changes

The associated bases changes for MPS 2 and 3 TS 3.7.1.2 have been marked up to reflect the changes in the technical specification actions and surveillance requirements and are provided in Attachment 6 for information only. The technical specification bases will be revised in accordance with the Technical Specification Bases Control Program (MPS 2 TS 6.23 and MPS 3 TS 6.18) following approval of the proposed license amendments.

3.0 BACKGROUND

3.1 MPS 2 AFW Description

The AFW system supplies feedwater to the steam generators (SGs) to remove decay heat from the reactor coolant system (RCS) upon a loss of normal feedwater, assuming the worst case single failure. In addition, the AFW system is an important mitigation system for other accidents, such as a small break loss of coolant accident (SBLOCA). The AFW system also supplies feedwater to the SGs during normal unit startup, shutdown, and hot standby conditions. The AFW pumps take suction from the condensate storage tank.

In order to perform its safety function assuming a single failure, two subsystems are provided (i.e., two motor-driven AFW pumps, or a motor-driven AFW pump and a turbine-driven AFW pump). The motor-driven AFW pumps automatically start upon receipt of an automatic AFW actuation signal. The turbine-driven AFW pump is started

by operator action. The MPS 2 turbine-driven AFW pump design includes two steam supplies, one from each of the two SGs.

The turbine-driven pump has a capacity of 600 gpm at 2437 feet total developed head (tdh) and the two motor-driven pumps have a 300 gpm capacity each at 2437 feet tdh.

The AFW pumps are located in the turbine building.

The MPS 2 AFW system is described in Final Safety Analysis Report (FSAR) Section 10.4.5.3.

3.2 MPS 3 AFW Description

The AFW system supplies feedwater to the SGs to remove decay heat from the RCS upon a loss of normal feedwater, assuming the worst case single failure. In addition, the AFW system is an important mitigation system for other accidents, such as a feedwater line break accident or SBLOCA. The AFW system also supplies feedwater to the SGs during normal unit startup, shutdown, and hot standby conditions. The AFW pumps can take suction from the demineralized water storage tank or condensate storage tank.

In order to perform its safety function assuming a single failure, two subsystems are provided (i.e., two motor-driven AFW pumps, or a motor-driven AFW pump and a turbine-driven AFW pump). The motor-driven and turbine-driven AFW pumps automatically start upon receipt of automatic AFW actuation signals. The MPS 3 turbine-driven AFW pump design includes steam supplies from three of the four SGs.

Two motor-driven AFW pumps and one turbine-driven AFW pump are provided to ensure an adequate supply of AFW following an accident coincident with a single active failure. The turbine-driven AFW pump is rated at 1,150 gpm at 2,975 feet tdh while the motor-driven AFW pumps are each rated at 575 gpm at 2,975 feet tdh. The turbine-driven AFW pump and a motor-driven AFW pump, or the pair of motor-driven AFW pumps, each have sufficient capacity for sensible and decay heat removal.

The system is located in both the engineered safeguards features building and the containment building.

The MPS 3 AFW system is described in MPS 3 FSAR Section 10.4.9.

3.3 Reason for Proposed Amendment

This change is being requested based on industry and plant operating experience. This experience indicates that an extended allowed outage time is acceptable for the inoperability of the necessary steam supply to the turbine-driven AFW pump in Modes 1, 2, and 3, or the inoperability of the turbine-driven AFW pump if the inoperability occurs in Mode 3 following a refueling outage and if Mode 2 had not been entered. By preventing unnecessary mode changes associated with an inoperable steam supply to the turbine-driven AFW pump during operation in Modes 1, 2, and 3 or an inoperable turbine-driven AFW pump during startup following refueling, the proposed changes are expected to result in a reduction in personnel exposure and a reduction in plant refueling outage duration. The proposed amendment achieves this by allowing additional time in Modes 1, 2, and 3 to repair and retest an inoperable steam supply, or additional time in Mode 3, prior to entering Mode 2, to repair and retest the turbine-driven AFW pump, if the steam supply or pump is declared inoperable. Additionally, this change will revise the existing exception to MPS 2 Technical Specification 4.0.4 for entry into Mode 3 to permit performance of the turbine driven AFW pump flow / differential pressure test in Mode 3 after secondary steam supply pressure exceeds the specified 800 psig, but before entering Mode 2. The existing surveillance requirement will be modified to delete the words "24 hours." This request also includes a revision to the required actions and the associated note for the condition where three AFW pumps are inoperable in Modes 1, 2, or 3 to match the phrasing of the corresponding action in NUREG 1432 and NUREG 1431.

4.0 TECHNICAL ANALYSIS

4.1 Details of the Proposed Amendment

Changes 1 and 2

MPS 2 and 3 Proposed TSs 3.7.1.2

The first change to the MPS 2 and 3 TSs is the addition of a 7 day allowed outage time for the inoperability of the necessary steam supply to the turbine-driven AFW pump in Modes 1, 2, and 3. The second change is an increase in the allowed outage time from 72 hours to 7 days for the inoperability of the turbine-driven AFW pump if the inoperability occurs in Mode 3 following a refueling outage and if Mode 2 had not been entered. Additional changes are necessary to support the proposed allowed outage time increase, and to improve the format of the action requirements. The proposed changes include a two-column format rather than the three-column format used in TSTF-340, Revision 3. The two column format is based on the format used for changes to the emergency diesel generator TSs approved by the NRC in MPS 2 TS

Amendment 261 dated January 4, 2002, (TAC No. MB2196), and MPS 3 TS Amendment 210 dated August 26, 2002, (TAC No. MB3125). The format changes will not modify any technical aspects of the action requirements. Each change is discussed below.

1. Inoperable Equipment a. / Required Action a.
   - (MPS 2) One steam supply to turbine-driven AFW pump inoperable.
   - (MPS 3) Two steam supplies to turbine-driven AFW pump inoperable.

   Inoperable Equipment a. / Required Action a. will be added. For MPS 2, the new condition is the inoperability of one steam supply to the turbine-driven AFW pump and the associated required action. For MPS 3, the new condition is the inoperability of two steam supplies to the turbine-driven AFW pump and the associated required action. The difference between the two units is that the MPS 3 design includes three steam supplies where the MPS 2 design includes two steam supplies. At either unit any single steam supply is sufficient to operate the turbine-driven AFW pump. Restoration of the affected equipment to operable status will be required within 7 days from discovery of failure to meet the LCO.

   If one of the two steam supplies to the turbine-driven AFW pump at MPS 2 is inoperable, action must be taken to restore the inoperable equipment to an operable status within 7 days. Similarly, if two of the three steam supplies to the turbine-driven AFW pump at MPS 3 are inoperable, 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:

   a. For the inoperability of one of two steam supplies at MPS2 (or two of three steam supplies at MPS 3) to the turbine-driven AFW pump, the 7 day allowed outage time is reasonable since the AFW system design affords adequate redundancy for the steam supply line for the turbine-driven AFW pump.

   This change is being requested to reflect industry operating experience and plant specific experience and practices. The proposed changes will prevent unnecessary mode changes in that the additional allowed outage time in Modes 1, 2, and 3 would provide time to repair and retest an inoperable steam supply, if the steam supply is declared inoperable.

   Current TS 3.7.1.2 ACTION a. states that with one AFW pump inoperable, restore the pump to OPERABLE status within 72 hours or be in HOT STANDBY (i.e., MODE 3) within the next 6 hours and be in HOT SHUTDOWN (i.e., MODE

4) within the following 6 hours. Proposed ACTION a. states that if an inoperable AFW steam supply for MPS 2 (two steam supplies for MPS 3) is not restored within 7 days, be in MODE 3 in the next 6 hours and MODE 4 in the next 12 hours (i.e., within 18 hours). This changes the current TS by introducing new allowed outage time restrictions for an inoperable steam supply for MPS 2 (two inoperable steam supplies for MPS 3) of 6 hours to be in MODE 3 and an allowed outage time of 18 hours to be in MODE 4.

This change is acceptable because the allowed outage time is consistent with safe operation under the specified condition, considering the OPERABLE status of the redundant systems or features. This includes the capacity and capability of remaining systems or features, a reasonable time for repairs or replacement, and the low probability of a Design Basis Accident (DBA) occurring during the allowed outage time. The allowance to place the plant in MODE 3 in 6 hours and MODE 4 in 18 hours allows the unit to reach the required conditions from full power conditions in an orderly manner and without challenging plant systems. The time frame of 18 hours to require the plant to move from 100% power to MODE 4 is consistent with other NUREG 1431 and NUREG 1432 requirements when the heat removal capability of the unit is degraded.

The format of the proposed amendment is similar to the format of TSTF-340, Revision 3, and NUREGs 1431 and 1432. The differences in format exist because of the design of MPS 3 and because MPS 2 and 3 have not converted to improved standard TSs consistent with NUREGs 1431 and 1432. The differences do not introduce any safety impact. Overall this portion of the change is less restrictive.

2. Inoperable Equipment b. / Required Action b.
   - One turbine-driven AFW pump inoperable in MODE 3 following a refueling outage and if MODE 2 had not been entered.

Inoperable Equipment b. / Required Action b. will be added. The new condition for both units is the inoperability of one turbine-driven AFW pump in Mode 3 following refueling and if Mode 2 had not been entered, and the associated required action. Restoration of the affected equipment to operable status will be required within 7 days from discovery of failure to meet the LCO.

The 7 day allowed outage time is reasonable, based on the following:

a. For the inoperability of a turbine-driven AFW 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. The low

decay heat in the core is because of the extended decay of the fuel returned to the core following the refueling outage.

This change is being requested to reflect industry operating experience and plant specific experience and practices. The proposed changes will prevent unnecessary mode changes in that the additional allowed outage time in Mode 3 would provide time to repair and retest the turbine-driven AFW pump, if the pump is declared inoperable during restart following a refueling outage before entering mode 2.

Current TS 3.7.1.2 ACTION a. states that with one AFW pump inoperable, restore the pump to OPERABLE status within 72 hours or be in HOT STANDBY (i.e., MODE 3) within the next 6 hours and be in HOT SHUTDOWN (i.e., MODE 4) within the following 6 hours. Proposed ACTION b. states that if an inoperable turbine driven AFW pump is not restored within 7 days, be in MODE 4 in the next 12 hours. This changes the current TS by introducing new allowed outage time restrictions if an inoperable turbine-driven AFW pump is not restored with 7 days while in Mode 3 immediately following refueling if MODE 2 had not been entered.

This change is acceptable because the allowed outage time is consistent with safe operation under the specified condition, considering the operable status of the redundant systems or features, and the reduced heat load associated with a core following a refueling outage. This includes the capacity and capability of remaining systems or features, a reasonable time for repairs or replacement, and the low probability of a DBA occurring during the allowed outage time. The allowance to place the plant in MODE 4 in 12 hours allows the unit to reach the required conditions from MODE 3 conditions in an orderly manner and without challenging plant systems. The time frame of 12 hours to require the plant to move from MODE 3 to MODE 4 is consistent with other NUREG 1431 and NUREG 1432 requirements when the heat removal capability of the unit is degraded. This change is designated as less restrictive because additional time is allowed to restore parameters to within the LCO limits than was allowed in the current TS.

The format of the proposed amendment is similar to the format of TSTF-340, Revision 3, and NUREGs 1431 and 1432. The differences in format exist because of the design of MPS 3 and because MPS 2 and 3 have not converted to improved standard TS consistent with NUREGs 1431 and 1432. The differences in format have no safety significance.

3. Inoperable Equipment c. / Required Action c.
   - One AFW pump inoperable in MODE 1, 2, or 3 for reasons other than a. or b. above.

   The requirements of current required ACTION a. will be relocated to the proposed required ACTION c. The requirement to restore the required AFW pump to OPERABLE status within 72 hours will be retained.

   Current TS 3.7.1.2 ACTION a. states that with one AFW pump inoperable, restore the pump to OPERABLE status within 72 hours or be in HOT STANDBY (i.e., MODE 3) within the next 6 hours and be in HOT SHUTDOWN (i.e., MODE 4) within the following 6 hours. Proposed ACTION c. states that if an inoperable AFW pump is not restored within 72 hours, be in MODE 3 in the next 6 hours and MODE 4 in the next 12 hours (i.e., within 18 hours). This changes the current TS by allowing 18 hours instead of 12 hours to be in MODE 4.

   This change is acceptable because the allowed outage time is consistent with safe operation under the specified condition, considering the operable status of the redundant systems or features. This includes the capacity and capability of remaining systems or features, a reasonable time for repairs or replacement, and the low probability of a DBA occurring during the allowed outage time. The allowance to place the plant in MODE 3 in 6 hours and MODE 4 in 18 hours allows the unit to reach the required conditions from full power conditions in an orderly manner and without challenging plant systems. The time frame of 18 hours to require the plant to move from 100% power to MODE 4 is consistent with other NUREG 1431 and NUREG 1432 requirements when the heat removal capability of the unit is degraded. This change is designated as less restrictive because additional time is allowed to restore parameters to within the LCO limits than was allowed in the current TS.

   The format of the proposed amendment is similar to the format of TSTF-340, Revision 3, and NUREGs 1431 and 1432. The differences in format exist because MPS 2 and 3 have not converted to improved standard TSs consistent with NUREGs 1431 and 1432, but do not present any safety significance.

4. Inoperable Equipment a., b., and c. / Required Actions a., b., and c.
   - Asterisk added to allow separate condition entry.

   An asterisk for Inoperable Equipment a., b., and c. will be added. This asterisk will allow separate condition entry for (1) one inoperable steam supply to the turbine-driven AFW pump (two steam supplies for MPS 3), (2) if MODE 2 has not been entered following refueling, an inoperable turbine-driven AFW pump in

MODE 3 following refueling, and (3) one inoperable AFW pump in MODES 1, 2, or 3 for reasons other than Actions a. or b. above.

For coincident entry into Action Requirements a. and b., the 7 day allowed outage time is reasonable, based on the following:

a. For both the inoperability of one of two steam supplies at MPS2 (or two of three steam supplies at MPS 3) to the turbine-driven AFW pump and an inoperable turbine-driven AFW 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 AFW pumps, and due to the low probability of an event requiring the use of the turbine-driven AFW pump.

If situations are discovered that require entry into more than one inoperable equipment condition at a time, the restoration of the affected equipment must be performed within the associated required action allowed outage time. When in multiple inoperable equipment conditions, separate allowed outage times are tracked for each inoperable equipment condition starting from the time of discovery of the situation that required entry into the condition. For coincident entry into Action Requirements c. and Action Requirements a., b., or a. and b., the 72 hour or 7 day allowed outage times are reasonable due to the availability of the redundant operable motor driven AFW pumps, and due to the low probability of an event requiring the use of the turbine-driven AFW pump.

This change is being requested to reflect industry operating experience and plant specific experience and practices. The proposed changes will prevent unnecessary mode changes in that the additional allowed outage time in Modes 1, 2, and 3 would provide time to repair and retest an inoperable steam supply, if the steam supply is declared inoperable because the surveillance requirements could not be met.

This change is designated as less restrictive because additional time is allowed to restore parameters to within the LCO limits than was allowed in the current TS.

The asterisk allowing separate entry is added because MPS 2 and 3 have not converted to improved standard TSs consistent with NUREGs 1431 and 1432. The discussion of separate condition entry is included in Section 3.0 of NUREGs 1431 and 1432 but is not included in the MPS 2 and 3 TSs. These differences in format are administrative in nature and do not present any safety significance.

5. Inoperable Equipment d. / Required Action d.
   - Two AFW pumps inoperable in MODE 1, 2, or 3.

   The requirements of current required ACTION b. will be relocated to the proposed required ACTION d.

   Current TS 3.7.1.2 ACTION b. states that with two AFW pumps inoperable, be in HOT STANDBY (i.e., MODE 3) within the next 6 hours and be in HOT SHUTDOWN (i.e., MODE 4) within the following 6 hours. Proposed ACTION d. states that with two AFW pumps inoperable, be in MODE 3 in the next 6 hours and MODE 4 in the next 12 hours (i.e., within 18 hours). This changes the current TS by allowing 18 hours instead of 12 hours to be in MODE 4.

   This change is acceptable because the allowed outage time is consistent with safe operation under the specified condition, considering the operable status of the redundant systems or features. This includes the capacity and capability of remaining systems or features, a reasonable time for repairs or replacement, and the low probability of a DBA occurring during the allowed outage time. The allowance to place the plant in MODE 3 in 6 hours and MODE 4 in 18 hours allows the unit to reach the required conditions from full power conditions in an orderly manner and without challenging plant systems. The time frame of 18 hours to require the plant to move from 100% power to MODE 4 is consistent with other NUREG 1431 and NUREG 1432 requirements when the heat removal capability of the unit is degraded. This change is designated as less restrictive because additional time is allowed to restore parameters to within the LCO limits than was allowed in the current TS.

   The format of the proposed amendment is similar to the format of TSTF-340, Revision 3, and NUREGs 1431 and 1432. The differences in format exist because MPS 2 and 3 have not converted to improved standard TSs consistent with NUREGs 1431 and 1432, but do not present any safety significance.

6. Inoperable Equipment e. / Required Action e.
   - Three AFW pumps inoperable in MODE 1, 2, or 3.

   The requirements of current required ACTION c. will be relocated to the proposed required ACTION e.

   The requirement to immediately initiate action to restore one AFW pump to operable status will be retained. This request includes a revision to the phrasing of the required actions and the associated note for the condition where three AFW pumps are inoperable in Modes 1, 2, or 3 to match the phrasing of the corresponding action in NUREG 1432 and NUREG 1431.

The format of the proposed amendment is similar to the format of TSTF-340, Revision 3, and NUREGs 1431 and 1432. The differences in format exist because MPS 2 and 3 have not converted to improved standard TSs consistent with NUREGs 1431 and 1432, but do not present any safety significance. This is an administrative change.

Change 3

MPS 3 Proposed TS 4.7.1.2

SR 4.7.1.2.1.a. Verifying each AFW manual, power operated, and automatic valve in each water flow path and in each required steam supply flow path to the steam turbine driven pump, that is not locked, sealed, or otherwise secured in position, is in the correct position.

The requirements of current Surveillance Requirement (SR) 4.7.1.2.1.a.1 and 2 will be replaced by proposed SR 4.7.1.2.1.a.

The revised SR adds a requirement to verify the steam supply flow paths consistent with the revised required ACTION a. requirement. The revised SR is consistent with NUREG 1431 and combines the requirements of the current surveillance into one paragraph. The detail of the existing requirement that specifies each AFW control and isolation valve in the flow path is in the fully open position when above 10% rated thermal power is not required, is not necessary information for the specifications, and was previously added to the TS bases discussion of the correct position for these valves. Therefore, deletion of this detail from the SR will have no significant impact. The scope of the valves being verified within the new SR includes all the valves verified in the current technical specifications and expands the scope to include steam supply valves.

Additionally, a note has been added to clarify/allow that one or more AFW 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 AFW mode of operation. The bases further clarifies that this note is applicable provided the pump(s) are 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 AFW 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 AFW system, operability (i.e., the intended safety function) continues to be maintained. The reference to AFW pumps and associated valves is used in lieu of the term trains contained in NUREG 1431 to

maintain consistency with the terminology within the remaining unchanged portion of Technical Specification 3.7.1.2. This is a more restrictive change.

Change 4

MPS 2 Proposed TS 4.7.1.2

4.7.1.2 Each auxiliary feedwater pump shall be demonstrated OPERABLE:

b. By verifying the developed head of each AFW pump at the flow test point is greater than or equal to the required developed head when tested pursuant to Specification 4.0.5. (Not required to be performed for the steam turbine driven AFW pump until after reaching 800 psig in the steam generators. The provisions of Specification 4.0.4 are not applicable to the steam turbine driven AFW pump for entry into MODE 3.)

This change will revise the existing exception to Specification 4.0.4 for entry into Mode 3 to permit performance of the turbine driven AFW pump flow / differential pressure test in Mode 3 after secondary steam supply pressure exceeds the specified 800 psig, but before entering Mode 2. The existing SR will be modified to delete the words "24 hours." The inclusion of the requirement to perform the surveillance test within 24 hours after reaching 800 psig in the steam generators was added as part of MPS 2 License Amendment 283 (LA 283), dated September 9, 2004 (TAC NO. MB5019). As stated in the NRC Safety Evaluation Report for LA 283, this more restrictive change represented a decrease in the time allowed to complete a required action and was acceptable because it required completion of the surveillance within an established time to ensure safety. Upon review, this has been identified as an unnecessarily restrictive change and not required to ensure safety.

Other Affected TS

The proposed amendment does not impact any other sections of the MPS 2 and 3 TS.

A change to the MPS 2 TS SR to verify the correct position of each unsecured manual valve and each remote operated valve in the AFW system steam and water flow paths, on a 31 day interval, similar to the proposed change 3 above to the MPS 3 TS, was previously incorporated into MPS 2 TS 4.7.1.2.a and is therefore not included in this request. This change was approved on September 9, 2004, as part of MPS 2 Amendment 283 (TAC No. MB5019).

4.2 Summary

The proposed changes revise the action and SRs for Specification 3/4.7.1.2 of the MPS 2 and 3 TSs related to the AFW system. The proposed amendment incorporates NRC-approved TSTF-340, Revision 3. Also, the proposed changes include additional actions and surveillance requirements for the steam supply to the turbine-driven AFW pumps, which were not previously addressed in the TS. The proposed changes have been determined to provide reasonable assurance the health and safety of the public will not be endangered by operation in the proposed manner and the changes can be made with no significant impact on plant operations.

The justification for incorporating these changes in the MPS 2 and 3 TSs is based on the justification made by the Combustion Engineering Owners Group and the Westinghouse Owners Group for the changes to NUREG-1431 and 1432, the Improved Standard TSs, and for TSTF-340, Revision 3.

5.0 REGULATORY ANALYSIS

The proposed changes revise the action and surveillance requirements for Specification 3/4.7.1.2 of the MPS 2 and 3 technical specifications related to the auxiliary feedwater system. The amendment incorporates Nuclear Regulatory Commission-approved Technical Specification Task Force Traveler Number 340, Revision 3, to increase the allowed outage time from 72 hours to 7 days for the inoperability of the turbine-driven AFW pump if inoperability occurs in reactor Mode 3 following a refueling outage, and if Mode 2 had not been entered. The proposed change also includes additional actions and surveillance requirements for the inoperability of the necessary steam supply to the turbine-driven AFW pump in Modes 1, 2, and 3. In addition, the proposed change includes a revision to the required actions and the associated note for the condition where three AFW pumps are inoperable in Modes 1, 2, or 3 to match the phrasing of the corresponding action in NUREG 1432 and NUREG 1431. Additional changes are necessary to support the proposed allowed outage time increase, and to improve the format of the action requirements.

By preventing unnecessary mode changes associated with an inoperable steam supply to the turbine-driven AFW pump during operation in Modes 1, 2, and 3 or an inoperable turbine-driven AFW pump during startup following refueling, the proposed changes are expected to result in a reduction in personnel exposure and a reduction in plant refueling outage duration. The proposed amendment achieves this by allowing additional time in Modes 1, 2, and 3 to repair and retest an inoperable steam supply or additional time in Mode 3, prior to entering Mode 2, to repair and retest the turbine-

driven AFW pump, if the steam supply or pump is declared inoperable because the SRs could not be met.

5.1 No Significant Hazards Consideration

The proposed amendment modifies the MPS 2 and 3 TS AFW system allowed outage time. The allowed outage time is being changed to allow a 7 day allowed outage time for the inoperability of the necessary steam supply to the turbine-driven AFW pump in Modes 1, 2, and 3, or for the inoperability of the turbine-driven AFW pump if inoperability occurs in reactor Mode 3 following a refueling outage, and if Mode 2 had not been entered.

DNC has evaluated whether or not a significant hazards consideration (SHC) is involved with the proposed changes by addressing the three standards set forth in 10CFR 50.92(c) as discussed below.

Criterion 1:

Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed amendment to MPS 2 and 3 TS 3.7.1.2 permits a 7 day allowed outage time for the inoperability of the necessary steam supply to the turbine-driven AFW pump in Modes 1, 2, and 3, or for the inoperability of the turbine-driven AFW pump if the inoperability occurs in Mode 3 following a refueling outage, if Mode 2 had not been entered. Extending the allowed outage time does not involve a significant increase in the probability or consequences of an accident previously evaluated because: 1) the proposed amendment does not represent a change to the system design, 2) the proposed amendment does not prevent the safety function of the AFW from being performed since the redundant trains are required to be operable, 3) the proposed amendment does not alter, degrade, or prevent action described or assumed in any accident described in the MPS 2 and 3 FSARs from being performed since the other trains of AFW are required to be operable, 4) the proposed amendment does not alter any assumptions previously made in evaluating radiological consequences, and 5) the proposed amendment does not affect the integrity of any fission product barrier. No other safety related equipment is affected by the proposed change. Therefore, this proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

Criterion 2:

Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed amendment to MPS 2 and 3 TS 3.7.1.2 would allow a 7 day allowed outage time for the inoperability of the necessary steam supply to the turbine-driven AFW pump in Modes 1, 2, and 3, or for the inoperability of the turbine-driven AFW pump if the inoperability occurs in Mode 3 following a refueling outage, if Mode 2 had not been entered. Extending the allowed action time does not create the possibility of a new or different kind of accident from any accident previously evaluated because: 1) the proposed amendment does not represent a change to the system design, 2) the proposed amendment does not alter how equipment is operated or the ability of the system to deliver the required AFW flow, and 3) the proposed amendment does not affect any other safety related equipment. Therefore, the proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

Criterion 3:

Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

The proposed amendment does not involve a significant reduction in a margin of safety.

The proposed amendment to MPS 2 and 3 TS 3.7.1.2 would allow a 7 day allowed action time for the inoperability of the necessary steam supply to the turbine-driven AFW pump in Modes 1, 2, and 3. Extending the allowed action time does not involve a significant reduction in a margin of safety because: 1) there is a redundant steam supply to the turbine driven AFW pump, 2) the motor-driven AFW pumps are required to be operable when Mode 3 is entered, 3) the motor-driven AFW pumps can provide sufficient flow to remove decay heat and cool the unit to shutdown cooling system entry conditions from power operations, 4) the motor-driven AFW pumps are designed to supply sufficient water to remove decay heat with steam generator pressure at no load conditions to cool the unit to shutdown cooling entry conditions, 5) the proposed change does not change or introduce any new setpoints at which mitigating functions

are initiated, 6) no changes to the design parameters of the AFW system are being proposed, and 7) no changes in system operation that would impact an established safety margin are being proposed by this change.

The proposed amendment to MPS 2 and 3 TS 3.7.1.2 would also allow a 7 day allowed action time for the inoperability of the turbine-driven AFW pump if the inoperability occurs in Mode 3 following a refueling outage, if Mode 2 had not been entered. Extending the allowed action time does not involve a significant reduction in a margin of safety because: 1) during a return to power operations following a refueling outage, decay heat is at its lowest levels, 2) the motor-driven AFW pumps are required to be operable when Mode 3 is entered, 3) the motor-driven AFW pumps can provide sufficient flow to remove decay heat and cool the unit to shutdown cooling system entry conditions from power operations, 4) the motor-driven AFW pumps are designed to supply sufficient water to remove decay heat with steam generator pressure at no load conditions to cool the unit to shutdown cooling entry conditions, 5) the proposed change does not change or introduce any new setpoints at which mitigating functions are initiated, 6) no changes to the design parameters of the AFW are being proposed, and 7) no changes in system operation that would impact an established safety margin are being proposed by this change.

Therefore, based on the above, the proposed amendment does not involve a significant reduction in a margin of safety.

In summary, DNC concludes that the proposed amendment does not represent a SHC under the standards set forth in 10 CFR 50.92(c).

5.2 Applicable Regulatory Requirements/Criteria

The applicable criterion from 10 CFR 50 Appendix A, General Design Criteria (GDC) for Nuclear Plants, associated with the AFW are:

1. General Design Criterion 2, for structures housing the system and the system itself being capable of withstanding the effects of natural phenomena such as earthquakes, tornadoes, hurricanes, and floods.

2. General Design Criterion 4, with respect to structures housing the system and the system itself being capable of withstanding the effects of external missiles and internally generated missiles, pipe whip, and jet impingement forces associated with pipe breaks.

3. General Design Criterion 5, for shared systems and components important to safety being capable to perform required safety functions.

4. General Design Criterion 19, for the design capability of system instrumentation and controls for prompt hot shutdown of the reactor and potential capability for subsequent cold shutdown.

5. General Design Criterion 34, to ensure:

    a. The capability of the AFW system to sufficiently transfer fission product decay heat and other residual heat from the reactor core at a rate such that specified acceptable fuel design limits and the design conditions of the reactor coolant pressure boundary are not exceeded.

    b. Suitable redundancy in components, features, interconnections, leak detection, and isolation capabilities is provided to assure, under assumption of a single failure, the continued safety function regardless of the loss of either onsite, offsite, or the generating capability of both power systems.

6. General Design Criterion 44, to ensure:

    a. The capability to transfer heat loads from the reactor system to a heat sink under both normal operating and accident conditions.

    b. Redundancy of components so that under accident conditions the safety function can be performed assuming a single active component failure (This may be coincident with the loss of offsite power for certain events).

    c. The capability to isolate components, subsystems, or piping, if required, so that the system safety function is maintained.

7. General Design Criterion 45, for design provisions to permit periodic inservice inspection of system components and equipment.

8. General Design Criterion 46, for design provisions to permit appropriate functional testing of the system and components to ensure structural integrity and leak tightness, operability and performance of active components, and capability of the integrated system to function as intended during normal, shutdown, and accident conditions.

The design of the AFW system is to provide a supply of high-pressure feedwater to the secondary side of the steam generators for RCS heat removal following a loss of normal feedwater. It also provides a cooling source in the event of a SBLOCA. Under loss of offsite power conditions, the AFW system maintains the plant at a standby condition. If a loss of offsite power occurs, the turbine-driven AFW pump can be

manually actuated. The AFW system operates during startup and hot standby to maintain water level in the steam generators. The proposed changes do not adversely impact the ability of the AFW system to function as designed and do not impact conformance to the applicable GDCs. Therefore, the proposed changes are consistent with all applicable regulatory requirements or criteria.

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities 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 to the health and safety of the public.

6.0 ENVIRONMENTAL CONSIDERATION

DNC has determined that the proposed amendment would change requirements with respect to use of a facility component located within the restricted area, as defined by 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupation radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for a categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

Serial No. 05-699
Docket No. 50-336

ATTACHMENT 2

LICENSE AMENDMENT REQUEST (LBDCR 04-MP2-013)
AUXILIARY FEEDWATER ALLOWED OUTAGE TIME

MARKED-UP PAGES

MILLSTONE POWER STATION UNIT 2
DOMINION NUCLEAR CONNECTICUT, INC

PLANT SYSTEMS

AUXILIARY FEEDWATER PUMPS

LIMITING CONDITION FOR OPERATION

3.7.1.2 At least three steam generator auxiliary feedwater pumps shall be OPERABLE with:

a. Two feedwater pumps capable of being powered from separate OPERABLE emergency busses, and

b. One feedwater pump capable of being powered from an OPERABLE steam supply system.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

Insert A

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 or other specified condition under the provisions of Specification 3.0.4 shall not be made with three auxiliary feedwater pumps inoperable.

SURVEILLANCE REQUIREMENTS

4.7.1.2 Each auxiliary feedwater pump shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying each auxiliary feedwater manual, power operated, and automatic valve in each water flow path and in each steam supply flow path to the steam turbine driven pump, that is not locked, sealed, or otherwise secured in position, is in the correct position.

Insert B

b. By verifying the developed head of each auxiliary feedwater pump at the flow test point is greater than or equal to the required developed head when tested pursuant to Specification 4.0.5. (Not required to be performed for the steam turbine driven auxiliary feedwater pump until 24 hours after reaching 800 psig in the steam generators. The provisions of Specification 4.0.4 are not applicable to the steam turbine driven auxiliary feedwater pump for entry into MODE 3.

Insert A

Millstone Power Station Unit 2
Technical Specifications
Page 3/4 7-4

Inoperable Equipment	Required Action
a.* One steam supply to turbine-driven auxiliary feedwater pump.	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.
b.* ----------NOTE---------- Only applicable if MODE 2 has not been entered following REFUELING. ---------- One turbine-driven auxiliary feedwater pump in MODE 3 following REFUELING.	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 required 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.

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.

* Separate condition entry is allowed for (1) an inoperable steam supply to the turbine-driven auxiliary feedwater pump, (2) if MODE 2 has not been entered following REFUELING, an inoperable turbine-driven auxiliary feedwater pump in MODE 3 following REFUELING, and (3) one inoperable AFW pump in MODES 1, 2, or 3 for reasons other than a. or b. above. Should a combination of the above conditions result in the loss of two auxiliary feedwater pumps, then ACTION d. must be entered.

Insert B

Millstone Power Station Unit 2
Technical Specifications
Page 3/4 7-4

b. By verifying the developed head of each auxiliary feedwater pump at the flow test point is greater than or equal to the required developed head when tested pursuant to Specification 4.0.5. (Not required to be performed for the steam turbine driven auxiliary feedwater pump until after reaching 800 psig in the steam generators. The provisions of Specification 4.0.4 are not applicable to the steam turbine driven auxiliary feedwater pump for entry into MODE 3.)

ATTACHMENT 3

LICENSE AMENDMENT REQUEST (LBDCR 04-MP2-013)
AUXILIARY FEEDWATER ALLOWED OUTAGE TIME

RETYPED PAGES

MILLSTONE POWER STATION UNIT 2
DOMINION NUCLEAR CONNECTICUT, INC

PLANT SYSTEMS

AUXILIARY FEEDWATER PUMPS

LIMITING CONDITION FOR OPERATION

3.7.1.2 At least three steam generator auxiliary feedwater pumps shall be OPERABLE with:

a. Two feedwater pumps capable of being powered from separate OPERABLE emergency busses, and

b. One feedwater pump capable of being powered from an OPERABLE steam supply system.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

Inoperable Equipment	Required ACTION
a. * One steam supply to turbine-driven auxiliary feedwater pump.	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
b. * - - - - NOTE - - - - Only applicable if MODE 2 has not been entered following REFUELING. - - - - - - - - - - - One turbine-driven auxiliary feedwater pump in MODE 3 following REFUELING.	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 required 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.

AUXILIARY FEEDWATER PUMPS

LIMITING CONDITION FOR OPERATION

ACTION: (Continued)

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.

* Separate condition entry is allowed for (1) an inoperable steam supply to the turbine-driven auxiliary feedwater pump, (2) if MODE 2 has not been entered following REFUELING, an inoperable turbine-driven auxiliary feedwater pump in MODE 3 following REFUELING, and (3) one inoperable AFW pump in MODES 1, 2, or 3 for reasons other than a. or b. above. Should a combination of the above conditions result in the loss of two auxiliary feedwater pumps, then ACTION d. must be entered.

SURVEILLANCE REQUIREMENTS

4.7.1.2 Each auxiliary feedwater pump shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying each auxiliary feedwater manual, power operated, and automatic valve in each water flow path and in each steam supply flow path to the steam turbine driven pump, that is not locked, sealed, or otherwise secured in position, is in the correct position.

b. By verifying the developed head of each auxiliary feedwater pump at the flow test point is greater than or equal to the required developed head when tested pursuant to Specification 4.0.5. (Not required to be performed for the steam turbine driven auxiliary feedwater pump until after reaching 800 psig in the steam generators. The provisions of Specification 4.0.4 are not applicable to the steam turbine driven auxiliary feedwater pump for entry into MODE 3.)

c. At least once per 18 months by verifying each auxiliary feedwater automatic valve that is not locked, sealed, or otherwise secured in position, actuates to the correct position, as designed, on an actual or simulated actuation signal.

SURVEILLANCE REQUIREMENTS (Continued)

d. At least once per 18 months by verifying each auxiliary feedwater pump starts automatically, as designed, on an actual or simulated actuation signal.

e. By verifying the proper alignment of the required auxiliary feedwater flow paths by verifying flow from the condensate storage tank to each steam generator prior to entering MODE 2 whenever the unit has been in MODE 5, MODE 6, or defueled for a cumulative period of greater than 30 days.

Serial No. 05-699
Docket No. 50-423

ATTACHMENT 4

LICENSE AMENDMENT REQUEST (LBDCR 04-MP3-011)
AUXILIARY FEEDWATER ALLOWED OUTAGE TIME

MARKED-UP PAGES

MILLSTONE POWER STATION UNIT 3
DOMINION NUCLEAR CONNECTICUT, INC

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:

a. At least once per 31 days by:

Insert D

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.

Insert C

Millstone Power Station Unit 3
Technical Specifications
Page 3/4 7-4

Inoperable Equipment	Required Action
a.* Two steam supplies to turbine-driven auxiliary feedwater pump.	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.
b.* ----------NOTE---------- Only applicable if MODE 2 has not been entered following REFUELING. ---------- One turbine-driven auxiliary feedwater pump in MODE 3 following REFUELING.	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 required 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.

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.

* Separate condition entry is allowed for (1) two inoperable steam supplies to the turbine-driven auxiliary feedwater pump, (2) if MODE 2 has not been entered following REFUELING, an inoperable turbine-driven auxiliary feedwater pump in MODE 3 following REFUELING, and (3) one inoperable AFW pump in MODES 1, 2, or 3 for reasons other than a. or b. above. Should a combination of the above conditions result in the loss of two auxiliary feedwater pumps, then ACTION d. must be entered.

Insert D

Millstone Power Station Unit 3
Technical Specifications
Page 3/4 7-4

----------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.

Serial No. 05-699
Docket No. 50-423

ATTACHMENT 5

LICENSE AMENDMENT REQUEST (LBDCR 04-MP3-011)
AUXILIARY FEEDWATER ALLOWED OUTAGE TIME

RETYPED PAGES

MILLSTONE POWER STATION UNIT 3
DOMINION NUCLEAR CONNECTICUT, INC

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. * Two steam supplies to turbine-driven auxiliary feedwater pump.	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.
b. * - - - - - NOTE - - - - - Only applicable if MODE 2 has not been entered following REFUELING. - - - - - - - - - - - - - - - One turbine-driven auxiliary feedwater pump in MODE 3 following REFUELING.	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 required 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.

LIMITING CONDITION FOR OPERATION

ACTION: (Continued)

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.

* Separate condition entry is allowed for (1) two inoperable steam supplies to the turbine-driven auxiliary feedwater pump, (2) if MODE 2 has not been entered following REFUELING, an inoperable turbine-driven auxiliary feedwater pump in MODE 3 following REFUELING, and (3) one inoperable AFW pump in MODES 1, 2, or 3 for reasons other than a. or b. above. Should a combination of the above conditions result in the loss of two auxiliary feedwater pumps, then ACTION d. must be entered.

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, sealed, 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;

ATTACHMENT 6

LICENSE AMENDMENT REQUEST (LBDCR 04-MP2-013 AND 04-MP3-011)
AUXILIARY FEEDWATER ALLOWED OUTAGE TIME

MARKED-UP PAGES OF TECHNICAL SPECIFICATION BASES
(FOR INFORMATION ONLY)

MILLSTONE POWER STATION UNITS 2 AND 3
DOMINION NUCLEAR CONNECTICUT, INC

3/4.7 PLANT SYSTEMS

BASES

3/4.7.1.2 AUXILIARY FEEDWATER PUMPS (Continued)

Insert E →

During quarterly surveillance testing of the turbine driven AFW pump, valve 2-CN-27A is closed and valve 2-CN-28 is opened to prevent overheating the water being circulated. In this configuration, the suction of the turbine driven AFW pump is aligned to the Condensate Storage Tank via the motor driven AFW pump suction flow path, and the pump minimum flow is directed to the Condensate Storage Tank by the turbine driven AFW pump suction path upstream of 2-CN-27A in the reverse direction. During this surveillance, the suction path to the motor driven AFW pump suction path remains OPERABLE, and the turbine driven AFW suction path is inoperable. In this situation, the ACTION requirements of Technical Specification 3.7.1.2 for one AFW pump are applicable.

Surveillance Requirement 4.7.1.2.a verifies the correct alignment for manual, power operated, and automatic valves in the Auxiliary Feedwater (AFW) System flow paths (water and steam) to provide assurance that the proper flow paths will exist for AFW operation. This surveillance does not apply to valves that are locked, sealed, or otherwise secured in position, since these valves were verified to be in the correct position prior to locking, sealing, or securing. A valve that receives an actuation signal is allowed to be in a nonaccident position provided the valve automatically repositions within the proper stroke time. This surveillance does not require any testing or valve manipulation. Rather, it involves verification that those valves capable of being mispositioned are in the correct position. The 31 day frequency is appropriate because the valves are operated under procedural control and an improper valve position would only affect a single train. This frequency has been shown to be acceptable through operating experience.

Surveillance Requirement 4.7.1.2.b, which addresses periodic surveillance testing of the AFW pumps to detect gross degradation caused by impeller structural damage or other hydraulic component problems, is required by Section XI of the ASME Code. This type of testing may be accomplished by measuring the pump developed head at only one point of the pump characteristic curve. This verifies both that the measured performance is within an acceptable tolerance of the original pump baseline performance and that the performance at the test flow is greater than or equal to the performance assumed in the unit safety analysis. The surveillance requirements are specified in the Inservice Testing Program, which encompasses Section XI of the ASME Code. Section XI of the ASME Code provides the activities and frequencies necessary to satisfy the requirements. This surveillance is modified to indicate that the test can be deferred for the steam driven AFW pump until suitable plant conditions are established. This deferral is required because steam pressure is not sufficient to perform the test until after MODE 3 is entered. However, the test, if required, must be performed prior to entering MODE 2.

Insert E

Millstone Power Station Unit 2
Technical Specifications
Page B 3/4 7-2b

If one of the steam supplies to the turbine-driven auxiliary feedwater train is 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:

a. For the inoperability of a steam supply to the turbine-driven auxiliary feedwater pump, 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 a steam supply line to the turbine-driven pump 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 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 required 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 both 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.

The ACTION Statement is modified by a Note indicating that separate condition entry is allowed for "(1) an inoperable steam supply to the turbine-driven auxiliary feedwater pump, (2) if MODE 2 has not been entered following REFUELING, one turbine-driven auxiliary feedwater pump in MODE 3 following REFUELING, and (3) one inoperable AFW pump in MODES 1, 2, or 3 for reasons other than a. or b. above." If situations are discovered that require entry into more than one Inoperable Equipment condition at a time, the restoration of the affected equipment must be performed within the associated Required ACTION allowed outage time. Should a combination of the above conditions result in the loss of two auxiliary feedwater pumps, then ACTION d. must be entered. When in multiple Inoperable Equipment conditions, separate allowed outage times are tracked for each Inoperable Equipment condition starting from the time of discovery of the situation that required entry into the condition.

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.

AUXILIARY 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.

Insert F

Millstone Power Station Unit 3
Technical Specifications
Page B 3/4 7-2a

If two of the steam supplies to the turbine-driven auxiliary feedwater pump are 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 two of the three steam supplies to the turbine-driven auxiliary feedwater pump, 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 two of the three steam supplies to the turbine-driven pump 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 required 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.

The ACTION Statement is modified by a Note indicating that separate condition entry is allowed for "(1) an inoperable steam supply to the turbine-driven auxiliary feedwater pump, (2) if MODE 2 has not been entered following REFUELING, one turbine-driven auxiliary feedwater pump in MODE 3 following REFUELING, and (3) one inoperable AFW pump in MODES 1, 2, or 3 for reasons other than a. or b. above." If situations are discovered that require entry into more than one Inoperable Equipment condition at a time, the restoration of the affected equipment must be performed within the associated Required ACTION allowed outage time. Should a combination of the above conditions result in the loss of two auxiliary feedwater pumps, then ACTION d. must be entered. When in multiple Inoperable Equipment conditions, separate allowed outage times are tracked for each Inoperable Equipment condition starting from the time of discovery of the situation that required entry into the condition.

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.